

 **IEEE International Ultrasonics Symposium**  
Including Short Courses  
October 22 -25, 2018  
Portopia Hotel, Kobe, Japan



## Preliminary Program



IEEE ULTRASONICS, FERROELECTRICS,  
AND FREQUENCY CONTROL SOCIETY



Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**TUESDAY ORAL**

10:30 am -12:00 pm		Oral --- Tuesday, October 23							
	<b>Session 1A. Cardiac Elasticity</b>  <i>Chair: Guy Cloutier University of Montreal Hospital</i>	<b>Session 2A. Spotlight Session: Photo-acoustics</b>  <i>Chair: Koen W.A. van Dongen TU Delft</i>	<b>Session 3A. Hemodynamics: Estimation and Visualization</b>  <i>Chair: Kai Thomenius Massachusetts Institute of Technology</i>	<b>Session 4A. Use of Microbubbles and Cavitation in Ultrasound Therapy</b>  <i>Chair: Elisa Konofagou Columbia University</i>	<b>Session 5A. SAW Device &amp; Application</b>  <i>Chair: Hiroyuki Nakamura Skyworks Solutions, Inc.</i>	<b>Session 6A. Special Medical Systems</b>  <i>Chair: John Hossack University of Virginia</i>	<b>Session 7A. Abdominal and Pelvic Tissue Characterization</b>  <i>Chair: Timothy Hall University of Wisconsin- Madison</i>	<b>Session 8A. Therapeutic Transducers</b>  <i>Chair: Yongrae Roh Kyungpook National University</i>	
	<b>Topaz (400)</b>	<b>Diamond (300)</b>	<b>Emerald (280)</b>	<b>Sapphire (220)</b>	<b>Ikuta (200)</b>	<b>Nunobiki (150)</b>	<b>Kikusui (140)</b>	<b>Ruby (200)</b>	
<b>10:30 am</b>	<b>1A-1</b> Analyzing the shear wave mechanics in cardiac shear wave elastography using finite element simulations  <i>Annette Caenen, et al Ghent University</i>	<b>2A-1</b> Ultrasound-guided photoacoustics: from basic science tool to clinically-viable functional and molecular imaging  <i>Stanislav Emelianov, et al Georgia Institute of Technology and Emory University School of Medicine</i>	<b>3A-1</b> Simultaneous measurement of stimulus and response in Flow Mediated Dilation: a pilot clinical study  <i>Alessandro Ramalli, et al KU Leuven</i>	<b>4A-1</b> Correlation between passive cavitation imaging and positron emission tomography imaging of the radiolabeled-nanocluster delivery location and efficiency by FUS-mediated blood-brain barrier disruption  <i>Yaoheng Yang, et al Washington University in St Louis</i>	<b>5A-1</b> Coexisting Surface and Bulk Gyroscopic Effects  <i>Visarute Pinrod, et al Cornell University</i>	<b>6A-1</b> A lightweight, motorized 3D ultrasound probe for remote monitoring of astronauts health from ground  <i>Cyril Mossuz, et al VERMON S.A.</i>	<b>7A-1</b> Measured fractional calculus parameters for shear waves in swine liver  <i>Tom Humphrey, et al Michigan State University</i>	<b>8A-1</b> Treatment of breast tumors using a toroidal HIFU transducer. Preliminary experiments in human samples.  <i>Marine Sanchez, et al LabTAU - INSERM unité 1032</i>	
<b>10:45 am</b>	<b>1A-2</b> Validation of 2D non-rigid image registration to assess regional myocardial strain in a clinical setting  <i>Bidisha Chakraborty, et al KU Leuven</i>		<b>3A-2</b> Laterally-dependent velocity estimation bias in plane wave Doppler ultrasound  <i>Luxi Wei, et al University of Toronto</i>	<b>4A-2</b> Artificial stone comminution and behavior of cavitation bubbles with annular focused ultrasound  <i>Shin Yoshizawa, et al Tohoku University</i>	<b>5A-2</b> AIN based dual LCAT filters on a single chip for duplexing application  <i>Yao Zhu, et al Institutes of Microelectronics, A*STAR</i>	<b>6A-2</b> Development of a mechanically-scanning micro-ultrasound capsule endoscopy device and demonstration in vivo  <i>Yongqiang Qiu, et al University of Glasgow</i>	<b>7A-2</b> Quantitative ultrasound imaging and characterization of uterine peristaltic waves  <i>Yizhou Huang, et al Eindhoven University of Technology</i>	<b>8A-2</b> Design, fabrication and testing of a dual-frequency transducer for Acoustic Cluster Therapy activation  <i>Kenneth K. Andersen, et al University College of Southeast Norway</i>	
<b>11:00 am</b>	<b>1A-3</b> 4D mechanical wave velocity mapping using Clutter Filter Wave Imaging. Healthy subjects versus Patients  <i>Sebastien Salles, et al NTNU</i>	<b>2A-2</b> Quantitative GHz ultrasonic imaging of biological cells and transparent structures  <i>Oliver B. Wright, et al Hokkaido University</i>	<b>3A-3</b> Real-Time Flow Visualization through Locally Activated Nanodroplets and High Frame Rate Imaging  <i>Matthieu Toulemonde, et al Imperial College London</i>	<b>4A-3</b> Differentiation of tissue, cavitation bubbles and blood flow imaging in cavitation-enhanced high-intensity focused ultrasound treatment  <i>Hayato Ikeda, et al Tohoku University</i>	<b>5A-3</b> Leaky SAW devices with Beryllium electrodes  <i>Victor Plessky, et al GVR Trade SA</i>	<b>6A-3</b> Feasibility study of a coherent multi-transducer US imaging system  <i>Laura Peralta, et al King's College London</i>	<b>7A-3</b> Temporal Correlations Between Cervical Smooth Muscle Force Generation and Acoustic Backscatter Coefficient Parameters  <i>Andrew Santoso, et al University of Wisconsin-Madison</i>	<b>8A-3</b> Development of Magnetic Resonance(MR) Compatible Transcranial 3072-elements Ultrasonic 2D Array for Deep Brain Stimulation and Neuromodulation  <i>Teng Ma, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i>	

11:15 am	<p><b>1A-4</b> In vivo estimation of myocardial mechanical wave propagation in the fetus</p> <p>Solveig Fadnes, et al <i>Department of Circulation and Medical Imaging, NTNU</i></p>		<p><b>3A-4</b> Time-Resolved Wall Shear Rate Mapping: Spatiotemporal Profiling of a Key Hemodynamic Factor Related to Atherosclerosis</p> <p>Chung Kit Ho, et al <i>University of Waterloo</i></p>	<p><b>4A-4</b> Enhancement of Radiation Response Using Ultrasound-Stimulated Microbubbles: ASMase Dependence</p> <p>Gregory Czarnota, et al <i>Sunnybrook Health Sciences Centre</i></p>	<p><b>5A-4</b> Advanced characterization of surface acoustic wave fields at high temperature</p> <p>Robert Weser, et al <i>IFW Dresden</i></p>	<p><b>6A-4</b> Reconfigurable 1.5D Source Arrays for Improved Elevational Focussing in All-Optical Ultrasound Imaging</p> <p>Erwin Alles, et al <i>University College London</i></p>	<p><b>7A-4</b> Development of double Nakagami distribution model for quantitative evaluation of early-stage fatty-liver disease</p> <p>Kazuki Tamura, et al <i>Chiba university</i></p>	<p><b>8A-4</b> A 5 mm x 5 mm Square, Aluminum Lens Based Histotripsy Transducer: Reaching the Endoscopic Form Factor</p> <p>Jeffrey Woodacre, et al <i>Dalhousie University</i></p>
11:30 am	<p><b>1A-5</b> 4D cardiac ultrafast imaging of natural mechanical waves: towards quantitative elastography of the human ventricle</p> <p>Victor FineI, et al <i>Institut Langevin, INSERM U979, ESPCI, CNRS UMR 7587, ART</i></p>	<p><b>2A-3</b> Compressed Sensing in Photoacoustic Tomography</p> <p>Markus Haltmeier, et al <i>Universität Innsbruck</i></p>	<p><b>3A-5</b> In vivo wall shear stress and blood flow mapping using native blood speckle or contrast enhanced echo particle image velocimetry and plane wave imaging</p> <p>Kai Riemer, et al <i>Imperial College London</i></p>	<p><b>4A-5</b> Ultrasound-mediated microbubble destruction suppressed mouse glioblastoma growth as effectively as radiation therapy</p> <p>Lifei Zhu, et al <i>Washington University in St Louis</i></p>	<p><b>5A-5</b> High Quality Factor SAW Resonators Based on Al / AlN / Sapphire for High Temperature Wireless Applications</p> <p>Jérémy Streque, et al <i>Université de Lorraine, CNRS</i></p>	<p><b>6A-5</b> Fibre-Optic Ultrasound Imaging Devices for Guidance of Minimally Invasive Procedures</p> <p>Richard Colchester, et al <i>University College London</i></p>	<p><b>7A-5</b> System-Independent Ultrasound Attenuation Coefficient Estimation Using Spectra Normalization</p> <p>Ping Gong, et al <i>Mayo Clinic College of Medicine and Science</i></p>	<p><b>8A-5</b> 3D Ultrasound Image Guidance and Therapy through the Rib Cage with a Therapeutic Random Phased Array</p> <p>Muhammad Zubair, et al <i>Imperial College London</i></p>
11:45 am	<p><b>1A-6</b> Ultrafast ultrasound imaging grants alternate methods for assessing diaphragm function.</p> <p>Damien Bachasson, et al <i>Institute of Myology</i></p>		<p><b>3A-6</b> Clinical evaluation of wall shear stress by ultrafast vector flow imaging in carotid atherosclerotic stenosis</p> <p>Guillaume Goudot, et al <i>Institut Langevin, INSERM U979</i></p>	<p><b>4A-6</b> Tumor Vascular Normalization by Oxygen-Microbubbles with Ultrasound</p> <p>Shu-Wei Chu, et al <i>National Tsing Hua University</i></p>	<p><b>5A-6</b> Separation of Frequency and Amplitude Modulation Contributions due to External Vibration on a SAW Resonator</p> <p>Anin Maskay, et al <i>University of Maine</i></p>	<p><b>6A-6</b> Design of a fully populated phased array for transcranial HIFU therapies based on shock-wave exposures with aberration correction</p> <p>Pavel Rosnitskiy, et al <i>Physics Faculty, Moscow State University</i></p>	<p><b>7A-6</b> A deep learning method of transient elastography for assessment of liver fibrosis</p> <p>Yongshuai Li, et al <i>School of Medicine, Tsinghua University, Beijing</i></p>	<p><b>8A-6</b> Planar CMUT annular-array and embedded imaging for ultrasound-guided HIFU therapy</p> <p>W. Apoutou N'Djin, et al <i>LabTAU, INSERM, Centre Léon Bérard, Université Lyon 1, Univ Lyon</i></p>

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**TUESDAY ORAL**

01:30 pm -03:00 pm		Oral --- Tuesday, October 23							
		Session 1B. Advances in Clinical Ultrasound  Chair: Yoshifumi Saijo Tohoku University	Session 2B. Photoacoustic Contrast and Theranostic Agents  Chair: Roger Zemp University of Alberta	Session 3B. Tips and Tricks for Doppler and Contrast Imaging  Chair: Svetoslav Nikolov BK Ultrasound	Session 4B. Contrast Imaging Applications  Chair: Jeffrey Ketterling Riverside Research	Session 5B. SAW Modeling & Design 1  Chair: Karl Wagner RF360 Europe GmbH	Session 6B. Transducers  Chair: Kentaro Nakamura Tokyo Institute of Technology	Session 7B. Carotid Elasticity  Chair: Chris de Korte Radboud University Medical Center	Session 8B. PTF & PTE: Thin Films and High Power Ultrasonics  Chair: Andreas Mayer HS Offenburg - Univ. of Applied Sciences, Gengenbach
		Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)
01:30 pm	<p><b>1B-1</b> Viscoelasticity Measurement in the Liver Using Dispersion Imaging of Shear Wave US Elastography</p> <p>Fuminori Moriyasu, et al Sanno Hospital</p>	<p><b>2B-1</b> Plasmonic gold nanoparticles for combined photoacoustic imaging and photothermal therapy using a pulsed laser</p> <p>Oscar Knights, et al University of Leeds</p>	<p><b>3B-1</b> Higher order singular value decomposition for high contrast microvascular imaging</p> <p>Chee Hau Leow, et al Imperial College London</p>	<p><b>4B-1</b> Contrast enhanced ultrasound imaging of chronic rat spinal cord injury</p> <p>Matthew Bruce, et al University of Washington</p>	<p><b>5B-1</b> Thin Film Acoustoelectric GHZ SAW Amplifier Design</p> <p>Donald Malocha, et al Pegasense</p>	<p><b>6B-1</b> Printed polymer transducers for mid-air haptic feedback</p> <p>Paul van Neer, et al TNO</p>	<p><b>7B-1</b> Evaluation of carotid biomechanical properties by simultaneous analysis of arterial stiffening and deformation</p> <p>Guillaume Goudot, et al Institut Langevin, INSERM U979</p>	<p><b>8B-1</b> Evaluation method for high-power piezoelectric materials and devices</p> <p>Takeshi Morita, et al The Univ. of Tokyo</p>	
01:45 pm		<p><b>2B-2</b> In vivo Photoacoustic, 19F MR and fluorescent imaging of clinically-applicable perfluorocarbon-loaded nanoparticles</p> <p>Khalid Daoudi, et al Radboud university medical center</p>	<p><b>3B-2</b> Adaptive grayscale mapping to improve molecular ultrasound difference images</p> <p>Jasmine Shu, et al Stanford University</p>	<p><b>4B-2</b> Quantification of lipid microbubble shell pharmacokinetics enabled by copper-porphyrin-lipid labeling</p> <p>Maneesha Rajora, et al University Health Network</p>	<p><b>5B-2</b> Simplified BEM Model for Fast and Accurate Simulation of Surface Acoustic Wave Devices</p> <p>Takanao Suzuki, et al Murata Manufacturing Co., Ltd., Kyoto</p>	<p><b>6B-2</b> Linear Ultrasonic Array Development incorporating Cantor Set Fractal Geometry</p> <p>Haoyu Fang, et al University of Strathclyde</p>	<p><b>7B-2</b> Strain Discontinuities in Carotid Atherosclerotic Plaques – a Novel Marker for Plaque Vulnerability?</p> <p>Tim Vonk, et al Maastricht University Medical Center</p>		
02:00 pm	<p><b>1B-2</b> Echocardiographic Particle Image Velocimetry in Heart Diseases</p> <p>Haruhiko Abe, et al Osaka National Hospital</p>	<p><b>2B-3</b> Ultrasound and Photoacoustic Imaging to Aid Design, Optimization, and Validation of Pathogen-like Particle Vaccines</p> <p>Kelsey Kubelick, et al Georgia Institute of Technology &amp; Emory University</p>	<p><b>3B-3</b> Understanding the origin of flashing artefacts due to Singular Value Decomposition clutter filter</p> <p>Jiaqi Zhu, et al Imperial College London</p>	<p><b>4B-3</b> Contrast-Enhanced Micro-Vasculature Imaging: A New Statistical Approach</p> <p>Billy Y. S. Yiu, et al University of Waterloo</p>	<p><b>5B-3</b> Multi-mode P-matrix models for the description of interacting modes in TCSAW and LSAW devices</p> <p>Markus Mayer, et al RF360 Europe GmbH</p>	<p><b>6B-3</b> Broadband Piezocrystal Transducer Array for Non-Destructive Evaluation Imaging Applications</p> <p>Zhen Qiu, et al University of Strathclyde</p>	<p><b>7B-3</b> In vivo 3D strain imaging of the carotid artery</p> <p>Stein Fekkes, et al Radboud university medical center</p>	<p><b>8B-2</b> An Ultrasonically Assisted Sagittal Saw</p> <p>Daniel Richards, et al University of Glasgow</p>	



02:15 pm		<p><b>2B-4</b> A feasibility study of targeted nanoparticled-based photoacoustic imaging of ex vivo endoscopic mucosal resection tissue from Barrett's esophagus patients</p> <p>Han Ho Jeon, et al <i>University Health Network</i></p>	<p><b>3B-4</b> Identifying Directional Components in an Augmented Pulse Wave: A Spatial-Velocity Gradient Approach</p> <p>Adrian J. Y. Chee, et al <i>University of Waterloo</i></p>	<p><b>4B-4</b> Precise collection of microbubbles by acoustic vortex under flow conditions</p> <p>Wei Chen Lo, et al <i>National Tsing Hua University</i></p>	<p><b>5B-4</b> Nonclassical power law of third order intermodulation in TC-SAW devices</p> <p>Thomas Finteis, et al <i>RF360 Europe GmbH</i></p>	<p><b>6B-4</b> A novel design of piezoelectric ultrasonic transducer with high temperature resistance</p> <p>Xianwei Yuan, et al <i>Harbin Institute Of Technology</i></p>	<p><b>7B-4</b> Carotid elastography for detection of vulnerable atherosclerotic plaques: An inter-operator reproducibility study</p> <p>Zhi Liu, et al <i>Tsinghua University</i></p>	<p><b>8B-3</b> Improvement of crystalline orientation and electromechanical coupling in ScAlN film in view of negative ion bombardment during sputtering deposition</p> <p>Shinji Takayanagi, et al <i>Nagoya Institute of Technology</i></p>
02:30 pm	<p><b>1B-3</b> Novel Non-Shelled Nanobubbles as a New Ultrasound Imaging and Drug Delivery Tool</p> <p>Katsuro Tachibana, et al <i>Fukuoka University</i></p>	<p><b>2B-5</b> Sono-Photoacoustic Vaporization of Polypyrrole coated Perfluorocarbon Droplets for Clot Lysis</p> <p>David Li, et al <i>University of Washington</i></p>	<p><b>3B-5</b> Fetal heart rate measurements of twins using a single flexible ultrasound transducer matrix</p> <p>Paul Hamelmann, et al <i>Eindhoven University of Technology</i></p>	<p><b>4B-5</b> Real-Time Closed-Loop Spatiotemporal Control of Cavitation Activity with Passive Acoustic Mapping</p> <p>Scott Schoen Jr., et al <i>Georgia Institute of Technology</i></p>	<p><b>5B-5</b> Transverse modes in temperature compensated surface acoustic wave devices</p> <p>Ken-ya Hashimoto, et al <i>Chiba University</i></p>	<p><b>6B-5</b> Densification behavior and Mechanical Properties of PBX Substitute Composites Fabricated by Ultrasonic Assisted Pressing of Powder</p> <p>Kezhen Lyu, et al <i>Institute of Chemical Materials, China Academy of Engineering Physics</i></p>	<p><b>7B-5</b> A Machine Learning Approach to Delineating Carotid Atherosclerotic Plaque Structure and Composition by ARFI Ultrasound, In Vivo</p> <p>Gabriela Torres, et al <i>The University of North Carolina at Chapel Hill</i></p>	<p><b>8B-4</b> High-volume production and non-destructive piezo-property mapping of 30% Sc-doped aluminium nitride thin films</p> <p>Stefan Mertin, et al <i>VTT Technical Research Centre of Finland</i></p>
02:45 pm		<p><b>2B-6</b> Nanobubble Facilitated Optoporation and Ultra High Frequency Photoacoustic Imaging of BT-474 Breast Cancer Cells in Vitro</p> <p>Filip Bodera, et al <i>Ryerson University</i></p>	<p><b>3B-6</b> Unambiguous detection and visualizing of a catheter with multiple active acoustic sources: in-vivo validation in a swine model</p> <p>Viksit Kumar, et al <i>Mayo Clinic College of Medicine and Science</i></p>	<p><b>4B-6</b> Dual-Frequency-Chirp Passive Cavitation Imaging in Brain</p> <p>Hsiang-Ching Lin, et al <i>National Tsing Hua University</i></p>		<p><b>6B-6</b> High Temperature condition monitoring with a novel, flexible, thin film sensor</p> <p>Daniel Irving, et al <i>novosound</i></p>	<p><b>7B-6</b> Hadamard Encoded Multi-element Synthetic Aperture Imaging (H-MSA) for High Quality Tracking of Shear Waves</p> <p>Rifat Ahmed, et al <i>University of Rochester</i></p>	<p><b>8B-5</b> PZT epitaxial thick film for ultrasonic transducer at frequencies below 100 MHz</p> <p>Yuka Mazda, et al <i>Waseda University</i></p>

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**TUESDAY ORAL**

04:00 pm -05:30 pm					Oral --- Tuesday, October 23										
Session 1C. Cardiac and Cerebrovascular Imaging  Chair: Damien Garcia CREATIS		Session 2C. Technical Advances in Photoacoustic Imaging  Chair: Muyinatu Bell Johns Hopkins University		Session 3C. Nanodroplets Enhanced Imaging  Chair: Mingxi Wan Xi'an Jiaotong University		Session 4C. Microbubbles and Nanoparticles  Chair: Nobuki Kudo Hokkaido University		Session 5C. BAW Device  Chair: Rich Ruby Broadcom Ltd		Session 6C. NDE  Chair: Jafar Saniie Illinois Institute of Technology		Session 7C. Vascular Elasticity  Chair: Richard Lopata Eindhoven University of Technology		Session 8C. CMUT Design and Applications  Chair: Alessandro Stuart Savoia Roma Tre University	
Topaz (400)		Diamond (300)		Emerald (280)		Sapphire (220)		Ikuta (200)		Nunobiki (150)		Kikusui (140)		Ruby (200)	
04:00 pm	<p><b>1C-1</b> Instantaneous Volumetric Flow Rate Measurement Using High-Frame-Rate Ultrasound</p> <p>Billy Y. S. Yiu, et al University of Waterloo</p>	<p><b>2C-1</b> Sparsity-Based Super-Resolution for Photoacoustic Tomography with a Ring Array Transducer</p> <p>David Egolf, et al University of Alberta</p>	<p><b>3C-1</b> Acoustic Wave Sparsely-Activated Localization Microscopy (AWSALM): A Fast and Flow Independent Ultrasound Super-Resolution Technique using Nanodroplets</p> <p>Ge Zhang, et al Imperial College London</p>	<p><b>4C-1</b> Enhancing Checkpoint Inhibitor Therapy with Ultrasound Stimulated Microbubbles</p> <p>Sharshi Bulner, et al Sunnybrook Research Institute</p>	<p><b>5C-1</b> A Fast Thermo-Piezoelectric Finite Element Model of 3D Transient FBAR Dynamics under Large RF Signal</p> <p>Christopher Kirkendall, et al Broadcom Inc</p>	<p><b>6C-1</b> GPU-based parallel processing for inverse computation of full-field material properties based on quantitative laser ultrasound visualization</p> <p>Sheng-Po Tseng, et al National Taipei University of Technology</p>	<p><b>7C-1</b> Stiffness Evaluation of Aortic Aneurysm using an Ultrafast Regularized Tissue-Doppler Optical-Flow Principal Strain Estimator</p> <p>Diya Wang, et al University of Montreal Hospital</p>	<p><b>8C-1</b> Collapse-mode CMUT: design and characterization</p> <p>Chris van Heesch, et al Philips Research</p>							
04:15 pm	<p><b>1C-2</b> Volume flow estimation in valvular jets using 3D high frame rate ultrasound</p> <p>Jorgen Avdal, et al NTNU</p>	<p><b>2C-2</b> Sparsity-based optimization of the initial pressure distribution using a linear array transducer in photoacoustic imaging</p> <p>Ruibo Shang, et al Dartmouth College</p>	<p><b>3C-2</b> Spontaneous Nucleation of Perfluorocarbon Droplets</p> <p>David Li, et al University of Washington</p>	<p><b>4C-2</b> Targeted microbubble-cell interactions elucidated with combined confocal microscopy and Brandaris 128 ultra-high speed imaging</p> <p>Ines Beekers, et al Erasmus MC</p>	<p><b>5C-2</b> Determining the Off-resonance 3rd Order Nonlinear Constants of a BAW resonator</p> <p>Jing Wu, et al Broadcom</p>	<p><b>6C-2</b> Optoacoustic Tissue Differentiation using a Mach-Zehnder Interferometer: Preliminary Results</p> <p>Herve Nguendon Kenhagho, et al Biomedical Laser and Optics Group (BLOG), University of Basel</p>	<p><b>7C-2</b> A Longitudinal Study of the Mechanical Properties of Abdominal Aortic Aneurysms: the First Results</p> <p>Emiel van Disseldorp, et al Eindhoven University Of Technology</p>								
04:30 pm	<p><b>1C-3</b> Next-generation echocardiography – opportunities and challenges</p> <p>Lasse Lovstakken, et al NTNU</p>	<p><b>2C-3</b> Structured acousto-optic imaging with ultrafast ultrasonic plane waves</p> <p>Jean-Luc Gennisson, et al IRAM / CNRS / UPSUD / CEA</p>	<p><b>3C-3</b> Manipulating the Dynamic Behavior of Laser-Activated Perfluorocarbon Nanodroplets Using Transmit Pulse Shape of Ultrafast Ultrasound Imaging</p> <p>Yiying I. Zhu, et al Georgia Institute of Technology</p>	<p><b>4C-3</b> The effect of sonication on extravasation and distribution of nanoparticles and dextrans in tumor tissue imaged by multiphoton microscopy</p> <p>Petros Tesfamichael Yemane, et al Norwegian University of Science and Technology (NTNU)</p>	<p><b>5C-3</b> Prediction of the H2 Response of an FBAR Resonator Using Finite Element Method</p> <p>Zongliang Cao, et al Broadcom Inc</p>	<p><b>6C-3</b> Monitoring Changes in Mechanical Properties of Rock Bolts Using a Low-Power Coded-Excitation Scheme</p> <p>Johan E. Carlson, et al Lulea University of Technology</p>	<p><b>7C-3</b> Comparison of the shear wave velocities in anastomosis between excised pig aorta, Dacron, PTFE and custom made arterial models using shear wave elastography</p> <p>Miguel Bernal, et al Universidad Pontificia Bolivariana</p>	<p><b>8C-2</b> A Robust and High Output Pressure CMUT Design for Ultrasound Imaging and HIFU Ablation</p> <p>Ji Hoon Jang, et al Stanford University</p>							

04:45 pm		<p><b>2C-4</b> Alternative elasticity measurement in deep tissue using strain-photoacoustic imaging</p> <p>Guan Xu, et al <i>University of Michigan</i></p>	<p><b>3C-4</b> Individual perfluorocarbon nanodrop vaporization with 18-MHz plane waves</p> <p>Jeffrey Ketterling, et al <i>Riverside Research</i></p>	<p><b>4C-4</b> Development of a microvascular phantom for studies on microbubble dynamics and bubble-cell interaction inside a capillary</p> <p>Shinji Imai, et al <i>Hokkaido University</i></p>	<p><b>5C-4</b> A Hybrid 3D Thermal / 1D Piezoelectric Finite Element Model for Rapid Simulation of FBAR Filter Response under High Power</p> <p>Christopher Kirkendall, et al <i>Broadcom Inc</i></p>	<p><b>6C-4</b> Experimental validation of non-collinear wave mixing model</p> <p>Hector Hernandez Delgadillo, et al <i>University of Twente</i></p>	<p><b>7C-4</b> Pulse Wave Imaging for monitoring non-linear material behavior in an Ang-II induced hypertensive mouse model</p> <p>Paul Kemper, et al <i>Columbia University</i></p>	<p><b>8C-3</b> Design of High-Frequency Ultra-Wideband 1-D CMUT Arrays for Acoustic Angiography Applications</p> <p>Oluwafemi Adelegan, et al <i>North Carolina State University</i></p>
05:00 pm	<p><b>1C-4</b> Ultrafast Doppler Observation in Rat Stroke Model --- Comparison with High Field Magnetic Resonance Imaging</p> <p>Yu-Chieh Kao, et al <i>Taipei Medical University</i></p>	<p><b>2C-5</b> Portable LED-based photoacoustic and ultrasound imaging system for guiding minimally invasive procedures with peripheral tissue targets</p> <p>Mithun Kuniyil Ajith Singh, et al <i>PreXion Corporation</i></p>	<p><b>3C-5</b> HER2 Targeted Perfluorocarbon Nanodroplets for Super-Resolution Ultrasound Imaging</p> <p>Austin Van Namen, et al <i>Dartmouth College</i></p>	<p><b>4C-5</b> Dynamics and Mechanisms of Ultrasound and Microbubble Facilitated Intracellular Plasmid DNA Uptake</p> <p>Ning Rong, et al <i>Tianjin University</i></p>	<p><b>5C-5</b> Hafnium nitride as high acoustic impedance material for fully insulating acoustic reflectors</p> <p>Mario DeMiguel-Ramos, et al <i>University of Cambridge</i></p>	<p><b>6C-5</b> Full-field Laser-Ultrasound for Practical Nondestructive Inspection</p> <p>Eric Flynn, et al <i>Los Alamos National Laboratory</i></p>	<p><b>7C-5</b> Establishing Reliable Reference Values for Ultrasound Pulse Wave Velocity Measurement Methods: An Arterial Phantom Validation Study</p> <p>Adrian J. Y. Chee, et al <i>University of Waterloo</i></p>	<p><b>8C-4</b> Microbubble Contrast Agent Imaging Using Multi-Frequency CMUT Arrays</p> <p>Mohammad Maadi, et al <i>University of Alberta</i></p>
05:15 pm	<p><b>1C-5</b> The continuous cardiac thick-slice acquisition - for simultaneous flow and tissue motion estimation</p> <p>Morten Wigén, et al <i>NTNU</i></p>	<p><b>2C-6</b> Characterizing non-resolvable tissue structures in photoacoustic imaging</p> <p>Eno Hysi, et al <i>Ryerson University</i></p>	<p><b>3C-6</b> High-frequency molecular ultrasound imaging using targeted phase-change nanodroplets</p> <p>Trevor Mitcham, et al <i>MD Anderson Cancer Center</i></p>	<p><b>4C-6</b> New Insights in the Actin Cytoskeleton Dynamics of the Sonoporated Human Umbilical Vein Endothelial Cells</p> <p>Caixia Jia, et al <i>Shanghai Jiao Tong University</i></p>	<p><b>5C-6</b> Alloy Engineered Single Crystal BAW RF Filters for 5-6GHz Applications</p> <p>Ramakrishna Vetury, et al <i>Akoustis</i></p>		<p><b>7C-6</b> An ultrasound phantom material with unique features: changing viscoelastic properties while keeping the speed of sound constant</p> <p>Benjamin Meirza, et al <i>Lund University</i></p>	<p><b>8C-5</b> Broadband vs. sensitive CMUT linear array: a comparative study from bare chip up to the image</p> <p>Maxime Hery, et al <i>Tours University</i></p>

09:30 am - 04:00 pm		Poster --- Tuesday, October 23			Kairaku (posters 1)	
<p><b>Session P1-A2.</b> <b>Cell Stimulation, HIFU, and Pressure Measurement</b></p> <p><i>Chair: Brandon Helfield</i> <i>University of Toronto</i></p>		<p><b>Session P1-A3.</b> <b>Multifunctional Bubbles and Applications</b></p> <p><i>Chair: Agata Exner</i> <i>Case Western Reserve University</i></p>		<p><b>P1-A4-3</b> Contrast-Enhanced Time-Resolved Vector Flow Imaging of Urinary Flow Dynamics</p> <p>Takuro Ishii, et al <i>University of Waterloo</i></p>	<p><b>P1-A5-7</b> Toward a Shear Wave Based Mode to Sonographically Monitor the Enrichment of Iron Oxide Nanoparticles in Drug Targeting Applications</p> <p>Michael Fink, et al <i>University of Erlangen-Nuremberg</i></p>	<p><b>P1-A7-2</b> Receive angle steering and clutter reduction for imaging the speed-of-sound inside large blood vessels</p> <p>Maju Kuriakose, et al <i>University of Bern</i></p>
<p><b>P1-A2-1</b> Behavioral responses of ultrasonic neuromodulation in freely moving mice</p> <p>Guofeng Li, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	<p><b>P1-A3-1</b> Biomimetic synthesis of neutrophil-microbubble for robust in vivo targeting of atherosclerotic vulnerable plaques</p> <p>yang mao, et al <i>The Key Laboratory of Cardiovascular Remodeling and Function Research, Chinese Ministry of Education</i></p>	<p><b>P1-A4-4</b> Characterization of Heterogeneous Perfusion in Contrast-enhanced Ultrasound</p> <p>Michelle Kleckler, et al <i>University of Minnesota Twin Cities</i></p>	<p><b>P1-A5-8</b> Shear Wave Computed Tomography with Directional Filtering</p> <p>Chia-Lin Lee, et al <i>National Taiwan University</i></p>	<p><b>P1-A7-3</b> Computationally Efficient Spatially Variant Deconvolution in Ultrasound Imaging</p> <p>Mihai Florea, et al <i>Aalto University</i></p>		
<p><b>P1-A2-2</b> Ultrasound stimulation of dopamine neurons in the ventral tegmental area induces reanimation from general anesthesia</p> <p>Tianyuan Bian, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	<p><b>P1-A3-2</b> In vivo acoustic trapping of microbubbles by a resonant stent</p> <p>Fei li, et al <i>shenzhen institutes of advanced technology, Chinese academy of sciences</i></p>	<p><b>P1-A4-5</b> Validation of NSSA-based filtering using differential targeted enhancement</p> <p>Elizabeth B. Herbst, et al <i>University of Virginia</i></p>	<p><b>Session P1-A6.</b> <b>Cardiovascular Elasticity Imaging</b></p> <p><i>Chair: Hendrik Hansen</i> <i>Radboud University Medical Center</i></p>		<p><b>P1-A7-4</b> Development of extended field of view, extended aperture and 3D spatial compounding of 3D images to improve ultrasound-based localization of the uterus for radiotherapy treatment</p> <p>Sarah Mason, et al <i>Institute of Cancer Research</i></p>	
<p><b>P1-A2-3</b> Ultrasound brain stimulation via activation of Piezo1</p> <p>Zhihai Qiu, et al <i>The Hong Kong Polytechnic University</i></p>	<p><b>P1-A3-3</b> Ultrasound Driven Penetration of Gold Nanocones in a Tissue Model</p> <p>Xiaoqian Su, et al <i>Nanyang Technological University</i></p>	<p><b>P1-A4-6</b> Dynamic contrast enhanced ultrasound imaging; the effect of imaging modes and parameter settings for a microvascular phantom</p> <p>Elahe Moghimirad, et al <i>Joint Department of Physics and CRUK Cancer Imaging Centre, The Institute of Cancer Research and Royal Marsden NHS Foundation Trust, Sutton, London</i></p>	<p><b>P1-A6-1</b> Estimation of the spatial resolution of a 2D strain estimator using synthetic cardiac images</p> <p>Bidisha Chakraborty, et al <i>KU Leuven</i></p>	<p><b>P1-A7-5</b> A new adaptive frequency compounding method based on a saliency map</p> <p>Sunyoung Oh, et al <i>SOGANG UNIVERSITY</i></p>		
<p><b>P1-A2-4</b> Transcranial focus ultrasound stimulation modulates saccadic behaviors in monkey</p> <p>Xiaojing Long, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	<p><b>P1-A3-4</b> Indirect assessment of nanobubble size through agarose trapping and ultrasound M-Mode imaging</p> <p>Michael Moore, et al <i>Ryerson University</i></p>	<p><b>P1-A4-7</b> A fluid dynamic model for quantitative contrast-enhanced ultrasound imaging: validation for the assessment of uteroplacental perfusion</p> <p>Baudouin Denis de Senneville, et al <i>Institut de Mathématiques de Bordeaux</i></p>	<p><b>P1-A6-2</b> Investigating the degree of shear wave speed anisotropy in function of studied ventricular zone</p> <p>Annette Caenen, et al <i>Ghent University</i></p>	<p><b>P1-A7-6</b> Transcranial Imaging Using Coded Multiple Transmit Focus Wavefront Synthesis</p> <p>Parker O'Brien, et al <i>University of Minnesota Twin Cities</i></p>		
<p><b>P1-A2-5</b> High Intensity Focused Ultrasound Induced Assembly of Suprametallomolecular Hydrogel</p> <p>Umesh Jonnalagadda, et al <i>Nanyang Technological University</i></p>	<p><b>P1-A3-5</b> Acoustic characterization of microbubbles with indocyanine green derivatives for dual contrast imaging using ultrasound and near infrared fluorescence</p> <p>Kenji Yoshida, et al <i>Chiba University</i></p>	<p><b>Session P1-A5.</b> <b>New Elasticity Imaging Methods</b></p> <p><i>Chair: Arun Kumar Thittai</i> <i>IIT Madras</i></p>		<p><b>P1-A6-3</b> High frame rate imaging to assess myocardial contractility</p> <p>Marta Orłowska, et al <i>KU Leuven</i></p>	<p><b>P1-A7-7</b> Shear shock wave focusing in human skull phantom: observations with high-frame rate ultrasound imaging and matched simulations</p> <p>Bharat Tripathi, et al <i>University of North Carolina-Chapel Hill</i></p>	



<p><b>P1-A2-6</b> On the use of spatial coherence for in situ peak rarefaction pressure estimation</p> <p>Bofeng Zhang, et al <i>Duke University</i></p>	<p><b>P1-A3-6</b> Porphyrin/Camptothecin-Fluorouracil Triad Microbubbles Along with Ultrasound and Photodynamic Therapy for Overcoming Multidrug Resistance in Colorectal Cancer</p> <p>Min Chen, et al <i>Department of Biomedical Engineering, Peking University</i></p>	<p><b>P1-A5-1</b> Hybrid elastography: a new technique for the assessment of tissue stiffness.</p> <p>Hugo Lorée, et al <i>Echosens</i></p>	<p><b>P1-A6-4</b> Imaging the contraction of mechanically supported ex vivo beating hearts</p> <p>Louis Fixsen, et al <i>Eindhoven University of Technology</i></p>	<p><b>P1-A7-8</b> 3D Motion Correction for Volumetric Super-Resolution Ultrasound Imaging</p> <p>Sevan Harput, et al <i>Imperial College London</i></p>		
<p><b>P1-A2-7</b> Ultrasound stimulates insulin secretion via activating mechanical sensitive ion channels in pancreatic islet <math>\beta</math> cells</p> <p>Jinghui Guo, et al <i>The Hong Kong Polytechnic University</i></p>	<p><b>P1-A3-7</b> Ultrasound contrast agent of camptothecin-fluorouracil microbubbles for achieving in situ tumor drug accumulation and enhancing combined chemotherapeutic efficacy</p> <p>Xiaolong Liang, et al <i>Peking University Third Hospital</i></p>	<p><b>P1-A5-2</b> Design and Experimental Validation of Miniature External Mechanical Vibrators towards Clinical Ultrasound Shear Wave Elastography</p> <p>Heng Yang, et al <i>MIT</i></p>	<p><b>P1-A6-5</b> Bi-directional Ultrasound Assessment of Nonlinear Mechanical Behavior of Physiologically Pressurized Artery in Both Normal and Hardening Conditions</p> <p>Yahua Wang, et al <i>The University of Hong Kong</i></p>	<p><b>P1-A7-9</b> A Harmonic Motion Imaging (HMI) clinical system for detection and characterization of in-vivo human breast tumors – Initial feasibility</p> <p>Niloufar Saharkhiz, et al <i>Columbia University</i></p>		
<p><b>P1-A2-8</b> Study on dependence of mechanotransduction sensitivity on cytoskeletal development using cultured cardiomyocytes.</p> <p>Shota Negishi, et al <i>Hokkaido University</i></p>	<p><b>P1-A3-8</b> The Effect of Lipid Solubilization on the Performance of Doxorubicin-loaded Nanobubbles</p> <p>Pinunta Nittayacharn, et al <i>Case Western Reserve University</i></p>	<p><b>P1-A5-3</b> Quantitative quasi-static ultrasound elastography using reference layer: A preliminary Assessment</p> <p>Sathiyamoorthy Selladurai, et al <i>Indian Institute of Technology Madras(IITM)</i></p>	<p><b>P1-A6-6</b> In Vivo Pulse Wave Imaging for Mice Carotid Artery Based on 40 MHz Array Ultrafast Ultrasound Vector Velocity Estimation</p> <p>Yi-Jie Wang, et al <i>National Cheng Kung University</i></p>	<p><b>P1-A7-10</b> Quantitative analysis of uterine motion outside pregnancy by dedicated ultrasound speckle tracking</p> <p>Federica Sammali, et al <i>Eindhoven University of Technology</i></p>		
<p><b>P1-A2-9</b> Real-time field mapping using an ultrasound scanner</p> <p>Kazuhiro Matsui, et al <i>INSERM</i></p>	<p><b>Session P1-A4.</b> <b>Contrast-Enhanced Ultrasound</b></p> <p><b>Chair: Hairong Zheng</b> <i>Shenzhen Institutes of Advanced Technology</i></p>		<p><b>P1-A5-4</b> A Convolution Neural Network-based Speckle Tracking Method for Ultrasound Elastography</p> <p>Bo Peng, et al <i>Southwest Petroleum University</i></p>	<p><b>P1-A6-7</b> High Spatio-Temporal Resolution Arterial Pulse Wave Assessment Using Multiplane Wave Sliding Decoding Sequence</p> <p>Jinbum Kang, et al <i>Sogang University</i></p>	<p><b>P1-A7-11</b> Characterization of the performances of 4D DCE-US</p> <p>Virginie Grand-Perret, et al <i>IR4M UMR8081 (CNRS, Univ. Paris-Sud, Université Paris-Saclay)</i></p>	
<p><b>P1-A2-10</b> Retrospective analysis and theoretical simulation of the first HIFU treatment point of iso-intense uterine fibroids on T2WI: a retrospective comparative study</p> <p>Faqi Li, et al <i>Chongqing Medical University</i></p>	<p><b>P1-A4-1</b> 3D local convective-dispersion characterisation in dynamic contrast-enhanced ultrasound recordings based on a finite-element scheme</p> <p>Rogier R. Wildeboer, et al <i>Eindhoven University of Technology</i></p>	<p><b>P1-A5-5</b> Mechanical waves in time-dependent media may offer a new view on tissue elasticity imaging</p> <p>Alberico Sabbadini, et al <i>Delft University of Technology</i></p>	<p><b>Session P1-A7.</b> <b>New Methods and Techniques for Imaging</b></p> <p><b>Chair: Hiroshi Kanai</b> <i>Tohoku University</i></p>		<p><b>Session P1-A8.</b> <b>Image Guidance and Acoustic Microscopy</b></p> <p><b>Chair: Shinichiro Umemura</b> <i>Tohoku University</i></p>	
<p><b>P1-A2-11</b> Investigation on interaction between ultrasound and living tissue</p> <p>Satoshi Sobue, et al <i>The University of Tokyo</i></p>	<p><b>P1-A4-2</b> Contrast-agent detection using orthogonal decoding with pulse-inversion harmonic suppression in Hadamard-encoded multi-pulses (HEM) transmission</p> <p>Che-Chou Shen, et al <i>National Taiwan University of Science and Technology</i></p>	<p><b>P1-A5-6</b> Non-contact sub-surface elastography using airborne ultrasound surface motion camera</p> <p>Antoine Aminot, et al <i>Institut Langevin, CNRS, ESPCI Paris, PSL Research University</i></p>	<p><b>P1-A7-1</b> Characterization of B-mode image quality using lag-one coherence (LOC)</p> <p>Will Long, et al <i>Duke University</i></p>	<p><b>P1-A8-1</b> 3-D observation of punctual needle by 2-D shear wave imaging under forced vibration of needle</p> <p>Yoshiki Yamakoshi, et al <i>Gunma University</i></p>		

09:30 am - 04:00 pm		Poster --- Tuesday, October 23			Kairaku (posters 1)
<p><b>P1-A8-2</b> In vivo microultrasound visualisation of nerve trauma due to regional anaesthesia needle insertion and injection</p> <p>Anu Chandra, et al University of Dundee</p>	<p><b>P1-A9-7</b> Enhanced Second Harmonic Imaging using a Pulse Compression Technique Combined with Ultrasound Pulse Inversion</p> <p>Yanis Mehdi Benane, et al Univ.Lyon, INSA-Lyon, UCBL1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206</p>	<p><b>P1-A11-3</b> Rapid Histotripsy Treatment Using Protocol of Fundamental and Second Harmonic Superposition Combined with Hundred-Microsecond Ultrasound Pulses with Sector Array Approach: Initial Experiments</p> <p>Mingzhu Lu, et al The key Laboratory of Biomedical Information Engineering of Ministry of Education, Xian Jiaotong Univ.</p>	<p><b>P1-A12-4</b> High Voltage Excitation and Nonlinear Transmission of a 16 MHz AIN-Based Piezoelectric Micro-Machined Ultrasonic Transducer</p> <p>Wen-Juan Liu, et al IEMN-DOAE</p>	<p><b>P1-A13-6</b> Tunable Manipulation of Microparticles by CMUT</p> <p>Changde He, et al North University of China</p>	
<p><b>P1-A8-3</b> Thermal Strain Imaging for Sonodynamic Therapy Monitoring: ex vivo and in vivo Feasibility Studies</p> <p>Fu-Feng Lee, et al Department of Biomedical Engineering, Tsinghua University</p>	<p><b>Session P1-A10. Cardiovascular System</b></p> <p><i>Chair: Chih-Chung Huang</i> National Cheng Kung University</p>	<p><b>P1-A11-4</b> Thrombotripsy for venous recanalization using a high frequency transducer of 2.25MHz in a porcine model of femoral venous thrombosis</p> <p>Guillaume Goudot, et al Institut Langevin, INSERM U979</p>	<p><b>P1-A12-5</b> A Row-Column-Addressed 2D Probe with an Integrated Compound Diverging Lens</p> <p>Mathias Engholm, et al Technical University of Denmark</p>	<p><b>P1-A13-7</b> A 50MHz CMUT Probe for Medical Ultrasound Imaging</p> <p>Steve Zhuang, et al Kolo Medical Inc.</p>	
<p><b>P1-A8-4</b> Reconstruction of Quantitative Acoustic Microscopy Images from RF Signals Sampled at Innovation Rate</p> <p>Jong-Hoon Kim, et al University of Toulouse</p>	<p><b>P1-A10-1</b> Characterizing the erythrocyte aggregation using the anisotropy of ultrasonic backscatter</p> <p>Julien Rouyer, et al Aix-Marseille universit�, CNRS, Centrale Marseille</p>	<p><b>P1-A11-5</b> Generation of medium-high intensity focused acoustic vortex and its application in sonothrombolysis</p> <p>Shifang Guo, et al School of Life Science and Technology, Xi'an Jiaotong University</p>	<p><b>P1-A12-6</b> Flexible piezoelectric micromachined ultrasonic transducers towards new applications</p> <p>Sheng Sun, et al Tianjin University</p>	<p><b>P1-A13-8</b> CMUT surface functionalization with imine-based polymer for SO2 gas detection applications</p> <p>Dovydas Barauskas, et al Kaunas University of Technology</p>	
<p><b>P1-A8-5</b> A Study for B-Mode Imaging using 100-MHz-Range Ultrasound through a Fused Quartz Fiber</p> <p>Takasuke Irie, et al Microsonic Co., Ltd</p>	<p><b>P1-A10-3</b> Coronary Plaque Characterization from IVUS Image by using Artificial Intelligence Technique</p> <p>Yi-Chen Li, et al National Cheng Kung University</p>	<p><b>P1-A11-6</b> Dual-frequency ultrasound thrombolysis using a high intensity focused ultrasound transducer array</p> <p>Wu Sun, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>P1-A12-7</b> A Study on Structural Parameters for Optimizing Wide-band Property of Diaphragm-Type Transducer Using Piezoelectric Thick Film</p> <p>Yuya Ishiguro, et al Tokyo Metropolitan University</p>	<p><b>P1-A13-9</b> Analysis and Design of High Frequency CMUT Arrays in Non-Collapsed Mode</p> <p>Evren Arkan, et al Georgia Institute of Technology</p>	
<p><b>P1-A8-6</b> In vitro volume imaging of articular cartilage using chirped coded high frequency ultrasound</p> <p>Anowarul Habib, et al UIT The Arctic University of Norway</p>	<p><b>P1-A10-4</b> Quantitative ultrasound spectroscopy measurements of erythrocyte aggregation within superficial veins</p> <p>Guy Cloutier, et al University of Montreal Hospital</p>	<p><b>P1-A11-7</b> High intensity focused ultrasound (HIFU) combines shear wave optical coherence elastography (SW-OCE) for diseases treatment and evaluation</p> <p>Kanheng Zhou, et al University of Dundee</p>	<p><b>P1-A12-8</b> A 6-Degree-of-Freedom Piezoelectric Vibration Microstage with Reduced Cross-Axis Coupling</p> <p>Yi Zhang, et al University of Electronic Science and Technology of China</p>		
<p><b>Session P1-A9. Leveraging Deep Learning and Pulse Compression</b></p> <p><i>Chair: Mathieu Pernot</i> INSERM</p>	<p><b>P1-A10-5</b> Experimental verification of relationship between red blood cell aggregation degree and peak frequency of ultrasonic reflection spectrum with real blood</p> <p>Takayuki Sato, et al Tokyo Metropolitan University</p>	<p><b>P1-A11-8</b> Low-cost ultrasound thermometry for HIFU therapy using CNN</p> <p>Younsou Kim, et al Johns Hopkins University</p>	<p><b>P1-A12-9</b> Electrical Tuning of Focal Size with Single Focused Ultrasonic Transducer</p> <p>Yongkui Tang, et al University of Southern California</p>		

<p><b>P1-A9-1</b> Learning Doppler with convolutional neural networks (DopplerNet) and its application to intra-cardiac echography</p> <p>Ruud J. G. van Sloun, et al Eindhoven University of Technology</p>	<p><b>P1-A10-6</b> Red blood cell aggregation measurement with 40-MHz ultrasound has a possibility for noninvasive evaluation of blood glucose level in patients with diabetes</p> <p>Kanta Nagasawa, et al Tohoku University</p>	<p><b>P1-A11-9</b> Feasibility Study on Noise Reduction Using Continuous Wave Response of Therapeutic Ultrasound for High Intensity Focused Ultrasound Treatment</p> <p>Ryo Takagi, et al National Institute of Advanced Industrial Science and Technology (AIST)</p>	<p><b>Session P1-A13.</b> <b>Micromachined Transducers - II</b></p> <p><i>Chair: Omer Oralkan</i> North Carolina State University</p>
<p><b>P1-A9-2</b> WaveFlow – Towards Integration of Ultrasound Processing with Deep Learning</p> <p>Piotr Jarosik, et al Institute of Fundamental Technological Research, Polish Academy of Sciences</p>	<p><b>P1-A10-7</b> Nonlinearly Generated Second Harmonic Ultrasonic Backscatter for Determining Composition of Human Carotid Plaque</p> <p>Russell Fedewa, et al Cleveland Clinic</p>	<p><b>P1-A11-10</b> Patched Optimal Scanning Pathway with Brute-force Approach for Time Reduction in High Intensity Focused Ultrasound Treatment</p> <p>Euisuk Chung, et al Sogang University</p>	<p><b>P1-A13-1</b> A 120+120-Element Crisscross CMUT Probe with Real-Time Switchable Electronic and Fresnel Focusing Capabilities</p> <p>Alessandro Stuart Savoia, et al Roma Tre University</p>
<p><b>P1-A9-3</b> Localization of partially visible needles in 3D ultrasound using dilated convolutional neural networks</p> <p>Arash Pourtaherian, et al Eindhoven University of Technology</p>	<p><b>P1-A10-8</b> Laser-generated focused ultrasound back-scattered signal analysis for differentiating blood and clot: A quantitative study</p> <p>Deblina Biswas, et al Sungkyunkwan University</p>	<p><b>Session P1-A12.</b> <b>Micromachined Transducers - I</b></p> <p><i>Chair: Omer Oralkan</i> North Carolina State University</p>	<p><b>P1-A13-2</b> CMUT based air coupled transducers for gas-mixture analysis</p> <p>Priyadarshini SHANMUGAM, et al GREMAN UMR-CNRS 7347, Université de TOURS</p>
<p><b>P1-A9-4</b> Grading severity of rheumatoid arthritis on ultrasound images with deep convolutional neural networks</p> <p>Jian Tang, et al Nanjing University</p>	<p><b>Session P1-A11.</b> <b>Histotripsy, Sonothrombolysis and HIFU</b></p> <p><i>Chair: Shin Yoshizawa</i> Tohoku University</p>	<p><b>P1-A12-1</b> Efficiency and bandwidth of experimental capacitive and commercial piezo transducers</p> <p>Borislav Gueorguiev Tomov, et al Technical University of Denmark</p>	<p><b>P1-A13-3</b> CMUT-based single element transducer applied to 1D transient ultrasound elastography</p> <p>Dominique Certon, et al Tours University</p>
<p><b>P1-A9-5</b> Improved Decorrelation Based Elevational Motion Estimation with Singular Value Decomposition and Machine Learning</p> <p>Ching-Yen Lee, et al National Taiwan University</p>	<p><b>P1-A11-1</b> Non-invasive Histotripsy Aberration Correction for Soft-Tissue using Cavitation-induced Shockwaves</p> <p>Jonathan Macoskey, et al University of Michigan</p>	<p><b>P1-A12-2</b> A PMUT array with dynamic directivity: A study of its underwater acoustic power intensity</p> <p>Sina Sadeghpour, et al KU Leuven</p>	<p><b>P1-A13-4</b> Capacitance-Voltage Characterization of CMUT Arrays: Analytical modeling, simulations, and experiments</p> <p>Erik Thomsen, et al Technical University of Denmark</p>
<p><b>P1-A9-6</b> Ultrasound Probe Bandwidth Enhancement Combined with Non-Stationary Compression Filters to Improve Image Quality</p> <p>Yanis Mehdi Benane, et al Univ.Lyon, INSA-Lyon, UCBL1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206, Lyon</p>	<p><b>P1-A11-2</b> Histotripsy Volume Ablation Enabled by Electronic Focal Steering and Bubble Coalescence</p> <p>Jonathan Lundt, et al University of Michigan</p>	<p><b>P1-A12-3</b> Study on Wide-band Piezoelectric Micro-machined Ultrasound Transducers (pMUT) by Combined Resonance Frequencies and Controlling Poling Directions.</p> <p>Kenji Suzuki, et al KONICAMINOLTA, INC.</p>	<p><b>P1-A13-5</b> Electrode resistance considerations for large CMUT arrays</p> <p>Andreas Havreland, et al Technical University of sDenmark</p>

09:30 am - 04:00 pm		Poster --- Tuesday, October 23			Waraku (posters 2)	
<p><b>Session P2-A1.</b> <b>PTF &amp; PTE: Thin Films and High Power Ultrasonics</b></p> <p><i>Chair: Koen W.A. van Dongen</i> <i>TU Delft</i></p>		<p><b>P2-A2-3</b> Effect of Backing on Carbon-Polymer Nanocomposite Sources for Laser Generation of Broadband and High Amplitude Ultrasound</p> <p>Srinath Rajagopal, et al <i>University College London</i></p>	<p><b>P2-A3-6</b> Plane-Wave Phase Coherence Imaging with Singular Value Decomposition</p> <p>Hideyuki Hasegawa, et al <i>University of Toyama</i></p>	<p><b>P2-A4-8</b> In Vivo 40 MHz Ultrafast Ultrasound Vector Doppler Imaging (VDI) for Mice Carotid Artery</p> <p>Hsin Huang, et al <i>National Cheng Kung University</i></p>	<p><b>P2-A6-3</b> Deep learning for limited-view photoacoustic tomography reconstruction</p> <p>Yuan Zhou, et al <i>Tsinghua University</i></p>	
<p><b>P2-A1-1</b> DC-induced piezoelectric cubic PMN-PT/ piezoelectric tetragonal PZT epitaxial stack polarity inverted resonators for frequency switchable filters</p> <p>Takahiro Shimidzu, et al <i>Waseda University</i></p>	<p><b>P2-A2-4</b> Magnetically mediated thermoacoustic signal enhanced by coupled magnetic resonance</p> <p>Yunqi Luo, et al <i>Nanyang Technological University</i></p>	<p><b>P2-A3-7</b> Low-complexity Delay-Multiply-and-Sum (DMAS) beamforming using baseband spatial coherence</p> <p>Che-Chou Shen, et al <i>National Taiwan University of Science and Technology</i></p>	<p><b>Session P2-A5.</b> <b>Novel Instrumentation and Approaches in Photoacoustic Imaging</b></p> <p><i>Chair: Sophine Iskander-Rizk</i> <i>Erasmus Medical Center</i></p>		<p><b>P2-A6-4</b> Using deep neural networks to remove photoacoustic reflection artifacts in ex vivo tissue</p> <p>Derek Allman, et al <i>Johns Hopkins University</i></p>	
<p><b>P2-A1-2</b> Evaluation of frequency shifts in thickness-shear mode resonator consisting of c-axis parallel oriented ZnO film for viscosity measurement</p> <p>Masaya Miyata, et al <i>Doshisha university</i></p>	<p><b>P2-A2-5</b> Improved lateral resolution using sub pitch sampling of ultrasound data for pulsed laser diode-based photoacoustic imaging</p> <p>Sowmiya Chandramoorthi, et al <i>Indian Institute of Technology Madras(IITM)</i></p>	<p><b>P2-A3-8</b> Phase aberration correction of focused ultrasound by optimized refraction-compensation method</p> <p>Jun Yasuda, et al <i>Hitachi, Ltd.</i></p>	<p><b>P2-A5-1</b> An automated breast ultrasound scanner with integrated Doppler flow imaging and shear wave elastography</p> <p>Corey Kelly, et al <i>University of British Columbia</i></p>	<p><b>Session P2-A7.</b> <b>Industrial Applications</b></p> <p><i>Chair: Kentaro Nakamura</i> <i>Tokyo Institute of Technology</i></p>		
<p><b>P2-A1-3</b> ScAlN free-standing 0.1 mm plates with 30-50 MHz resonance frequency</p> <p>Chiaki Masamune, et al <i>Waseda University</i></p>	<p><b>P2-A2-6</b> Analysis of Elastic Vortex Waves for Optical Orbital-Angular-Momentum Mode Conversion by Acoustooptic Interaction</p> <p>Takuya Shoro, et al <i>Tokushima University</i></p>	<p><b>P2-A3-9</b> A New Compounding Method for High Contrast Ultrafast Ultrasound Imaging Based on Delay Multiply and Sum</p> <p>Dooyoung Go, et al <i>Sogang University</i></p>	<p><b>P2-A5-2</b> 3D Photoacoustic and Ultrafast Ultrasound Volumetric Flow Imaging with a Bias-Switchable Row-Column 2D Array</p> <p>Chris Ceroici, et al <i>University of Alberta</i></p>	<p><b>P2-A7-1</b> Evaluation of engine oil deterioration using shear horizontal surface acoustic wave sensor based on acoustoelectric interaction</p> <p>Saya Kobayashi, et al <i>Shizuoka University</i></p>		
<p><b>P2-A1-4</b> Picosecond-ultrasound study on interlayer interaction of monocrystal graphite</p> <p>Atsuki Wake, et al <i>Osaka University</i></p>	<p><b>P2-A2-7</b> Acousto-Optic Modulator Driven by Longitudinal Leaky Surface Acoustic Waves on Bonded Structures</p> <p>Kentaro Hakiri, et al <i>Integrated Graduate School of Medicine, Engineering, and Agricultural Sciences, University of Yamanashi</i></p>	<p><b>P2-A3-10</b> A real-time lag one coherence tool for adaptive imaging</p> <p>Nick Bottenus, et al <i>Duke University</i></p>	<p><b>P2-A5-3</b> Laser-generated focused ultrasound system using CNT-PDMS optoacoustic lenses for micro-precision tissue treatment</p> <p>Jeongmin Heo, et al <i>Sungkyunkwan university</i></p>	<p><b>P2-A7-2</b> Application of Ultrasonic Assisted End Milling for Glass Material</p> <p>Akira Yoneyama, et al <i>Yamanashi Industrial Technology Center</i></p>		
<p><b>P2-A1-5</b> Morphology Change of Ultrathin Films Studied by Noncontact Piezoelectric Resonance Method</p> <p>Tomoya Ueno, et al <i>Osaka University</i></p>	<p><b>P2-A2-8</b> Minimization of group delay dispersion for platelet piezoelectric transducers of acousto-optic devices</p> <p>Vladimir Molchanov, et al <i>National University of Science and Technology MISIS</i></p>	<p><b>Session P2-A4.</b> <b>Vector Flow Measurements</b></p> <p><i>Chair: Adrian Chee</i> <i>University of Waterloo</i></p>		<p><b>P2-A5-4</b> The effectiveness of the omnidirectional illumination in full-ring photoacoustic tomography</p> <p>Suhail Alshahrani, et al <i>Wayne State University</i></p>	<p><b>P2-A7-3</b> An ultrasonic flextensional array for acoustic emission techniques on concrete structures</p> <p>Monica La Mura, et al <i>University of Salerno</i></p>	

<p><b>P2-A1-6</b> Deposition of Pd semicontinuous films using resistive spectroscopy for hydrogen sensor</p> <p>Nobutomo Nakamura, et al Osaka University</p>	<p><b>Session P2-A3.</b> <b>Adaptive Beamforming</b></p> <p><i>Chair: Francois Varray</i> INSA Lyon</p>	<p><b>P2-A4-1</b> Quantitative vascular blood flow imaging: A comparison of vector velocity estimation schemes</p> <p>Ingvild Kinn Ekroll, et al CIUS, Norwegian University of Science and Technology, NTNU</p>	<p><b>P2-A5-5</b> Internal-illumination Photoacoustic Computed Tomography with 15-cm Penetration Depth</p> <p>Mucong Li, et al Duke University</p>	<p><b>P2-A7-4</b> Modelling and electrical characterization of a cantilever mechanical energy harvester</p> <p>Thien Hoang, et al Vermont SA</p>
<p><b>P2-A1-7</b> Investigation of morphotropic phase boundary in sputter-grown Pb(Zrx,Ti1-x)O3 epitaxial films</p> <p>Ryuta Noda, et al Waseda University</p>	<p><b>P2-A3-1</b> A New Compensated Coherence Factor Beamforming Method for Ultrasound B-mode Imaging: Preliminary Evaluation in Simulation and in-vivo Breast Studies</p> <p>Youngjo Oh, et al Sogang University</p>	<p><b>P2-A4-2</b> Intraventricular blood velocity measurements – a comparison between iVFM and blood speckle tracking</p> <p>Magnus Sælemnsminde, et al Norwegian University of Science and Technology (NTNU)</p>	<p><b>P2-A5-6</b> Axial-Resolution Improved Optical Resolution Photoacoustic Microscopy Using Minimum-Variance Spectral Apodization and Coherence Weighting</p> <p>Hong-Sheng Chen, et al National Tsing Hua University</p>	<p><b>Session P2-A8.</b> <b>NDE</b></p> <p><i>Chair: Robert Addison</i> Rockwell Science Center</p>
<p><b>P2-A1-8</b> Polymer films joining with High-Intensity Focused Ultrasound: investigation of the physical principles</p> <p>Coralie Koo Sin Lin, et al Technische Universität Dresden</p>	<p><b>P2-A3-2</b> Short-lag Spatial Coherence Imaging in 1.5-D and 1.75-D Arrays: Beamforming and Array Design Considerations</p> <p>Matthew Morgan, et al Duke University</p>	<p><b>P2-A4-3</b> High Frequency Ultrafast Ultrasound Vector Flow Imaging for Mice Brain Without Contrast Agents</p> <p>Chin-Fang Hsieh, et al National Cheng Kung University</p>	<p><b>P2-A5-7</b> Simultaneous photoacoustic and ultrasound imaging using a hemispherical sensor array</p> <p>Shunto Takaoka, et al Kyoto University</p>	<p><b>P2-A8-1</b> A GPU-based Portable Phased-Array System with Full-Matrix Capture</p> <p>Marcin Lewandowski, et al Institute of Fundamental Technological Research, Polish Academy of Sciences</p>
<p><b>Session P2-A2.</b> <b>POA: Opto-Acoustics</b></p> <p><i>Chair: Koen W.A. van Dongen</i> TU Delft</p>	<p><b>P2-A3-3</b> Benefits of adaptive beamforming methods for contrast enhanced high frame-rate ultrasound</p> <p>Antonio Stanzola, et al Imperial College London</p>	<p><b>P2-A4-4</b> Vortex Ring Phantom for Investigation of Ultrasound Vector Flow Imaging</p> <p>Emilia Badescu, et al Université de Lyon, CREATIS ; CNRS UMR5220 ; Inserm U1206 ; INSA-Lyon ; Université Lyon 1, France</p>	<p><b>Session P2-A6.</b> <b>All-Optical Photoacoustic Imaging and Computational Approaches</b></p> <p><i>Chair: Meng-Lin Li</i> National Tsing Hua University</p>	<p><b>P2-A8-2</b> Stress dependence of magnetic hysteresis properties through acoustically stimulated electromagnetic response in steel</p> <p>Yuhei Suzuki, et al Tokyo Univ. of A &amp; T</p>
<p><b>P2-A2-1</b> Sparsity-promoting opto-acoustic imaging with source estimation</p> <p>Rajiv Kumar, et al Georgia Institute of Technology</p>	<p><b>P2-A3-4</b> A dynamic generalized coherence factor based on Van Cittert-Zernike theorem</p> <p>Ali Fatemi, et al NTNU</p>	<p><b>P2-A4-5</b> Inter-leaved Synthetic Aperture Sequences for Measuring High Vector Flow Velocities</p> <p>Jørgen Jensen, et al Technical University of Denmark</p>	<p><b>P2-A6-1</b> Dual-modality All-Optical Ultrasound and Photoacoustic Imaging Using Permanent Marker Ink</p> <p>Richard Colchester, et al University College London</p>	<p><b>P2-A8-3</b> Defect detection in billet using plane-wave and time-of-flight deviation with transmission method</p> <p>Ryusuke Miyamoto, et al University of Tsukuba</p>
<p><b>P2-A2-2</b> Regularized Capon Beamformer using L1-Norm Applied to Photoacoustic Imaging</p> <p>Roya Paridar, et al Tarbiat Modares University</p>	<p><b>P2-A3-5</b> Adaptive loading in minimum variance beamforming for passive imaging of acoustic cavitation</p> <p>Tao Sun, et al Brigham and Women's Hospital, Harvard Medical School</p>	<p><b>P2-A4-7</b> Simultaneous Tissue and Flow Estimation using Plane Waves and Transverse Oscillation on In Vivo Carotid</p> <p>Vincent Perrot, et al Univ.Lyon, INSA-Lyon, UCB Lyon 1, UJM-Saint Etienne, CNRS, Inserm</p>	<p><b>P2-A6-2</b> Adaptive All-Optical Ultrasound Imaging through Temporal Modulation of Excitation Light</p> <p>Erwin Alles, et al University College London</p>	<p><b>P2-A8-4</b> Study about non-contact measurement of the acoustic property in an incline-sided tissue using pass-through airborne ultrasound</p> <p>Shinnosuke Hirata, et al Tokyo Institute of Technology</p>



Key: Group 1  Group 2  Group 3  Group 4  Group 5 

09:30 am - 04:00 pm	Poster --- Tuesday, October 23			Waraku (posters 2)
<p><b>P2-A8-5</b> Ultrasonic Pattern Recognition Algorithm based on Multilayer Perceptron Neural Network</p> <p>Boyang Wang, et al <i>Illinois Institute of Technology</i></p>	<p><b>P2-A9-9</b> Equivalent Circuit Analysis of a Piezoelectric Multilayered Structure for In-Air Ultrasound Sensors</p> <p>Muhammad Shakeel Afzal, et al <i>Kyungpook National University</i></p>	<p><b>P2-A11-2</b> Study for Temperature Coefficient of Frequency of Surface Acoustic Wave Devices with SiOxNy Film Using LiTaO3 Substrate</p> <p>Atsushi Nishimura, et al <i>Skyworks Solutions, Inc.</i></p>	<p><b>P2-A13-2</b> Microbubble Non-linear Oscillation Induced Acoustic Micromixing within Microfluidic Devices</p> <p>Wenjun Zhang, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	
<p><b>P2-A8-6</b> Study of amount of gas in soft container using the noncontact acoustic inspection method</p> <p>Shigeya Kawai, et al <i>Graduate School of Engineering, Toin University of Yokohama</i></p>	<p><b>P2-A9-10</b> Blood Coagulation Time Measurement Using a 1<math>\mu</math>L of Whole Blood on a TE Mode BAW Resonator</p> <p>Negar Majidi, et al <i>Electrical and Electronics Engineering, Ozyegin University</i></p>	<p><b>P2-A11-3</b> Longitudinal Leaky SAW with Low Attenuation on LiTaO3 Thin Plate Bonded to Quartz Substrate</p> <p>Junki Hayashi, et al <i>University of Yamanashi</i></p>	<p><b>P2-A13-3</b> Nanocrystalline Optomechanical Cavity Excited by SAW Launchers</p> <p>Jouni Ahopelto, et al <i>VTT Technical Research Centre of Finland</i></p>	
<p><b>P2-A8-7</b> Ultrasonic Communication System Design using Electromagnetic Acoustic Transducer</p> <p>Xin Huang, et al <i>Illinois Institute of Technology</i></p>	<p><b>P2-A9-11</b> Non-contact measurement of surface wave speeds and estimation of Young's moduli of tissue-mimicking phantoms by using focused airborne ultrasound</p> <p>Marie Tabaru, et al <i>Tokyo Institute of Technology</i></p>	<p><b>P2-A11-4</b> Optimized Y-rotated cut of LiNbO3 with least anisotropic and higher electromechanical in-plane properties for omnidirectional surface acoustic waves propagation</p> <p>Naiqing Zhang, et al <i>University of California, San Diego</i></p>		
<p><b>Session P2-A9. Sensors</b></p> <p><i>Chair: David Greve DWGreve Consulting</i></p>	<p><b>P2-A9-12</b> A Novel Phase Evaluation Method for Range Detection by Hybrid SAW sensors</p> <p>Zixiao Lu, et al <i>institute of acoustics, chinese academy of sciences</i></p>	<p><b>P2-A11-5</b> Novel Cuts of Quartz Crystals for SAW Resonators with Cubic Frequency-temperature Relations</p> <p>Shaoyun Wang, et al <i>Ningbo University</i></p>		
<p><b>P2-A9-1</b> ULTRA SONIC CAVITY RESONANCE METHOD FOR FLUID QUALITY MONITORING APPLICATION</p> <p>Daijiro Miyazaki, et al <i>TE connectivity</i></p>	<p><b>Session P2-A10. SAW Modeling &amp; Design I</b></p> <p><i>Chair: Ryo Nakagawa Murata Manufacturing Co., Ltd.</i></p>	<p><b>Session P2-A12. BAW Device &amp; Application I</b></p> <p><i>Chair: Amelie Hagelauer University of Erlangen-Nuremberg</i></p>		
<p><b>P2-A9-2</b> Acoustic sensor for non-contact analysis of bacterial cells in conducting suspensions</p> <p>Irina Borodina, et al <i>Kotel'nikov Institute of Radio Engineering and Electronics of RAS, Saratov Branch</i></p>	<p><b>P2-A10-1</b> Acoustic Wave Filter Topologies for enhanced performance</p> <p>Jordi Mateu, et al <i>Universitat Politcnica de Catalunya</i></p>	<p><b>P2-A12-1</b> A Hybrid Acoustic-Wave Resonator and Lumped-Element Ladder Filter</p> <p>Michael Wagner, et al <i>Friedrich-Alexander-University Erlangen-Nuremberg</i></p>		

<p><b>P2-A9-3</b> A Delay-line Sensor Based on Wedge Waves</p> <p>Che-Hua Yang, et al <i>National Taipei University of Technology</i></p>	<p><b>P2-A10-2</b> Fast SAW Device Simulation in COMSOL Using the Hierarchical Cascading Method</p> <p>Aleksey Shimko, et al <i>Tai-Saw Technology Co. Ltd</i></p>	<p><b>P2-A12-2</b> Resonant and antiresonant frequencies behavior with temperature changes in gravimetric sensors</p> <p>Teona Mirea, et al <i>Universidad Politecnica de Madrid</i></p>		
<p><b>P2-A9-4</b> Quantifying the performance of state of the art fiber optic sensors to measure guided elastic waves</p> <p>Gert-Jan van Groenestijn, et al <i>TNO</i></p>	<p><b>P2-A10-3</b> A nonlinear FEM model to calculate third harmonics and intermodulation in TC-SAW devices</p> <p>Vikrant Chauhan, et al <i>Friedrich-Alexander-University Erlangen-Nuremberg</i></p>	<p><b>P2-A12-3</b> FBAR oscillator stabilized by Rb atomic resonator for SHF/EHF band wireless devices</p> <p>Motoaki Hara, et al <i>National Institute of Information and Communications Technology</i></p>		
<p><b>P2-A9-5</b> Integrated Transmitting and Receiving Mode Graphene Microphone Array</p> <p>Kaihua Cao, et al <i>Wuhan University of Technology</i></p>	<p><b>P2-A10-4</b> P-matrix model for third order electric and acoustic nonlinearities in TC-SAW devices</p> <p>Vikrant Chauhan, et al <i>Friedrich-Alexander-University Erlangen-Nueremberg</i></p>	<p><b>P2-A12-4</b> Laterally acoustically coupled BAW filters at 3.6 GHz</p> <p>Tuomas Pensala, et al <i>VTT Technical Research Centre of Finland</i></p>		
<p><b>P2-A9-6</b> Gas sensor based on the piezoelectric resonator with lateral electric field and film of chitosan glucolate</p> <p>Boris Zaitsev, et al <i>Kotelnikov's Institute of Radio Engineering and Electronics of RAS, Saratov Branch</i></p>	<p><b>P2-A10-5</b> Electrothermal modeling of TC SAW filter</p> <p>Wolfgang Akstaller, et al <i>Friedrich-Alexander-University Erlangen-Nueremberg</i></p>	<p><b>P2-A12-5</b> Investigation of thermal and non-linear effects on the performance of the power amplifier - BAW filter - chain in a LTE transmitter</p> <p>Uwe Stehr, et al <i>TU Ilmenau</i></p>		
<p><b>P2-A9-7</b> Influence of Viscoelastic Stress Relaxation of Glass-frit Sealing layer on the Frequency Stability of a Dual-mode Quartz Pressure Sensor under extreme Pressure Conditions</p> <p>Mihir Patel, et al <i>Schlumberger Tech Corp</i></p>	<p style="text-align: center;"><b>Session P2-A11.</b> <b>SAW Device &amp; Application I</b></p> <p style="text-align: center;"><i>Chair: Jidong Dai</i> <i>Murata Electronics North America, Inc.</i></p>		<p style="text-align: center;"><b>Session P2-A13.</b> <b>MEMS &amp; Application I</b></p> <p style="text-align: center;"><i>Chair: Shuji Tanaka</i> <i>Tohoku University</i></p>	
<p><b>P2-A9-8</b> Pressure and Temperature Sensitivity of a Dual-mode Quartz Pressure Sensor for High Pressure Applications</p> <p>Mihir Patel, et al <i>Schlumberger Tech Corp</i></p>	<p><b>P2-A11-1</b> Experimental observation of high-velocity surface acoustic wave (HVSAW) on highly-textured ScAlN/Sapphire bilayer structure. Application to high frequency devices.</p> <p>Florian Bartoli, et al <i>CentraleSupélec</i></p>	<p><b>P2-A13-1</b> On the implementation of mode localization between physical and digital resonators</p> <p>Claude Humbert, et al <i>FEMTO-ST</i></p>		

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**WEDNESDAY ORAL**

08:00 am -09:30 am		Oral --- Wednesday, October 24							
	<b>Session 1D. Novel Contrast Agents</b>  <i>Chair: Ayache Bouakaz INSERM</i>	<b>Session 2D. Tissue Ablation and Vascular Imaging using Photoacoustics</b>  <i>Chair: Michael Kolios Ryerson University</i>	<b>Session 3D. Advanced Beamforming I (Mustafa Karaman Memoriam)</b>  <i>Chair: Matthew O'Donnell University of Washington</i>	<b>Session 4D. Prostate, Thyroid Elasticity, and Mechanical Anisotropy</b>  <i>Chair: Caterina Gallippi University of North Carolina</i>	<b>Session 5D. PAT: Acoustic Tweezers and Particle Manipulation</b>  <i>Chair: Eun Sok Kim University of Southern California</i>	<b>Session 6D. Flow Measurement and Industrial Applications</b>  <i>Chair: Nishal Ramadas Elster Instrument</i>	<b>Session 7D. New Developments in Medical Imaging</b>  <i>Chair: Kang Kim University of Pittsburgh</i>	<b>Session 8D. High Frequency and IVUS</b>  <i>Chair: Jian Yuan ALS Shanghai</i>	
	<b>Topaz (400)</b>	<b>Diamond (300)</b>	<b>Emerald (280)</b>	<b>Sapphire (220)</b>	<b>Ikuta (200)</b>	<b>Nunobiki (150)</b>	<b>Kikusui (140)</b>	<b>Ruby (200)</b>	
<b>08:00 am</b>	<b>1D-1</b> Bio-distribution of gas vesicles for cancer molecular ultrasound imaging  Guohao Wang, et al <i>The Hong Kong Polytechnic University</i>	<b>2D-1</b> Atrial RF ablation with dual wavelength photoacoustic imaging  Sophinese Iskander-Rizk, et al <i>Erasmus MC</i>	<b>3D-1</b> Multi-covariate Imaging of Sub-resolution Targets (MIST)  William Walker, et al <i>Duke University</i>	<b>4D-1</b> evaluation of transrectal ultrasound shear wave elastography (SWE) imaging in detection and characterization of clinically localized prostate cancer  Cheng Wei, et al <i>University of Dundee</i>	<b>5D-1</b> Magnetic-Free Radio Frequency Circulator Based on Spatiotemporal Modulation of MEMS Resonators  Matteo Rinaldi, et al <i>Northeastern University</i>	<b>6D-1</b> 3D flow mapping for Lorentz force driven liquid metal flows in crystallization experiments  Kevin Mäder, et al <i>Technische Universität Dresden</i>	<b>7D-1</b> Image-guided photo-mediated ultrasound therapy as a novel anti-vascular treatment for eye diseases  Xinyi Xie, et al <i>University of michigan</i>	<b>8D-1</b> In vivo imaging of a porcine coronary artery with a 30/80 MHz dual frequency intravascular ultrasound catheter  Chelsea Munding, et al <i>University of Toronto</i>	
<b>08:15 am</b>	<b>1D-2</b> Nonlinear X-wave ultrasound imaging of acoustic biomolecules  Daniel Sawyer, et al <i>Caltech</i>	<b>2D-2</b> Real-Time, Video-Rate and Depth-Resolved Imaging of Radio-Frequency Ablation using All-Optical Ultrasound  Erwin Alles, et al <i>University College London</i>	<b>3D-2</b> Synthetic adaptive refocusing of ultrafast plane waves through aberrating media  Hanna Bendjador, et al <i>Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</i>	<b>4D-2</b> Prostate Shear Wave Elastography: Multiresolution Reconstruction Dependence on Push Beam Spacing  Derek Y. Chan, et al <i>Duke University</i>	<b>5D-2</b> Trajectory Optimization of Levitated Particles in Mid-air Ultrasonic Standing Wave Levitators  Tatsuki Fushimi, et al <i>University of Bristol</i>	<b>6D-2</b> Feasibility of ultrasound flow measurements via non-linear wave propagation  Jack Massaad, et al <i>TU Delft</i>	<b>7D-2</b> High-resolution imaging of the breast using full-waveform inversion  Oscar Calderón Agudo, et al <i>Imperial College London</i>	<b>8D-2</b> Development of Dual-Element Intravascular Ultrasound Transducers for Third Harmonic Tissue Imaging  JUNSU Lee, et al <i>Sogang University</i>	
<b>08:30 am</b>	<b>1D-3</b> Acoustic Biomolecules as Genetically Encodable Nuclei for Inertial Cavitation  Avinoam Bar-Zion, et al <i>California Institute of Technology</i>	<b>2D-3</b> Automatic detection of healthy arterial wall tissue in vivo using photoacoustic multi-spectral imaging  Tobias Erlöv, et al <i>Lund University</i>	<b>3D-3</b> Ultrasound Transcranial Imaging based on Fast Coherent-time-delay and Correlative Pixel-based Beamforming  Chen Bai, et al <i>School of Life Science and Technology, Xi'an Jiaotong University</i>	<b>4D-3</b> Correlation between 3D ARFI and quantitative imaging metrics from SWEI and multi-parametric MRI in vivo in normal and cancerous prostate tissue  D. Cody Morris, et al <i>Duke University</i>	<b>5D-2</b> Trajectory Optimization of Levitated Particles in Mid-air Ultrasonic Standing Wave Levitators  Tatsuki Fushimi, et al <i>University of Bristol</i>	<b>6D-3</b> Development of a non-intrusive in-line tomographic ultrasonic velocity meter to measure liquid rheology  Paul van Neer, et al <i>TNO</i>	<b>7D-3</b> Respiratory motion compensation for localization-based ultrasound super-resolution imaging  Jaesok Yu, et al <i>University of Pittsburgh</i>	<b>8D-3</b> Axially-Segmented Cylindrical Transducer Array for Intravascular ARFI and SWEI Imaging  Arsenii Telichko, et al <i>Stanford University</i>	

**WEDNESDAY ORAL**

Key: Group 1

Group 2

Group 3


Group 4

Group 5

WEDNESDAY ORAL

08:45 am	<p><b>1D-4</b> Fluorine-modified Superhydrophobic Amorphous Calcium Carbonate-Doxorubicin Nanoparticles for Ultrasound Theranostics</p> <p>Pei-Hua Chiang, et al <i>National Tsing Hua University</i></p>	<p><b>2D-4</b> Multi-spectral photoacoustic morphology assessment of human carotid plaques using blind spectral unmixing and histologic validation</p> <p>Mustafa Umit Arabul, et al <i>Eindhoven University of Technology</i></p>	<p><b>3D-4</b> Distributed Phase Aberration Correction Techniques Based on Local Sound Speed Estimates</p> <p>Rehman Ali, et al <i>Stanford University</i></p>	<p><b>4D-4</b> Elastography of the thyroid by tracking shear waves generated by vocal cords vibrations</p> <p>Steve Beuve, et al <i>UMR 1253 iBrain, Université de Tours, Inserm</i></p>	<p><b>5D-3</b> Acoustic Biomolecules Enable Acoustic Trapping and Manipulation of Genetically Engineered Cells</p> <p>Di Wu, et al <i>Caltech</i></p>	<p><b>6D-4</b> Flow Imaging through a Multimode Waveguide using a Time Reversal Virtual Array</p> <p>Richard Nauber, et al <i>TU Dresden</i></p>	<p><b>7D-4</b> 3D Super-Resolution Ultrasound Imaging using a 2D Sparse Array with High Volumetric Imaging Rate</p> <p>Sevan Harput, et al <i>Imperial College London</i></p>	<p><b>8D-4</b> A novel dual-frequency transducer for intravascular ultrasound</p> <p>Min Su, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>
09:00 am	<p><b>1D-5</b> Chemical and acoustic characterization of a novel ultrasound contrast agent</p> <p>Simone A. G. Langeveld, et al <i>Erasmus MC</i></p>	<p><b>2D-5</b> Simulation of photoacoustic imaging of red blood cell aggregation using a numerical model of pulsatile blood flow</p> <p>Tae-Hoon Bok, et al <i>Ryerson University</i></p>	<p><b>3D-5</b> Matrix approach of ultrasound imaging and quantification</p> <p>William Lambert, et al <i>Institut Langevin</i></p>	<p><b>4D-5</b> Assessing Mechanical Anisotropy in Transversely Isotropic (TI) Elastic Materials Using ARFI-Induced Peak Displacement (PD) at Electronically Steered Rotation Angles</p> <p>Md Murad Hossain, et al <i>The University of North Carolina at Chapel Hill</i></p>	<p><b>5D-4</b> Particle Manipulation and Separation Using Macro-Scale Bulk Angled Standing Waves</p> <p>Kedar Chitale, et al <i>FloDesign Sonics</i></p>	<p><b>6D-5</b> 27 kHz Ultrasonic Complex Vibration Welding System Using Various Exchangeable Welding Tips for Different Welding Specimens</p> <p>Jiromaru Tsujino, et al <i>Kanagawa University</i></p>	<p><b>7D-5</b> Detection of distal forearm fractures using bone-enhanced 3D ultrasound imaging</p> <p>Von F. Botteicher, et al <i>Rivanna Medical, LLC</i></p>	<p><b>8D-5</b> High frequency ultrasound needle transducer based on modified PMN-PT ceramic with ultrahigh clamped dielectric permittivity</p> <p>Zhiqiang Zhang, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>
09:15 am	<p><b>1D-6</b> Characterization of the in-vivo uptake of novel contrast agents using photoacoustic radiofrequency spectra</p> <p>Yanjie Wang, et al <i>Ryerson University</i></p>	<p><b>2D-6</b> Improving tissue oxygenation estimation using photoacoustic spectral analysis</p> <p>Muhannad N. Fadhel, et al <i>Keenan Research Centre for Biomedical Science of St. Michael's Hospital</i></p>	<p><b>3D-6</b> Experimental Cross-Talk reduction for 3D multi-line transmission</p> <p>Emilia Badescu, et al <i>Université de Lyon, CREATIS ; CNRS UMR5220 ; Inserm U1206 ; INSA-Lyon ; Université Lyon 1, France</i></p>	<p><b>4D-6</b> Anisotropic Constructive Shearwave Interference (ACSI) Measurements of Transverse Anisotropic Elasticity</p> <p>Peter Hollender, et al <i>Duke University</i></p>	<p><b>5D-5</b> Numerical simulation of particle motion in a phase modulated surface acoustic wave microfluidic device</p> <p>Gergely Simon, et al <i>Heriot-Watt University</i></p>	<p><b>6D-6</b> Automatic estimation of borehole shape using ultrasonic data while drilling</p> <p>Hadrien DOLLFUS, et al <i>Schlumberger K.K</i></p>	<p><b>7D-6</b> Implementation and Clinical Evaluation of a Fetal ALARA System</p> <p>Katelyn Flint, et al <i>Duke University</i></p>	<p><b>8D-6</b> Development of a KNN ceramic based lead-free array transducer for high-frequency ultrasound</p> <p>Zhiqiang Zhang, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>

WEDNESDAY ORAL

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**WEDNESDAY ORAL**

10:30 am -12:00 pm		Oral --- Wednesday, October 24							
	Session 1E. Microbubbles and Nanobubbles  Chair: Mike Averkiou University of Washington	Session 2E. Photoacoustics and Imaging  Chair: William Wright University College Cork	Session 3E. Advanced beamforming II  Chair: Jeremy Dahl Stanford University	Session 4E. Abdominal Organ Elasticity  Chair: Shigao Chen Mayo Clinic	Session 5E. SAW Modeling & Design 2  Chair: Marc Solal Qorvo, Inc	Session 6E. Cancer  Chair: Gregory Czarnota University of Toronto	Session 7E. New Developments in Brain Imaging  Chair: Russell Witte University of Arizona	Session 8E. Special Session: Technologies and Challenges for 3D Imaging  Chair: Alfred Yu University of Waterloo	
	Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)	
10:30 am	<p><b>1E-1</b> Molecular Modulation of Biological Membranes by Phospholipid Microbubbles</p> <p>Eleanor Stride, et al Oxford University</p>	<p><b>2E-1</b> Guided acoustic wave in a single Pt nanowire</p> <p>Hiroki Tamura, et al Osaka University</p>	<p><b>3E-1</b> Experimental Implementation of Resolution Enhancement Compression for Ultrasound Diverging Wave Compounding using a Tri-State Voltage Drive</p> <p>Yanis Mehdi Benane, et al Univ.Lyon</p>	<p><b>4E-1</b> Feasibility of Young's modulus mapping in Pancreatic Ductal Adenocarcinoma (PDA) tumors Using Harmonic Motion Elastography (HME) ex vivo and in vivo</p> <p>Alireza Nabavizadeh, et al Columbia University</p>	<p><b>5E-1</b> Study on High-Isolation SAW Duplexer with On-Chip SAW Compensation Circuit Optimized for Isolated Multiple Frequency Bands</p> <p>Masafumi Iwaki, et al TAIYO YUDEN CO., LTD.</p>	<p><b>6E-1</b> Quantitative ultrasound-based detection of cancerous thyroid nodules</p> <p>Daniel Rohrbach, et al Riverside Research</p>	<p><b>7E-1</b> Ultrafast 4D Doppler Imaging of the rat brain with a large aperture Row Column addressed probe</p> <p>Jack Sauvage, et al Institut Langevin, ESPCI Paris</p>	<p><b>8E-1</b> Modular fabrication and assembly of large 2D Arrays with interface ASICs, PIN-PMN-PT composite, and 3D printed backing</p> <p>Robert Wodnicki, et al University of Southern California</p>	
10:45 am		<p><b>2E-2</b> Imaging of wrinkles in CFRP composites with laser-ultrasound and tilt filter signal processing</p> <p>Lukasz Ambrozinski, et al AGH University of Science and Technology</p>	<p><b>3E-2</b> The Detection Probability of Adaptive Beamformers</p> <p>Alfonso Rodriguez-Molares, et al Department of Circulation and Medical Imaging, and CIUS</p>	<p><b>4E-2</b> The influence of shear modulus on drug uptake in pancreatic ductal adenocarcinoma: an in vitro study</p> <p>Hexuan Wang, et al University of Rochester</p>	<p><b>5E-2</b> Low-loss, high-frequency and large-coupling SH SAW resonators based on SiN/LiNbO3/Si</p> <p>Jie Zou, et al Resonant Inc.</p>	<p><b>6E-2</b> Quantitative Ultrasound and Texture Predictors of Breast Tumor Response to Chemotherapy Prior to Treatment</p> <p>Gregory Czarnota, et al Sunnybrook Health Sciences Centre/University of Toronto</p>	<p><b>7E-2</b> 3D Transcranial Ultrasound Tomography of the Brain in Small Animals using Full-Waveform Inversion – an Initial Feasibility Study</p> <p>Thomas Robins, et al Imperial College London</p>	<p><b>8E-2</b> Prototype 3D real-time imaging system based on a sparse PZT spiral array</p> <p>Enrico Boni, et al University of Florence</p>	
11:00 am	<p><b>1E-2</b> Investigating nonlinear porphyrin nanobubble behaviour for vascular and extravascular applications</p> <p>Carly Pellow, et al Sunnybrook Research Institute</p>	<p><b>2E-3</b> New signal processing for fast and accurate QEPAS measurements</p> <p>raphael Levy, et al ONERA- The French Aerospace Lab</p>	<p><b>3E-3</b> Iterative ADMIRE for high dynamic range b-mode</p> <p>Siegfried Schlunk, et al Vanderbilt University</p>	<p><b>4E-3</b> Plane wave based single track location shear wave elasticity imaging (pSTL-SWEI) enables high resolution in vivo and ex vivo murine pancreatic tumor imaging</p> <p>Rifat Ahmed, et al University of Rochester</p>	<p><b>5E-3</b> HIERARCHICAL CASCADING IN FEM SIMULATIONS OF SAW DEVICES</p> <p>Julius Koskela, et al GVR Trade SA</p>	<p><b>6E-3</b> Predicting Radiotherapy Response in Head and Neck Patients Using Quantitative Ultrasound</p> <p>William Tran, et al Sunnybrook Health Sciences Centre/University of Toronto</p>	<p><b>7E-3</b> Automatic segmentation of the cerebral ventricles in preterm neonates using deep learning with 3D reconstructed freehand ultrasound imaging.</p> <p>Matthieu Martin, et al Univ Lyon</p>	<p><b>8E-3</b> Single-Chip Reduced-Wire CMUT-on-CMOS System for Intracardiac Echocardiography</p> <p>Gwangrok Jung, et al Georgia Institute of Technology</p>	

**WEDNESDAY ORAL**



Key: Group 1  Group 2  Group 3  Group 4  Group 5 


**WEDNESDAY ORAL**

<p><b>11:15 am</b></p>	<p><b>1E-3</b> Stabilizing echogenic nanobubbles by nature-inspired elastic contrast shell design</p> <p>Al de Leon, et al Case Western Reserve University</p>	<p><b>2E-4</b> Ultrasonic Phased Array TFM Detection in Highly Attenuating Materials based on Modified Golay-Coded Excitation</p> <p>Teng Da, et al East China University of Science and Technology</p>	<p><b>3E-4</b> Accelerating Nonlinear Speed of Sound Reconstructions Using a Randomized Block Kaczmarz Algorithm</p> <p>Andreas Ihrig, et al Ruhr-University Bochum</p>	<p><b>4E-4</b> 3D Liver Shear Wave Absolute Vibro-Elastography with an xMATRIX Array – A Healthy Volunteer Study</p> <p>Qi Zeng, et al University of British Columbia</p>		<p><b>6E-4</b> In vivo diagnosis of metastasis in cervical lymph nodes using backscatter coefficients</p> <p>Gloria Valenzuela, et al Pontificia Universidad Católica del Perú</p>	<p><b>7E-4</b> 3D Multiplane Wave Imaging for 4D Functional Ultrasound imaging of the whole-brain neuronal activity</p> <p>Claire Rabut, et al Institut Langevin, ESPCI Paris</p>	<p><b>8E-4</b> Fast Orthogonal Row-Column Electronic Scanning with Bias-Switchable Crossed-Electrode Relaxor Arrays and GPU Accelerated Volumetric Reconstruction</p> <p>Chris Cerroici, et al University of Alberta</p>
<p><b>11:30 am</b></p>	<p><b>1E-4</b> Nanobubble Extravasation in Prostate Tumors Imaged with Ultrasound: Role of Active versus Passive Targeting</p> <p>Reshani Perera, et al Case Western Reserve University</p>	<p><b>2E-5</b> Cortical bone microstructure assessed by acoustic microscopy in the tibia and proximal femur shaft is correlated with hip stiffness and strength</p> <p>Gianluca Iori, et al Charité - Universitätsmedizin Berlin</p>	<p><b>3E-5</b> High Frequency Ultrasonic Tomography Using Optimal Transport Distance</p> <p>Andreas Ihrig, et al Ruhr-University Bochum</p>	<p><b>4E-5</b> Shear wave velocity and attenuation in 85 post-transplant liver patients with acute cellular rejection and comparison with biopsy findings</p> <p>Ivan Nenadic, et al Mayo Clinic</p>	<p><b>5E-4</b> Use of Hierarchical Cascading Technique for FEM Analysis of Transverse Mode Behaviors in SAW Devices</p> <p>Xinyi Li, et al University of Electronic Science and Technology of China</p>	<p><b>6E-5</b> Machine-learning for the prediction of prostate cancer biopsy based on three-dimensional dynamic contrast-enhanced ultrasound quantification</p> <p>Rogier R. Wildeboer, et al Eindhoven University of Technology</p>	<p><b>7E-5</b> Quantitative ultrasound brain imaging in 3D</p> <p>Lluís Guasch, et al Imperial College London</p>	<p><b>8E-5</b> Panel Discussion</p> <p>Piero Tortoli, Jorgen Jensen, Steven Freear, Susan Trolrier-McKinstry, Roger Zemp, Robert Vodnicki</p>
<p><b>11:45 am</b></p>	<p><b>1E-5</b> Virus-like and egg-yolk sandwich Fe<sub>3</sub>O<sub>4</sub> mesoporous silica nanoparticles for photoacoustic imaging of prostate cancer</p> <p>Wenkun Bai, et al Shanghai Jiao Tong University</p>	<p><b>2E-6</b> Efficient and stable acoustical coupling for bottom Actuated GHz Subsurface Probe Microscopy</p> <p>Benoit Qesson, et al TNO</p>	<p><b>3E-6</b> REFoCUS: Ultrasound focusing for the software beamforming age</p> <p>Nick Bottenus, et al Duke University</p>	<p><b>4E-6</b> VisR, SWEI, and SDUV Ultrasound Detect Increased Degree of Mechanical Anisotropy Following Ischemia-Reperfusion Injury in Pig Kidney, In Vivo</p> <p>Md Murad Hossain, et al University of North Carolina at Chapel Hill</p>	<p><b>5E-5</b> FEM-calculation of nonlinear fields in SAW resonators with a finite number of electrodes</p> <p>Andreas Mayer, et al University of Applied Science</p>	<p><b>6E-6</b> Quantitative Ultrasound for in vivo monitoring of anti-angiogenic tumor therapy</p> <p>Régine Guillermin, et al Aix-Marseille université, CNRS, Centrale Marseille</p>	<p><b>7E-6</b> Low Frequency Ultrasound Transcranial Imaging with Coherent Compounding of Diverging Chirp Waves</p> <p>Chen Bai, et al School of Life Science and Technology, Xi'an Jiaotong University</p>	

**WEDNESDAY ORAL**

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

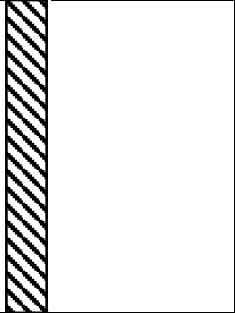
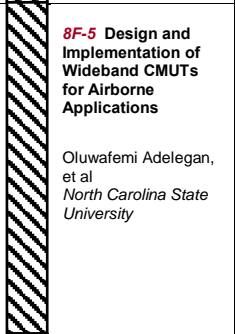
**WEDNESDAY ORAL**

01:30 pm -03:00 pm		Oral --- Wednesday, October 24							
	Session 1F. Advanced Systems and Devices for Real-Time Applications  Chair: Steven Freear University of Leeds	Session 2F. Novel Photoacoustic Imaging Techniques and Applications  Chair: Geoffrey Luke Dartmouth College	Session 3F. Super Resolution Microbubble Imaging  Chair: Mickael Tanter INSERM	Session 4F. 3D Flow Imaging  Chair: Jørgen Jensen Technical University of Denmark	Session 5F. MEMS Resonator & Application  Chair: Sunil Bhawe Purdue University	Session 6F. Signal Processing  Chair: Erdal Oruklu Illinois Institute of Technology	Session 7F. Applications of Therapeutic Ultrasound  Chair: Zhen Xu University of Michigan	Session 8F. CMUT/PMUT  Chair: Qifa Zhou University of Southern California	
	Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)	
01:30 pm	<p><b>1F-1</b> Real-Time, Multi-Angle Flow Vector Estimation with Dealising Using GPU</p> <p>Hassan Nahas, et al University of Waterloo</p>	<p><b>2F-1</b> Non-invasive mapping of rat visual cortex dynamics in vivo using transcranial photoacoustic voltage-sensitive dye imaging</p> <p>Jeeun Kang, et al Johns Hopkins University</p>	<p><b>3F-1</b> Deep-ULM: Super-resolution Ultrasound Localization Microscopy through Deep Learning</p> <p>Ruud J. G. van Sloun, et al Eindhoven University of Technology</p>	<p><b>4F-1</b> Full 3D Power, Color &amp; Vector Doppler imaging using large aperture Row Column Array transducers</p> <p>Jonathan Porée, et al Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</p>	<p><b>5F-1</b> S0-Mode Lithium Niobate Acoustic Delay Lines with 1 dB Insertion Loss</p> <p>Ruochen Lu, et al University of Illinois at Urbana-Champaign</p>		<p><b>6F-1</b> Information Transmission through Solids using Ultrasound</p> <p>Jafar Saniie, et al Illinois Institute of Technology</p>	<p><b>7F-1</b> Ultrasound and Microbubbles Promote the Retention of Fluorescent Compounds in the Small Intestine</p> <p>Mihnea Vlad Turcanu, et al University of Glasgow</p>	<p><b>8F-1</b> Design, Fabrication and Characterization of a Hybrid Piezoelectric-CMUT Dual-Frequency Ultrasonic Transducer</p> <p>Alessandro Stuart Savoia, et al Roma Tre University</p>
01:45 pm	<p><b>1F-2</b> High Frame Rate Vector Flow Imaging: Development as a New Diagnostic Mode on a Clinical Scanner</p> <p>Yigang Du, et al Shenzhen Mindray Bio-Medical Electronics Co., Ltd.</p>	<p><b>2F-2</b> Ultrasound/ Photoacoustic Imaging Platform to Expedite Development of Novel Glaucoma Treatments</p> <p>Kelsey Kubelick, et al Georgia Institute of Technology &amp; Emory University</p>	<p><b>3F-2</b> A Systematic Investigation of Microbubble Spatial Sampling Requirement and Microbubble Localization Methods for Super-resolution Imaging</p> <p>Pengfei Song, et al Mayo Clinic</p>	<p><b>4F-2</b> High-volume-rate 3D ultrasound imaging and stereoscopic PIV in a dynamic left ventricular phantom</p> <p>Jason Voorneveld, et al Erasmus MC</p>	<p><b>5F-2</b> Investigations on the Quality Factor of Lithium Niobate Laterally Vibrating Resonators with Figure of Merit greater than 1,500</p> <p>Luca Colombo, et al Carnegie Mellon University</p>		<p><b>7F-2</b> Luminescence estimation of the region of reactive oxygen generation by focused ultrasound with multiple foci for sonodynamic treatment</p> <p>Daisaku Mashiko, et al Tohoku University</p>	<p><b>8F-2</b> 36% Scandium ScAlN Air-coupled Piezoelectric Micromachined Ultrasonic Transducers</p> <p>Yuri Kusano, et al University of California, Davis</p>	
02:00 pm	<p><b>1F-3</b> Parallel implementation of randomized singular value decomposition and randomized spatial downsampling for real time ultrafast microvessel imaging on a multi-core CPUs architecture</p> <p>U Wai Lok, et al Mayo Clinic</p>	<p><b>2F-3</b> Photoacoustic imaging of human inflammatory arthritis using light emitting diode</p> <p>Janggun Jo, et al University of Michigan</p>	<p><b>3F-3</b> Assessment of Diabetic Kidney Disease Using Ultrasound Localization Microscopy on the Microvasculature in a Rat Kidney: An in vivo Feasibility Study</p> <p>Yi Yang, et al Department of Biomedical Engineering, Tsinghua University</p>	<p><b>4F-3</b> The Helical Toroid Flow Phantom: A Twist for 3-D Flow Imaging Innovations</p> <p>Adrian J. Y. Chee, et al University of Waterloo</p>	<p><b>5F-3</b> PVDF-TrFE/SiO2 Composite Film Bulk Acoustic Wave Resonator for Frequency-Modulated Sensor Application</p> <p>Ryosuke Kaneko, et al Tohoku university</p>		<p><b>6F-2</b> Modelling of channels for intra-corporal communication</p> <p>Wentao Jiang, et al KU Leuven</p>	<p><b>7F-3</b> Antivascular photo-mediated ultrasound therapy for neovascularization in the eye</p> <p>Xinmai Yang, et al University of Kansas</p>	<p><b>8F-3</b> Thin Film PZT-based PMUT arrays</p> <p>Susan Trolier-McKinstry, et al Penn State University</p>

**WEDNESDAY ORAL**

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**WEDNESDAY ORAL**

<p><b>02:15 pm</b></p>	<p><b>1F-4 Acoustic Navigation of Intramyocardial Injection Needle Catheter Using Color Doppler Echocardiography</b></p> <p>Minako Katayama, et al <i>Mayo Clinic</i></p>	<p><b>2F-4 Characterizing intestinal strictures with an endoscopic photoacoustic probe in rabbits in vivo</b></p> <p>Hao Lei, et al <i>University of Michigan</i></p>	<p><b>3F-4 Performance of Foreground-Background Separation Algorithms for the Detection of Microbubbles in Super-Resolution Imaging</b></p> <p>Marion Piepenbrock, et al <i>Ruhr-University Bochum</i></p>	<p><b>4F-4 Simultaneous 4D ultrafast blood flow and tissue Doppler imaging of the human heart</b></p> <p>Clément Papadacci, et al <i>Institut Langevin, INSERM U979, ESPCI, CNRS UMR 7587, ART</i></p>	<p><b>5F-4 Spurious mode free 3.5GHz AlN plate mode resonator with high FoM</b></p> <p>Nan Wang, et al <i>Institutes of Microelectronics, A*STAR</i></p>	<p><b>6F-3 Optical Imaging of Far-Field Diffraction of GHz AlN Transducers into Silicon: Towards Physical Fast Fourier Transform Computing</b></p> <p>Yutong Liu, et al <i>Cornell University</i></p>	<p><b>7F-4 Ultrasound Convolutional Neural Networks Imaging for Monitoring of Microwave Ablation</b></p> <p>Siyuan Zhang, et al <i>Xi'an Jiaotong University</i></p>	
<p><b>02:30 pm</b></p>	<p><b>1F-5 Matrix transducers for real-time 3D imaging: From intra-cardiac to trans-cranial applications</b></p> <p>Nico de Jong, et al <i>Erasmus Medical Centre</i></p>	<p><b>2F-5 Development of an ultrasound and photoacoustic endoscopy system for imaging of gynecological disorders</b></p> <p>Maryam Basij, et al <i>Wayne State University</i></p>	<p><b>3F-5 Improved super-resolution by exploiting microbubble kinematics in ultrasound imaging</b></p> <p>Oren Solomon, et al <i>Technion</i></p>	<p><b>4F-5 Combining automatic angle correction and 3-D tracking Doppler for Aortic Stenosis severity assessment</b></p> <p>Stefano Fiorentini, et al <i>NTNU</i></p>	<p><b>5F-5 A Radio Frequency Comb Filter for Sparse Fourier Transform-based Spectrum Sensing</b></p> <p>Ruochen Lu, et al <i>University of Illinois at Urbana-Champaign</i></p>	<p><b>6F-4 GHz Ultrasonic Digital to Analog Converter for Wavefront Signal processing</b></p> <p>Mamdouh Abdelmejeed, et al <i>Cornell University</i></p>	<p><b>7F-5 A catheter based ultrasound device for treating chronic total occlusions</b></p> <p>Alex Wright, et al <i>Sunnybrook Research Institute</i></p>	<p><b>8F-4 1D Lumped Parameter Modeling of CPUT: A Capacitive Transducer Without DC Bias or Pre-Charge</b></p> <p>Sushruta Surappa, et al <i>Georgia Institute of Technology</i></p>
<p><b>02:45 pm</b></p>	<p><b>2F-6 Fast label-free photoacoustic histology system using a MEMS scanner</b></p> <p>Jin Woo Baik, et al <i>Pohang University of Science and Technology</i></p>	<p><b>3F-6 What is the Resolving Power of Ultrasound Localization Microscopy? - Systematic Analysis Using a New Forked Microvessel Phantom Design</b></p> <p>Hanyue Shanguan, et al <i>University of Waterloo</i></p>	<p><b>4F-6 Using functional ultrasound imaging and 3D navigation for neonatal sleep phases discrimination</b></p> <p>Jerome Baranger, et al <i>Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</i></p>	<p><b>5F-6 Novel topology for a non-reciprocal MEMS filter</b></p> <p>Michele Pirro, et al <i>northeastern university</i></p>	<p><b>6F-5 An inverse approach for ultrasonic focusing point for close reflectors separation</b></p> <p>Nans Laroche, et al <i>The Phased Array Company</i></p>	<p><b>7F-6 Ultrasound Oncotripsy: Targeting Cancer Cells Selectively Via Resonant Harmonic Excitation</b></p> <p>David Mittelstein, et al <i>California Institute of Technology</i></p>	<p><b>8F-5 Design and Implementation of Wideband CMUTs for Airborne Applications</b></p> <p>Oluwafemi Adelegan, et al <i>North Carolina State University</i></p>	

**WEDNESDAY ORAL**

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**WEDNESDAY ORAL**

04:00 pm -05:30 pm		Oral --- Wednesday, October 24							
	Session 1G. Functional Assessment by Remote Modulation  Chair: Jan D'hooge KU Leuven	Session 2G. POA: Opto-Acoustics  Chair: Vincent Laude CNRS	Session 3G. Super Resolution and Contrast Brain imaging  Chair: Nico de Jong Erasmus Medical Centre	Session 4G. Vector Flow Imaging  Chair: Enrico Boni University of Florence	Session 5G. Novel Measurement Systems and Modeling Methods for Tissue Characterization  Chair: Jonathan Mamou Riverside Research	Session 6G. Bio & Chemical Sensors  Chair: James Friend UCSD	Session 7G. Monitoring and Mapping Methods in Ultrasound Therapy  Chair: Costas Arvanitis Georgia Tech	Session 8G. Ultrasound Electronics  Chair: David Cowell University of Leeds	
	Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)	
04:00 pm	<p><b>1G-1</b> Towards Tomographic Reconstruction of Current Source Densities with Multichannel Acoustoelectric Brain Imaging (mABI) Using Ellipsoidal Human Head Model</p> <p>Tushar Bera, et al University of Arizona</p>	<p><b>2G-1</b> Moving acoustic field for the control of electronic excitations in semiconductor nanostructures</p> <p>Paulo Santos, et al Paul-Drude-Institut für Festkörperelektronik</p>	<p><b>3G-1</b> Deep Transcranial Ultrasound Localization Microscopy of the adult human brain vascularization</p> <p>Charlie Demené, et al Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</p>	<p><b>4G-1</b> A fast 4D B-spline framework for model-based reconstruction and regularization in vector flow imaging</p> <p>Thomas Groenli, et al Norwegian University of Science and Technology (NTNU)</p>	<p><b>5G-1</b> In vivo estimation of cortical thickness and porosity by axial transmission: Comparison with high resolution computed tomography</p> <p>Donatien Ramiandrisoa, et al Bleu Solid</p>	<p><b>6G-1</b> Design of Lab-on-a-Chip Surface Acoustic Resonance (SAR) Sensor with Enhanced Sensitivity and Integrated EIS</p> <p>Kiryl Kustanovich, et al Chalmers University of Technology</p>	<p><b>7G-1</b> Self-adaptive 3D time reversal cavity for safe ultrasound therapy through the ribcage</p> <p>Justine Robin, et al Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</p>	<p><b>8G-1</b> ASIC design for a single-cable 64-element ultrasound probe</p> <p>Douwe van Willigen, et al Delft University of Technology</p>	
04:15 pm	<p><b>1G-2</b> Real-time displacement and cavitation imaging of non-invasive neuromodulation of the peripheral nervous system via focused ultrasound</p> <p>Stephen Lee, et al Columbia University</p>		<p><b>3G-2</b> Ultrafast Volumetric Ultrasound Localization Microscopy in vivo</p> <p>Baptiste Heiles, et al Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</p>	<p><b>4G-2</b> Lagrangian coupling of SPH with ultrasound simulation for vector flow imaging investigation</p> <p>Damien Garcia, et al Creatis</p>	<p><b>5G-2</b> Assessment of cardiomyocyte contractility using high frequency ultrasound</p> <p>Eric Strohm, et al University of Toronto</p>	<p><b>6G-2</b> c-axis tilted ScAIN film shear mode resonators for biosensing</p> <p>Hana Yazaki, et al Waseda University</p>	<p><b>7G-2</b> High-resolution Transcranial Passive Acoustic Mapping using Delay Multiple and Sum Beamformer</p> <p>Shukuan Lu, et al Xi'an Jiaotong University</p>	<p><b>8G-2</b> Integrated Front End Circuitry for Microultrasound Capsule Endoscopy</p> <p>Holly Lay, et al University of Glasgow</p>	
04:30 pm	<p><b>1G-3</b> Transcranial Acoustoelectric Brain Imaging: Progress and Challenges</p> <p>Russell Witte, et al University of Arizona Health Sciences</p>	<p><b>2G-2</b> Structural and Functional Imaging with Concurrent Photoacoustic and Ultrasound Microscopy</p> <p>Yuqi Tang, et al Duke University</p>	<p><b>3G-3</b> In vivo 3D imaging of lymph nodes via high frame rate contrast enhanced ultrasound and super resolution</p> <p>Jiaqi Zhu, et al Imperial College London</p>	<p><b>4G-3</b> Flow changes after biological and mechanical aortic valve implantation measured with VFI</p> <p>Kristoffer Hansen, et al Copenhagen University Hospital</p>	<p><b>5G-3</b> Estimation of viscoelastic properties of tissue with arbitrary power-law attenuation</p> <p>Bharat Tripathi, et al University of North Carolina-Chapel Hill and North Carolina State University</p>	<p><b>6G-3</b> Wireless CO2 SAW sensors with a nanoporous ZIF-8 sensing layer</p> <p>David Greve, et al DWGreve Consulting</p>	<p><b>7G-3</b> Detection of the focused-ultrasound-induced blood-brain barrier opening by diffusion tensor imaging in non-human primates</p> <p>Maria Eleni Karakatsani, et al Columbia University</p>	<p><b>8G-3</b> A 256-Element Spiral CMUT Array with Integrated Analog Front End and Transmit Beamforming Circuits</p> <p>Alessandro Stuart Savoia, et al Roma Tre University</p>	

**WEDNESDAY ORAL**

Key: Group 1

Group 2

Group 3

Group 4

Group 5

WEDNESDAY ORAL

04:45 pm		<p><b>2G-3 Design of Acoustooptical Devices Based on KY(WO4)2 Crystal</b></p> <p>Vladimir Molchanov, et al <i>National University of Science and Technology MISIS</i></p>	<p><b>3G-4 Gas vesicles as hemodynamic enhancers for noninvasive functional ultrasound imaging of the mouse brain</b></p> <p>David Maresca, et al <i>California Institute of Technology</i></p>	<p><b>4G-4 Vector Projectile Imaging to detect regional changes in extracranial blood velocity: A lower-body suction study</b></p> <p>Jason Au, et al <i>University of Waterloo</i></p>	<p><b>5G-4 Ultrasound Multiple Scattering in Cortical Bone: Effect of Pore Size and Pore Concentration</b></p> <p>Yasamin Karbalaiesadegh, et al <i>North Carolina State University</i></p>	<p><b>6G-4 Post-Complementary-Metal-Oxide-Semiconductor Compatible Piezoelectric Micro-Machined Ultrasonic Transducers</b></p> <p>Robert Reger, et al <i>Sandia National Laboratories</i></p>	<p><b>7G-4 Wideband Image-based Transskull Refocusing of Ultrasound Beams Using Dual-Mode Ultrasound Arrays: Ex Vivo Results</b></p> <p>Hasan Aldiabat, et al <i>University of Minnesota--Twin Cities</i></p>	<p><b>8G-4 Real-Time FIR Filter Normalisation of Ultrasound Analog Front Ends for Broadband Imaging</b></p> <p>Thomas Carpenter, et al <i>University of Leeds</i></p>
05:00 pm	<p><b>1G-4 X-Ray Induced Acoustic Computed Tomography for Real-Time Monitoring of External Beam Radiotherapy</b></p> <p>Wei Zhang, et al <i>University of Michigan</i></p>	<p><b>2G-4 High sensitivity sub-nanosecond pump probe measurement with surface plasmon resonance</b></p> <p>Hayato Ichihashi, et al <i>Doshisha university</i></p>	<p><b>3G-5 Kalman Filter-based Microvessel Inpainting for Super-Resolution Imaging</b></p> <p>Pengfei Song, et al <i>Mayo Clinic</i></p>	<p><b>4G-5 Vector Flow Imaging Validated by Patient-Specific Fluid-Structure Interaction (FSI) Models</b></p> <p>Marie Traberg, et al <i>Technical University of Denmark</i></p>	<p><b>5G-5 Sizing cells using acoustic flow cytometry</b></p> <p>Eric Strohm, et al <i>University of Toronto</i></p>	<p><b>6G-5 A compact and sensitive liquid sensor based on a circumferential mode</b></p> <p>Qin Lin, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	<p><b>7G-5 Fast MR thermometry for FUS monitoring using an echo-shifted sequence with simultaneous multi-slice imaging</b></p> <p>Chao Zou, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	<p><b>8G-5 A Power-Efficient Transmit Beamformer ASIC for 3-D Catheter-Based/ Endoscopic Probes</b></p> <p>Zhao Chen, et al <i>Delft University of Technology</i></p>
05:15 pm	<p><b>1G-5 On the Performance of Delay Estimators for Magnetomotive Imaging</b></p> <p>Thomas Ersepke, et al <i>Ruhr-University Bochum</i></p>	<p><b>2G-5 Modelling the iono-acoustic wave field for proton beam range verification</b></p> <p>Koen W.A. van Dongen, et al <i>Delft University of Technology</i></p>	<p><b>3G-6 Human transcranial super-resolution imaging</b></p> <p>Danai Eleni Soulioti, et al <i>University of North Carolina at Chapel Hill and North Carolina State University</i></p>	<p><b>4G-6 Combined contrast-enhanced echocardiography and 2D vector flow mapping at high frame rate using diverging waves</b></p> <p>Luzhen Nie, et al <i>University of Leeds</i></p>	<p><b>5G-6 Skin Moisturizer Changes Morphology and Acoustic Impedance of Skin</b></p> <p>Yoshifumi Saijo, et al <i>Tohoku University</i></p>	<p><b>6G-6 Improvement of signal to noise ratio for Quartz Crystal Microbalance with viscous damping</b></p> <p>Sawit Na songkhla, et al <i>Tokyo Institute of Technology</i></p>	<p><b>7G-6 Passive cavitation mapping during blood-brain barrier opening is facilitated through treatment with ultrasonic pulses of inverse polarity</b></p> <p>Antonios Poulipoulos, et al <i>Columbia University</i></p>	<p><b>8G-6 Modified Harmonic Reduction Pulse Width Modulation (mHRPWM) for Switched Excitation of Resonant HIFU Transducers</b></p> <p>David Cowell, et al <i>University of Leeds</i></p>

WEDNESDAY ORAL



Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**WEDNESDAY POSTER**

09:30 am - 04:00 pm		Poster --- Wednesday, October 24			Kairaku (posters 1)
<p><b>Session P1-B2.</b> <i>Emerging Methods and Initiatives</i></p> <p><i>Chair: Giulia Matrone</i> <i>University of Pavia</i></p>	<p><b>P1-B3-6</b> Real-time investigation of cell membrane damage induced by acoustic droplet vaporization in tissue mimicking hydrogel</p> <p>Lei Zhang, et al <i>School of Life Science and Technology, Xi'an Jiaotong University</i></p>	<p><b>P1-B4-7</b> Separation of contrast agents from tissue via an unfolded deep learning scheme</p> <p>Oren Solomon, et al <i>Technion</i></p>	<p><b>P1-B6-5</b> Measurement of Passive Elastic Property of Human Gastrocnemius Muscle in Vivo using Dynamic Ultrasound B-mode and Shear-wave Elastography Image Sequences</p> <p>Yang Xiao, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	<p><b>P1-B7-8</b> Automatic spatial mechanical inhomogeneity detection in atherosclerotic carotid arteries in-vivo</p> <p>Grigorios Marios Karageorgos, et al <i>Columbia University</i></p>	
<p><b>P1-B2-1</b> Density- and Compressibility-Weighted Ultrasound Scattering Tomography</p> <p>Quinn Barber, et al <i>University of Alberta</i></p>	<p><b>P1-B3-7</b> Lysosome Exocytosis Involved in the Resealing of the Perforated Membrane by Acoustic Cavitation</p> <p>Caixia Jia, et al <i>Shanghai Jiao Tong University</i></p>	<p><b>Session P1-B5.</b> <i>Abdominal Elasticity Imaging</i></p> <p><i>Chair: Jianwen Luo</i> <i>Tsinghua University</i></p>	<p><b>P1-B6-6</b> Pulmonary edema model study using lung ultrasound surface wave elastography</p> <p>Jinling Zhou, et al <i>Mayo Clinic</i></p>	<p><b>Session P1-B8.</b> <i>Functional Assessment by Remote Modulation</i></p> <p><i>Chair: Alessandro Ramalli</i> <i>University of Florence</i></p>	
<p><b>P1-B2-2</b> The Ultrasound File Format</p> <p>Olivier Bernard, et al <i>CREATIS</i></p>	<p><b>P1-B3-8</b> Experimental study for active control of bubble-surrounded cells by acoustic radiation force with considering optimal production and cell viability</p> <p>Kohji Masuda, et al <i>Tokyo Univ. of A&amp;T</i></p>	<p><b>P1-B5-1</b> Kidney biopsy score prediction based on shear wave elastography measurements and machine learning</p> <p>Luiz Vasconcelos, et al <i>Mayo Clinic</i></p>	<p><b>P1-B6-7</b> Comparison of placental elastography and contrast-enhanced ultrasound imaging in a murine intrauterine growth restriction model</p> <p>Emmanuel Simon, et al <i>UMR 1253, iBrain, University of Tours, Inserm</i></p>	<p><b>P1-B8-1</b> Mobile Platform for Acoustoelectric Brain Imaging in Rats</p> <p>Alex Burton, et al <i>University of Arizona</i></p>	
<p><b>P1-B2-3</b> Improving quality of high-frame-rate imaging with coherent and incoherent processing</p> <p>Jian-yu Lu, et al <i>The University of Toledo</i></p>	<p><b>P1-B3-9</b> Ultrasound-Induced Acid-Base Neutralization-Generated CO<sub>2</sub> microbubbles on Epidermal Penetration</p> <p>Hui-Ching Hsu, et al <i>National Tsing Hua University</i></p>	<p><b>P1-B5-2</b> Obtaining Equivalent Liver Shear Wave Speed Measurements with Multiple Transducers</p> <p>Mallory Selzo, et al <i>Siemens Healthineers</i></p>	<p><b>P1-B6-8</b> SHEAR WAVE SPEED DISPERSION COMPARISON IN NORMAL AND ABNORMAL PLACENTAS</p> <p>Emmanuel Simon, et al <i>UMR 1253, iBrain, University of Tours, Inserm</i></p>	<p><b>P1-B8-2</b> Effects of Ultrasound Frequency and Beam Pattern on Acoustoelectric Cardiac Imaging</p> <p>Alexander Alvarez, et al <i>University of Arizona</i></p>	
<p><b>P1-B2-4</b> Synthetic transmit aperture beamforming for sound velocity estimation using channel-domain differential phase gradient</p> <p>Che-Chou Shen, et al <i>National Taiwan University of Science and Technology</i></p>	<p><b>P1-B3-10</b> Microscopic examination of sonothrombolysis process inside the transparent to ultrasound parallel plate flow chamber</p> <p>Wojciech Secomski, et al <i>Institute of Fundamental Technological Research</i></p>	<p><b>P1-B5-3</b> Could ultrasound elastography reflect liver function reserve?</p> <p>Tingting Qiu, et al <i>Department of ultrasound, West China Hospital, Sichuan University</i></p>	<p><b>Session P1-B7.</b> <i>Cardiovascular Imaging</i></p> <p><i>Chair: Marie Traberg</i> <i>Technical University of Denmark</i></p>	<p><b>P1-B8-3</b> 2D mapping of the electrical activation in the live heart using the acoustoelectric effect: a parametric study</p> <p>Beatrice Berthon, et al <i>Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</i></p>	
<p><b>P1-B2-5</b> Efficient Pseudo-dynamic Delay Calculation using Optimal Zone Segmentation for Ultra-portable Ultrasound Imaging System</p> <p>Pilsu Kim, et al <i>Sogang University</i></p>	<p><b>Session P1-B4.</b> <i>Acoustic Droplets and Bubbles Applications</i></p> <p><i>Chair: Klazina Kooiman</i> <i>Erasmus Medical Center</i></p>	<p><b>P1-B5-4</b> Large Field-of-View Shear Wave Imaging for Hepatocellular Carcinoma Screening</p> <p>Samantha Lipman, et al <i>Duke University</i></p>	<p><b>P1-B7-1</b> Ultrasonically measured propagation speed of myocardial contraction rapidly decreased in swine heart just after avascularisation of coronary artery</p> <p>Akane Hayashi, et al <i>Tohoku University</i></p>	<p><b>P1-B8-4</b> Real-time Thermoacoustic Imaging and Thermometry Using a Linear Ultrasound Array</p> <p>Chandra Karunakaran, et al <i>University of Arizona</i></p>	


<p><b>Session P1-B3.</b> <b>Microbubbles, Droplets, and Nanoparticles</b></p> <p><i>Chair: Katsuro Tachibana</i> <i>Fukuoka University</i></p>	<p><b>P1-B4-1</b> Evidence of Laser-Activated Perfluorocarbon Nanodroplet Extravasation In Vivo</p> <p>Steven K. Yarmoska, et al <i>Georgia Institute of Technology and Emory University</i></p>	<p><b>P1-B5-5</b> A Two-dimensional (2D) Systems Biology-based Discrete Liver Tissue Model for Simulations of Ultrasound Shear Wave Elastography (SWE)</p> <p>Jingfeng Jiang, et al <i>Michigan Technological University</i></p>	<p><b>P1-B7-2</b> Ultrasound imaging of cardiac fiber orientation: What are we looking at?</p> <p>Alessandro Ramalli, et al <i>KU Leuven</i></p>	<p><b>P1-B8-5</b> Detectability of Model Thrombus as a Function of Size and Stiffness using Magnetomotive Ultrasound</p> <p>Benjamin Levy, et al <i>The University of North Carolina at Chapel Hill</i></p>
<p><b>P1-B3-1</b> Reduction of ultrasound energy to induce cellular damage by selective intracellular aggregation of phase-change nano-droplets</p> <p>Ayumu Ishijima, et al <i>The University of Tokyo</i></p>	<p><b>P1-B4-2</b> Ultrasound and Optical Imaging of Perfluorocarbon Nanodroplet Adhesion to Endothelial Cells under Atheroprone Flow Conditions</p> <p>Ge Zhang, et al <i>Imperial College London</i></p>	<p><b>Session P1-B6.</b> <b>Elasticity in Pre-Clinical and Clinical Applications</b></p> <p><i>Chair: Gianmarco Pinton</i> <i>University of North Carolina</i></p>	<p><b>P1-B7-3</b> Detection of mechanical activation of the left ventricle using high frame rate ultrasound imaging</p> <p>Kaja Kvåle, et al <i>GE Vingmed Ultrasound</i></p>	<p><b>P1-B8-6</b> Real-Time Magnetomotive Ultrasound Imaging Using a Recursive Estimator</p> <p>Tim C. Kranemann, et al <i>Ruhr-University Bochum</i></p>
<p><b>P1-B3-2</b> Acoustic droplet vaporization induced physicochemical effects at the single-cell level</p> <p>Ching-Hsiang Fan, et al <i>National Tsing Hua University</i></p>	<p><b>P1-B4-3</b> Enhanced Extravasation of Magnetic Perfluorocarbon Nanodroplets with Bimodal Size Distribution by Two-step Magnetic/Ultrasound Synergistic Manipulation</p> <p>Jixiu Huang, et al <i>Xi'an Jiaotong University</i></p>	<p><b>P1-B6-1</b> Subresolution displacements and shear shock wave tracking in the human brain</p> <p>Sandhya Chandrasekaran, et al <i>North Carolina State University</i></p>	<p><b>P1-B7-4</b> Spiral complex movements of the heart wall at the beginning of myocardial contraction detected by high frame speckle tracking</p> <p>Hiroshi Kanai, et al <i>Tohoku University</i></p>	<p><b>Session P1-B9.</b> <b>High-Frequency Tissue Characterization</b></p> <p><i>Chair: Eric Strohm</i> <i>University of Toronto</i></p>
<p><b>P1-B3-3</b> Effects of Pulse Length and Pulse Repetition Frequency on the Cavitation Dynamics of the flowing Microbubbles Population</p> <p>Mouwen Cheng, et al <i>Shanghai Jiao Tong University</i></p>	<p><b>P1-B4-4</b> Effects of Flowing Lipid-shelled Microbubbles and Phase-shift Nanodroplets on the Characteristics of Cavitation during Focused Ultrasound Exposure</p> <p>Tianqi Xu, et al <i>School of Life Science and Technology, Xi'an Jiaotong University</i></p>	<p><b>P1-B6-2</b> Measurement of the nonlinear elastic properties of ex vivo porcine brain: applications to traumatic brain injury</p> <p>David Espindola, et al <i>University of North Carolina at Chapel Hill and North Carolina State University</i></p>	<p><b>P1-B7-5</b> Adaptive Normalized Convolution for 4D reconstruction of freehand-rotated 2D TEE sequences</p> <p>Raja Sekhar Bandaru, et al <i>Erasmus MC</i></p>	<p><b>P1-B9-1</b> Estimating the change in cellular size variance during cell death using the polydisperse structure factor model</p> <p>Emilie Franceschini, et al <i>Aix-Marseille université, CNRS, Centrale Marseille</i></p>
<p><b>P1-B3-4</b> Tumor hypoxic microenvironment alteration and cancer therapy with biogenic nanoparticle-based oxygen delivery</p> <p>Lin Song, et al <i>The Hong Kong Polytechnic University</i></p>	<p><b>P1-B4-5</b> Synchronized ADV and ODV for enhanced cavitation</p> <p>Sy-Han Huang, et al <i>National Taiwan University</i></p>	<p><b>P1-B6-3</b> A novel non-invasive ultrasound vibro-elastography technique for assessing patients with unilateral papilledema and choroidal folds</p> <p>Boran Zhou, et al <i>Mayo Clinic</i></p>	<p><b>P1-B7-6</b> Ultrasound Sub-pixel Speckle Tracking with Off-plane Motion Detector for Precise Vascular Imaging</p> <p>Hideki Yoshikawa, et al <i>HITACHI Ltd.</i></p>	<p><b>P1-B9-2</b> Verification of error factors and accuracy improvement in speed of sound analysis at ultra-high frequency</p> <p>Toshiki Matsuzaki, et al <i>Chiba University</i></p>
<p><b>P1-B3-5</b> Acoustic phase-shift nanodroplets mediated miRNA therapy for hepatocellular carcinoma</p> <p>Wei Dong, et al <i>Xi'an Jiaotong University</i></p>	<p><b>P1-B4-6</b> Ultrasound-based Cell Sorting with Microbubbles</p> <p>Thomas Matula, et al <i>Univ. of Washington</i></p>	<p><b>P1-B6-4</b> Texture Features in Viscoelastic Response (VisR) Ultrasound Images Differentiate Dystrophic from Control Skeletal Muscles in a Dog Model of Duchenne Muscular Dystrophy, In Vivo</p> <p>Christopher Moore, et al <i>University of North Carolina at Chapel Hill</i></p>	<p><b>P1-B7-7</b> Automatic quantification of Extra-Medial Thickness in carotid ultrasound</p> <p>Guillaume Zahnd, et al <i>Chair for Computer Aided Medical Procedures &amp; Augmented Reality, Technische Universität München</i></p>	<p><b>P1-B9-3</b> Speed of sound analysis from micro to macro size by wide area ultrasound microscopic measurement</p> <p>Takuya Ogawa, et al <i>Chiba University</i></p>

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**WEDNESDAY POSTER**

09:30 am - 04:00 pm	Poster --- Wednesday, October 24			Kairaku (posters 1)
<p><b>P1-B9-4</b> Three-dimensional Acoustic Impedance Imaging for Cultured Biological Cells</p> <p>Naohiro Hozumi, et al <i>Toyohashi University of Technology</i></p>	<p><b>P1-B10-7</b> Relative quality of tumor growth equations describing volume and vascular evolution assessed with ultrasound</p> <p>Jerome Griffon, et al <i>Laboratoire d'Imagerie Biomédicale (Sorbonne University, CNRS, INSERM)</i></p>	<p><b>P1-B12-4</b> High speed high frequency miniature forward-looking ultrasound system for clinical applications</p> <p>Xueqiao Wang, et al <i>Newway Technology (US), Inc</i></p>	<p><b>P1-B13-7</b> Nonlinear Behavior of Contact-Resonance Atomic Force Microscopy due to Stick-Slip phenomena</p> <p>M Kalyan Phani, et al <i>OP Jindal University</i></p>	<p><b>P1-B14-8</b> Human Activity Recognition Based on Two-Dimensional Acoustic Arrays</p> <p>Xinhua Guo, et al <i>School of Mechanical and Electronic Engineering, Wuhan University of Technology</i></p>
<p><b>P1-B9-5</b> Enhancement of bandwidth and SNR with ultra-high-frequency ultrasound using chirps for acoustic microscopy</p> <p>Kazuyo Ito, et al <i>Chiba University</i></p>	<p><b>Session P1-B11.</b> <b>Neuromodulation and Brain Applications</b></p> <p><i>Chair: James Kwan</i> <i>Nanyang Technological University of Singapore</i></p>	<p><b>P1-B12-5</b> Novel thin film transducers for durable high-resolution imaging in industry and medicine</p> <p>Ivan Shorokhov, et al <i>Novosound Ltd, Biocity, Bo'ness Road, Newhouse, Scotland</i></p>	<p><b>P1-B13-8</b> A study on feasibility of method using high-intensity aerial ultrasonic waves for detection of foreign substance inside soft material</p> <p>Li Jin, et al <i>Graduate School of Science and Technology, Nihon University</i></p>	<p><b>P1-B14-9</b> A Recurrent Neural Network Classifier for Ultrasonic NDE Applications</p> <p>Michael Marino, et al <i>Illinois Institute of Technology</i></p>
<p><b>P1-B9-6</b> Non-invasive intracellular observation of cancer cells associated with proliferation</p> <p>Thomas Tiong Kwong Soon, et al <i>Toyohashi University of Technology</i></p>	<p><b>P1-B11-1</b> Measurement of Focused Ultrasound Neural Stimulation; Somatosensory Evoked Potential at Two Separate Skin Temperatures</p> <p>Lu Xu, et al <i>UC San Diego</i></p>	<p><b>P1-B12-6</b> A Distal Micro-Motor Ultrasonic Imaging Catheter</p> <p>Yunfei Li, et al <i>National-Regional Key Technology Engineering Laboratory for Medical Ultrasound</i></p>	<p><b>P1-B13-9</b> A Compressed Sensing Based Miniaturized Photoacoustic Imaging System</p> <p>Haoran Jin, et al <i>Nanyang Technological University</i></p>	<p><b>P1-B14-10</b> Analog computing for acoustic spatial signals based on metasurfaces</p> <p>Qi Wei, et al <i>Nanjing Normal University</i></p>
<p><b>P1-B9-7</b> Acoustic impedance analysis for internal structure of cultured cells by 250 MHz ultrasound</p> <p>Tamaki Honda, et al <i>Chiba University</i></p>	<p><b>P1-B11-2</b> Temperature and cavitation monitoring for FUS peripheral neuromodulation</p> <p>Hermes Kamimura, et al <i>Columbia University</i></p>	<p><b>P1-B12-7</b> Modeling and Characterization of an Acousto-optical Transducer for Catheter Tracking in Interventional Magnetic Resonance Imaging</p> <p>Yusuf Yaras, et al <i>Georgia Institute of Technology</i></p>	<p><b>P1-B13-10</b> Imaging of disbond and delamination using flexural vibrations generated by laser modulation</p> <p>Takahiro Hayashi, et al <i>Kyoto University</i></p>	
<p><b>P1-B9-8</b> In vivo attenuation coefficient estimation of the healthy forearm and thigh human dermis</p> <p>Ana Saavedra, et al <i>Pontificia Universidad Católica del Perú</i></p>	<p><b>P1-B11-3</b> Transcranial Focused Ultrasound Stimulation Decreases Blood Pressure in Spontaneously Hypertensive Rats</p> <p>Dapeng Li, et al <i>School of Life Science and Technology, Xi'an Jiaotong University</i></p>	<p><b>P1-B12-8</b> High frequency Transducer Based on Ultrathin Li doped (K0.45Na0.55)NbO3 Single Crystal for 80MHz Intravascular Ultrasound and Photoacoustic Imaging</p> <p>Tao Zhang, et al <i>Huazhong University of Science and Technology</i></p>	<p><b>P1-B13-11</b> Suppression of surface wave signal artifacts in laser-ultrasound imaging of CFRP composites</p> <p>Lukasz Ambrozinski, et al <i>AGH University of Science and Technology</i></p>	
<p><b>Session P1-B10.</b> <b>Spectral-Based and Elastographic Tissue Characterization</b></p> <p><i>Chair: Emilie Franceschini</i> <i>CNRS</i></p>	<p><b>P1-B11-4</b> Noninvasive delivery of adenoviral-mediated suicide gene to treat glioma through focused ultrasound-induced BBB opening</p> <p>Min Pan, et al <i>Shenzhen Hospital (Futian) of Guangzhou University of Chinese Medicine</i></p>	<p><b>Session P1-B13.</b> <b>Acoustic Imaging</b></p> <p><i>Chair: Joel Harley</i> <i>University of Utah</i></p>	<p><b>Session P1-B14.</b> <b>Signal Processing</b></p> <p><i>Chair: Erdal Oruklu</i> <i>Illinois Institute of Technology</i></p>	

<p><b>P1-B10-1</b> In situ calibration to account for transmission losses in backscatter coefficient estimation.</p> <p>Trong Nguyen, et al <i>University of Illinois at Urbana Champaign</i></p>	<p><b>P1-B11-5</b> Ultrasonic-magnetic Hybrid Gene-delivery System for Parkinson's Disease Treatment</p> <p>Chun-Yao Wu, et al <i>National Tsing Hua University</i></p>	<p><b>P1-B13-1</b> Preliminary experiments of 3-dimensional Fourier beamforming with no approximate interpolation for wavenumber matching</p> <p>Chikayoshi Sumi, et al <i>Sophia University</i></p>	<p><b>P1-B14-2</b> A Subspace Based Method for Near Transducer Interference Suppression</p> <p>Johan E. Carlson, et al <i>Lulea University of Technology</i></p>	
<p><b>P1-B10-2</b> Quantitative ultrasound and immunohistochemistry characterization at different stages of murine tumor development</p> <p>Jerome Griffon, et al <i>Laboratoire d'Imagerie Biomédicale (Sorbonne University, CNRS, INSERM)</i></p>	<p><b>P1-B11-6</b> Study on the antitumor effect of sonodynamic therapy on nude mice bearing intracranial glioblastoma xenografts</p> <p>Yongpeng Huang, et al <i>Shenzhen University</i></p>	<p><b>P1-B13-2</b> Ultrasonic Array Imaging through Reverberating Layers for Industrial Process Analysis</p> <p>Marcus Ingram, et al <i>University of Strathclyde</i></p>	<p><b>P1-B14-3</b> Sparse Representation with Partially Known Support and Subspace Expansion for Echo Estimation in Ultrasonic NDE Applications</p> <p>Yufeng Lu, et al <i>Bradley University</i></p>	
<p><b>P1-B10-3</b> Coherent ultrasound scattering in the young Rhesus macaque brain: effects of exposure to anesthetics</p> <p>Ivan Rosado-Mendez, et al <i>Universidad Nacional Autonoma de Mexico</i></p>	<p><b>Session P1-B12.</b> <b>Catheters and High-Frequency Transducers</b></p> <p><i>Chair: Nicolas Felix</i> <i>Vernon SA</i></p>	<p><b>P1-B13-3</b> Large-Panel Multitouch Ultrasonic Touchscreen using Lamb wave</p> <p>Ki Chang Kang, et al <i>Hanyang University</i></p>	<p><b>P1-B14-4</b> Mode Separation and Reconstruction of Ultrasonic Guided Waves Based on Synchrosqueezed Wavelet Transform</p> <p>Zhenli Liu, et al <i>Department of Electronic Engineering, Fudan University, Shanghai, 200433</i></p>	
<p><b>P1-B10-4</b> Lung Mass Density Analysis using Deep Neural Network and Lung Ultrasound Surface Wave Elastography: a sponge phantom study</p> <p>Boran Zhou, et al <i>Mayo Clinic</i></p>	<p><b>P1-B12-1</b> Development of High-Frequency Miniature PNN-PZT-based Ceramic Ultrasonic Transducer</p> <p>Qi Zhang, et al <i>The Hong Kong Polytechnic University</i></p>	<p><b>P1-B13-4</b> Ultrasonic focusing through a steel layer for acoustic imaging</p> <p>Andreas S. Talberg, et al <i>NTNU</i></p>	<p><b>P1-B14-5</b> A High Performance Communication Platform for Ultrasonic Applications</p> <p>Boyang Wang, et al <i>Illinois Institute of Technology</i></p>	
<p><b>P1-B10-5</b> Determination of Thermal Dose for Ablation Therapies: An Ex Vivo Tissue Experiment</p> <p>Ami Kling, et al <i>Michigan Technological University</i></p>	<p><b>P1-B12-2</b> High Performance 60MHz Single Crystal PMN-PT Composite for Medical Ultrasound Applications</p> <p>Ramanarao Bommena, et al <i>CTS ADVANCED MATERIALS</i></p>	<p><b>P1-B13-5</b> A Study on Marked Muscle Fiber for Ultrasonic Skeletal Muscle</p> <p>Pan Li, et al <i>Shaanxi Normal University</i></p>	<p><b>P1-B14-6</b> Fluid layer thickness measurement using a shift-invariant sparse approach</p> <p>Quanchang Li, et al <i>Chongqing University</i></p>	
<p><b>P1-B10-6</b> Analysis of the accuracy and precision of the least square fitting method for simultaneous estimation of backscatter and attenuation coefficients</p> <p>Johan Polack, et al <i>Pontifica Universidad Catolica del Peru</i></p>	<p><b>P1-B12-3</b> Highly Sensitive Array Transducer based on a KNN-NTK Composite Lead-free Piezoelectric Ceramic for High-frequency Ultrasonic Imaging Application</p> <p>Ruimin Chen, et al <i>University of Southern California</i></p>	<p><b>P1-B13-6</b> The Coupling Effects in Three Parallel Waveguides</p> <p>Guanjun Yin, et al <i>Shaanxi Normal University</i></p>	<p><b>P1-B14-7</b> A Multi-Resolution Convolutional Neural Network Architecture for Ultrasonic Flaw Detection</p> <p>Kushal Virupakshappa, et al <i>Illinois Institute of Technology</i></p>	

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**WEDNESDAY POSTER**

09:30 am - 04:00 pm		Poster --- Wednesday, October 24		Waraku (posters 2)	
<p><b>Session P2-B1.</b> <b>PAT: Acoustic Tweezers and Particle Manipulation</b></p> <p><i>Chair: Minoru Kuribayashi Kurosawa</i> <i>Tokyo Institute of Technology</i></p>	<p><b>P2-B2-2</b> Transferable Analytical Model of Phononic Bandgap in Cross-hole Phononic Crystals</p> <p>Takahiro Nishino, et al <i>Okayama University</i></p>	<p><b>P2-B4-5</b> S-sequence Encoded Multiplane Wave Imaging: Phantom and In-vivo Validations</p> <p>Yinran Chen, et al <i>Department of Biomedical Engineering, Tsinghua University</i></p>	<p><b>Session P2-B6.</b> <b>Photoacoustic Contrast and Theranostic Agents</b></p> <p><i>Chair: Kelsey Kubelick</i> <i>Georgia Institute of Technology</i></p>	<p><b>Session P2-B8.</b> <b>Application-Specific Systems and Real-Time Acceleration</b></p> <p><i>Chair: Billy Yiu</i> <i>University of Waterloo</i></p>	
<p><b>P2-B1-1</b> Ultrasound-driven self-assembly of gold nanocages with different patterns</p> <p>Mian Chen, et al <i>Shenzhen University</i></p>	<p><b>P2-B2-3</b> Design and Assessment of Phononic Crystals for Controlling Ultrasonic Wave via Optical Measurement Method</p> <p>Kensuke Manabe, et al <i>Okayama University</i></p>	<p><b>P2-B4-6</b> Reducing Cross-Talk Artifacts for Ultrafast Ultrasound Imaging with Arbitrary Level Codes: Beam Clustering and Optimization Dimensionality Reduction</p> <p>David Egolf, et al <i>University of Alberta</i></p>	<p><b>P2-B6-1</b> Monitoring liposome payload release by photoacoustic spectroscopy of indocyanine green</p> <p>Adam J. Dixon, et al <i>University of Virginia</i></p>	<p><b>P2-B8-1</b> A portable ultrasound device for measuring the stiffness of carotid artery: comparison with SphygmoCor carotid-femoral pulse wave velocity</p> <p>Chieh-Ju Tang, et al <i>National Cheng Kung University</i></p>	
<p><b>P2-B1-2</b> Experimental feasibility study of non-contact acoustic picker considering effect of stage</p> <p>Yutaka Yamamoto, et al <i>Tokyo Metropolitan University</i></p>	<p><b>P2-B2-4</b> Effective slowness surfaces for anisotropic elastic composites</p> <p>Vincent Laude, et al <i>CNRS</i></p>	<p><b>Session P2-B5.</b> <b>Flow Estimation Methods and Applications</b></p> <p><i>Chair: Pengfei Song</i> <i>Mayo Clinic</i></p>	<p><b>P2-B6-2</b> IR808-Anchored MnO Nanoparticles Imaging Tumor and Inducing Enhanced Phototherapy Effect via Mitochondria-mediated Pathway</p> <p>Lihua Zhou, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i></p>	<p><b>P2-B8-2</b> A Low-Cost Software-Defined Ultrasound System Capable of High-Speed Ultrasound Bubble Tracking</p> <p>Pascal Alexander Hager, et al <i>Integrated Systems Lab, ETH Zürich</i></p>	
<p><b>P2-B1-3</b> Immobilization of single cells by an array transducer based single-beam acoustic tweezers</p> <p>Changhan Yoon, et al <i>Inje University</i></p>	<p><b>P2-B2-5</b> Surface wave attenuation mechanisms in pillar-based phononic crystals</p> <p>Sebastien Aubert, et al <i>SENSeOR SAS</i></p>	<p><b>P2-B5-1</b> Spatiotemporal filtering for synthetic aperture slow flow imaging</p> <p>Guillermo Galán Olleros, et al <i>Technical University of Denmark</i></p>	<p><b>P2-B6-3</b> Investigation of nonlinear photoacoustic property of porphyrin by pump-probe excitation</p> <p>Fei Cao, et al <i>The Hong Kong Polytechnic University</i></p>	<p><b>P2-B8-3</b> Automatic B-mode Ultrasound Image Optimization for a Wireless Mobile Ultrasound Imaging System</p> <p>Hojung Lee, et al <i>Sogang University</i></p>	
<p><b>P2-B1-4</b> Ultrasonic manipulation of particles on fluid surface using 2-D CMUT array</p> <p>Chang Hoon Lee, et al <i>Hanyang University</i></p>	<p><b>Session P2-B3.</b> <b>PMI: Modelling and Inversion</b></p> <p><i>Chair: Minoru Kuribayashi Kurosawa</i> <i>Tokyo Institute of Technology</i></p>	<p><b>P2-B5-2</b> An Adapted Coherent Flow Power Doppler Beamforming Scheme for Improved Sensitivity Towards Blood Signal Energy</p> <p>Kathryn Ozgun, et al <i>Vanderbilt University</i></p>	<p><b>P2-B6-4</b> Transcranial photoacoustic imaging of NMDA-evoked focal circuit dynamics in rat forebrain</p> <p>Jeeun Kang, et al <i>Johns Hopkins University School of Medicine</i></p>	<p><b>P2-B8-4</b> A Point-of-Care Ultrasound Scanner with Software Beamforming on Nvidia Tegra mobile GPU</p> <p>Marcin Lewandowski, et al <i>Institute of Fundamental Technological Research, Polish Academy of Sciences</i></p>	
<p><b>P2-B1-5</b> Finite element analysis of acoustic streaming in a Kundt tube with artificial ridge boundary</p> <p>Yuji Wada, et al <i>Seikei University</i></p>	<p><b>P2-B3-1</b> Theoretical analysis of the slot acoustic waves in two piezoelectric plates of finite length separated by vacuum gap</p> <p>Andrey Teplykh, et al <i>Kotel'nikov's Institute of Radio Engineering and Electronics of RAS, Saratov Branch</i></p>	<p><b>P2-B5-3</b> High-frame-rate Ultrasound Motion Estimation Based on Pre-beamformed Multi-angle Plane Wave Images</p> <p>He Li, et al <i>The University of Hong Kong</i></p>	<p><b>Session P2-B7.</b> <b>Disease and Therapy Monitoring using Photoacoustics</b></p> <p><i>Chair: Pai Chi Li</i> <i>National Taiwan University</i></p>	<p><b>P2-B8-5</b> A Spline-based Spatial Impulse Response Ultrasound Simulator with GPU Implementation</p> <p>Dimitris Perdios, et al <i>Ecole Polytechnique Fédérale de Lausanne (EPFL)</i></p>	



<p><b>P2-B1-6</b> Simulation of interparticle radiation force between solid elastic spheres in a standing wave field</p> <p>Gergely Simon, et al Heriot-Watt University</p>	<p><b>P2-B3-2</b> Acoustic waves guided at the intersection of interfaces and surfaces</p> <p>Pavel Pupyrev, et al Prokhorov General Physics Institute of the Russian Academy of Sciences</p>	<p><b>P2-B5-4</b> De-aliasing color flow mapping with staggered pulse sequence at improved frame rate</p> <p>Rei Asami, et al Hitachi, Ltd</p>	<p><b>P2-B7-1</b> Photoacoustic imaging for assessing flow-mediated oxygenation for peripheral arterial disease.</p> <p>Kathryn Khaw, et al University of Pennsylvania</p>	<p><b>P2-B8-6</b> Feasibility of hands-free acquisitions of the skeletal muscles and the heart during exercise</p> <p>Marloes Sjoerdsma, et al Eindhoven University of Technology</p>
<p><b>P2-B1-7</b> Acoustic manipulation of microbubbles based on implantable and biodegradable artificial structures</p> <p>Fei Li, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>Session P2-B4.</b> <b>Multi-Line and Multi-Plane Imaging</b></p> <p><b>Chair: Dongwoon Hyun</b> Stanford University</p>	<p><b>P2-B5-5</b> Super-resolution measurement of fluid velocity profiles within sub-wavelength microtubes</p> <p>David Espindola, et al University of North Carolina at Chapel Hill and North Carolina State University</p>	<p><b>P2-B7-2</b> Integration of Endovenous Laser Ablation and Photoacoustic Imaging Systems for Enhanced Treatment of Venous Insufficiency</p> <p>Samuel John, et al Wayne State University</p>	<p><b>P2-B8-7</b> Experimental study to bend thin catheter independent to ultrasound propagation direction by tempo-spatial division emission using multiple transducers</p> <p>Hidetaka Ushimizu, et al Tokyo Univ. of A&amp;T</p>
<p><b>P2-B1-8</b> Acoustic trapping of microparticles at the inner and outer wall of a glass capillary</p> <p>Qin Lin, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>P2-B4-1</b> Spatial coherence based beamforming in multi-line transmit echocardiography</p> <p>Giulia Matrone, et al University of Pavia</p>	<p><b>P2-B5-6</b> An ultrafast ultrasound microvessel imaging technique for assessing patients with unilateral papilledema and choroidal folds</p> <p>Boran Zhou, et al Mayo Clinic</p>	<p><b>P2-B7-3</b> Photoacoustics for non-invasive monitoring of kidney damage due to diabetes and hypertension</p> <p>Elizabeth Berndt, et al Ryerson University</p>	<p><b>P2-B8-8</b> Comparison of longitudinal-mode and longitudinal-torsional mode ultrasonic bone biopsy devices</p> <p>Rebecca Cleary, et al University of Glasgow</p>
<p><b>P2-B1-9</b> High Frequency Ultrasonic Levitation of Red Blood Cells Aggregation</p> <p>Hae Gyun Lim, et al Pohang University of Science and Technology</p>	<p><b>P2-B4-2</b> Tri-plane cardiac imaging using multi-line transmission on a spiral array: a feasibility study</p> <p>Alessandro Ramalli, et al KU Leuven</p>	<p><b>P2-B5-7</b> RADIAL ARTERY REACTIVE RESPONSE AND SHEAR RATE MEASUREMENTS USING 20 MHZ SYSTEM</p> <p>Andrzej Nowicki, et al Institute of Fundamental Technological Research - PAS</p>	<p><b>P2-B7-4</b> Pathology Study for Blood Vessel of Ocular Fundus Images by photoacoustic tomography</p> <p>Jiayao Zhang, et al ShanghaiTech University</p>	<p><b>P2-B8-9</b> 3D Forward-Looking Ultrasound Imaging from a Steerable Single-Element Intracardiac Catheter</p> <p>Jovana Janjic, et al Erasmus MC</p>
<p><b>Session P2-B2.</b> <b>PPN: Phononics</b></p> <p><b>Chair: Minoru Kuribayashi Kurosawa</b> Tokyo Institute of Technology</p>	<p><b>P2-B4-3</b> Orthogonal Frequency Division Multiplexing Combined with Multi Line Transmission for Ultrafast Ultrasound Imaging: Experimental Findings</p> <p>Libertario Demi, et al University of Trento</p>	<p><b>P2-B5-8</b> Coded Multiple Parallel Focal Zone Scanning for Ultrafast Power Doppler Blood Flow Imaging</p> <p>Tarek Kaddoura, et al University of Alberta</p>	<p><b>P2-B7-5</b> Photoacoustic spectral analysis at ultraviolet wavelength for assessing the aggressiveness of prostate cancer</p> <p>Guan Xu, et al University of Michigan</p>	<p><b>P2-B8-10</b> Sonopill: Progress Towards Microultrasound Capsule Endoscopy</p> <p>Holly Lay, et al University of Glasgow</p>
<p><b>P2-B2-1</b> Experimental evidence of compact waveguide based on whispering gallery in phononic crystals plate</p> <p>Jinfeng Zhao, et al Tongji University</p>	<p><b>P2-B4-4</b> Multi-Line Transmission and Multi-Line Acquisition with Synthetic Transmit and Filtered Delay Multiply and Sum Receive Beamforming in Cardiac Ultrasound Imaging</p> <p>Grigoriy Zurakhov, et al Technion - IIT</p>	<p><b>P2-B5-9</b> Towards Oxygen Metabolism Estimation with Ultrafast Speckle-Decorrelation Imaging and Functional Photoacoustic Imaging</p> <p>Mayara Nascimento de Oliveira, et al University of Alberta</p>	<p><b>P2-B7-6</b> Photoacoustic cepstrum analysis for studying vascular networks</p> <p>Eno Hysi, et al Ryerson University</p>	<p><b>Session P2-B9.</b> <b>Spectral Doppler and Clutter Filters</b></p> <p><b>Chair: Ingvild Kinn Ekroll</b> NTNU</p>

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**WEDNESDAY POSTER**

09:30 am - 04:00 pm	Poster --- Wednesday, October 24			Waraku (posters 2)
<p><b>P2-B9-1</b> Spectral Doppler Measurements with 2-D Sparse Arrays</p> <p>Paolo Mattesini, et al <i>University of Florence</i></p>	<p><b>P2-B10-3</b> An ultrasonic probe to measure both radial arterial pressure and diameter at identical position for early diagnosis of arteriosclerosis</p> <p>Mototaka Arakawa, et al <i>Tohoku University</i></p>	<p><b>P2-B11-3</b> Analysis of SAW Scattering at Discontinuity Between Periodic Gratings Using Travelling Wave Excitation and Hierarchical Cascading Technique</p> <p>Yulin Huang, et al <i>University of Electronic Science and Technology of China</i></p>	<p><b>P2-B13-1</b> High frequency optical probe for BAW/SAW devices</p> <p>Hugo Chambon, et al <i>CTR AG</i></p>	
<p><b>P2-B9-2</b> A New Flow Disturbance Mapping Technique Based on Doppler Bandwidth Measurements</p> <p>Billy Y. S. Yiu, et al <i>University of Waterloo</i></p>	<p><b>P2-B10-4</b> Design of a novel zig-zag 192+192 Row Column Addressed Array Transducer for Rodent Super Resolution Imaging: A Simulation study.</p> <p>Mikkel Schou, et al <i>Technical University of Denmark</i></p>	<p><b>P2-B11-4</b> Love Wave Mode Resonator with a Wide Stable Temperature Range</p> <p>Yang Yang, et al <i>Shanghai Jiao Tong university</i></p>	<p><b>P2-B13-2</b> New Technique to Cancel IMD3 in Electroacoustic Filters</p> <p>Marta González-Rodríguez, et al <i>Universitat Politècnica de Catalunya (UPC), Barcelona, Catalunya, Spain</i></p>	
<p><b>P2-B9-3</b> Sparse Transmission Strategy for Transverse Doppler Spectrum Estimation</p> <p>Regev Cohen, et al <i>Technion</i></p>	<p><b>P2-B10-5</b> A row-column array for ultrasound-based tissue anisotropy measurement</p> <p>Huaiyu Wu, et al <i>NC state university</i></p>	<p><b>Session P2-B12.</b> <b>SAW Sensor &amp; Actuator I</b></p> <p><i>Chair: Tao Han</i> <i>Shanghai Jiao Tong University</i></p>	<p><b>P2-B13-3</b> Monolithic FBAR resonators using AlScN piezoelectric layers.</p> <p>Mohanraj Soundara pandian, et al <i>SiiTerra Malaysia Sdn Bhd</i></p>	
<p><b>P2-B9-4</b> Motion Tracking using Neural Networks for a 2D Sample Volume based Spectral Doppler Imaging</p> <p>Jihye Baek, et al <i>Sogang University</i></p>	<p><b>P2-B10-6</b> A quantitative study on the impact of bit errors on image quality in ultrasound probes with in-probe digitization</p> <p>Zhao Chen, et al <i>Delft University of Technology</i></p>	<p><b>P2-B12-1</b> Wireless, Direct Pressure Sensing with SAW Devices at Elevated Temperatures</p> <p>Gudrun Bruckner, et al <i>CTR AG</i></p>	<p><b>P2-B13-4</b> Fast Nonlinear Procedure for the Nonlinear Analysis of BAW Resonators and Filters</p> <p>Rafael Perea-Robles, et al <i>Universitat Politècnica de Catalunya (UPC), Barcelona, Catalunya</i></p>	
<p><b>P2-B9-5</b> Low-Complexity Rank-revealing Spatiotemporal Microvascular Clutter Filter</p> <p>John Flynn, et al <i>Verasonics, Inc</i></p>	<p><b>P2-B10-7</b> Magnetostrictive-Vibration Isolated Probe Design for Backward-Mode Magnetomotive Ultrasound</p> <p>Ming-Chen Lu, et al <i>National Tsing Hua University</i></p>	<p><b>P2-B12-2</b> Novel acoustic gratings with high reflection constant for surface acoustic wave gyroscopes</p> <p>Ashraf Mahmoud, et al <i>Carnegie Mellon University</i></p>	<p><b>P2-B13-5</b> AlN-based solidly mounted resonators on glass substrates for high temperature applications</p> <p>Teona Mirea, et al <i>GMME-CEMDATIC-ETSIT-Universidad Politécnica de Madrid. Spain.</i></p>	
<p><b>P2-B9-6</b> Efficient and flexible spatiotemporal clutter filtering of high frame rate images using subspace tracking</p> <p>Bas Generowicz, et al <i>TU Delft</i></p>	<p><b>P2-B10-8</b> Development of Flexible and Kerfless Phased Array Using Sol-Gel Composite Spraying Technique</p> <p>Masayuki Tanabe, et al <i>Kumamoto University</i></p>	<p><b>P2-B12-3</b> Cell detachment using guided surface acoustic waves</p> <p>Jiyang Mei, et al <i>University of California, San Diego</i></p>	<p><b>Session P2-B14.</b> <b>Material for Acoustic Wave Device I</b></p> <p><i>Chair: Sergei Zhgoon</i> <i>National Research University "MPEI" (Moscow Power Engineering Institute)</i></p>	

<p><b>P2-B9-7</b> Low-Rank Adaptive Clutter Filtering for Robust Ultrasound Vector Flow Imaging</p> <p>Yigang Du, et al Shenzhen Mindray Bio-Medical Electronics Co., Ltd.</p>	<p><b>P2-B10-9</b> Design, Fabrication and Testing Highly Sensitive Single Element Doppler Transducers</p> <p>Per Kristian Bolstad, et al University of Southeast Norway</p>	<p><b>P2-B12-4</b> Shape effects and response to an applied magnetic field in (TbCo<sub>2</sub>/FeCo) multilayer-based SAW resonators. Shape effects and response to an applied magnetic field in (TbCo<sub>2</sub>/FeCo) multilayer-based SAW resonators.</p> <p>Harshad Mishra, et al Université de Lorraine</p>	<p><b>P2-B14-1</b> Temperature characteristics of ScAlN/SiO<sub>2</sub> BAW resonators</p> <p>Honoka Igeta, et al Waseda University</p>	
<p><b>P2-B9-8</b> Spatial and Temporal Adaptive FIR Clutter Filtering</p> <p>Vincent Perrot, et al Univ.Lyon, INSA-Lyon, UCB Lyon 1, UJM-Saint Etienne, CNRS, Inserm</p>	<p><b>P2-B10-10</b> Feasibility of genetic algorithms in 2D ultrasound array optimization</p> <p>Bakary Diarra, et al Electrical, Electronics, Computer &amp; Telecommunication Engineering Department, Botswana International University of Science &amp; Technology (BIUST)</p>	<p><b>P2-B12-5</b> Acoustofluidics with high selectivity using spatio-temporal modulated SAWs</p> <p>Liqiang Li, et al College of mechanical engineering, Zhejiang University</p>	<p><b>P2-B14-2</b> Effects of post-deposition vacuum annealing on piezoelectric performance of AlScN thin films sputtered on 200 mm production wafers</p> <p>Marta Clement, et al GMME-CEMDATIC-ETSIT-Universidad Politécnica de Madrid</p>	
<p><b>P2-B9-9</b> Adaptive Independent Component Analysis-Based Clutter Filtering for Improved Non-Contrast Perfusion Ultrasound Imaging</p> <p>Jaime Tierney, et al Vanderbilt University</p>	<p><b>P2-B10-11</b> Basic study on ultrasonic imaging using piezoelectric elements with polarization-inverted layer</p> <p>Ryo Nagaoka, et al University of Toyama</p>	<p><b>P2-B12-6</b> SAW Delay-Line Sensors Only Using Two Reflectors</p> <p>Jingping Ruan, et al Shanghai Jiao Tong University</p>	<p><b>P2-B14-3</b> Evaluation of bonded wafer for SAW devices using The Line-Focus-Beam Acoustic Microscope</p> <p>Osamu Kawachi, et al TAIYO YUDEN Mobile Technogy Co., LTD.</p>	
<p><b>Session P2-B10. Imaging Transducers</b></p> <p><i>Chair: Richard O'Leary University of Strathclyde</i></p>	<p><b>Session P2-B11. SAW Modeling &amp; Design II</b></p> <p><i>Chair: Maximilian Pitschi RF360 Europe GmbH</i></p>	<p><b>P2-B12-7</b> SAW based tube rotation with wireless power transfer</p> <p>Sergey Biryukov, et al IFW Dresden</p>	<p><b>P2-B14-4</b> Stress control for highly doped Aluminum Scandium Nitride films</p> <p>Sergey Mishin, et al AMS, Inc.</p>	
<p><b>P2-B10-1</b> A 360° Electronic Radial Ultrasound Endoscope Based on Designed PMN-PT Single Crystal/Epoxy 2-2 Composite</p> <p>Ting Zhang, et al National-Regional Key Technology Engineering Laboratory for Medical Ultrasound</p>	<p><b>P2-B11-1</b> FEM-Based Estimation of SAW Power Flow Angle in Periodic Gratings</p> <p>Benfeng Zhang, et al Shanghai Jiao Tong University</p>	<p><b>P2-B12-8</b> Glue-less and robust assembly method for SAW strain sensors</p> <p>Pascal Nicolay, et al CTR AG</p>		
<p><b>P2-B10-2</b> A kerfless PVDF array for photoacoustic imaging</p> <p>Reza Pakdaman Zangabad, et al Erasmus Medical Center</p>	<p><b>P2-B11-2</b> Theoretical analysis and design of longitudinal leaky SAW device consisting of ScAlN film / piezoelectric single crystal substrate</p> <p>Masashi Suzuki, et al University of Yamanashi</p>	<p><b>Session P2-B13. BAW Device &amp; Application II</b></p> <p><i>Chair: Masanori Ueda TAIYO YUDEN CO., LTD.</i></p>		

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**THURSDAY ORAL**

08:00 am -09:30 am		Oral --- Thursday, October 25							
	Session 1H. Shear Wave Methods I  Chair: Matthew Urban Mayo Clinic	Session 2H. Neuromodulation and Brain Applications  Chair: William Apoutou N'Djin INSERM	Session 3H. Automated Image Quantification  Chair: Piero Tortoli University of Florence	Session 4H. Beamforming for Other Applications  Chair: Georg Schmitz Ruhr-Universität Bochum	Session 5H. Acoustic Microfluidics  Chair: David Greve DWGreve Consulting	Session 6H. Ultrasonic Transducer & Sensor  Chair: Mauricio Pereira da Cunha University of Maine	Session 7H. PPN: Phononics  Chair: John Larson Broadcom Ltd	Session 8H. Piezoelectric Transducers  Chair: Sandy Cochran University of Glasgow	
	Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)	
08:00 am	<p><b>1H-1</b> Ultrasound Shear Wave Elastography of Viscoelastic Media Using Local Phase Velocity Based Imaging (LPVI) Approach</p> <p>Piotr Kijanka, et al Mayo Clinic</p>	<p><b>2H-1</b> Inhibitory effects of motor neuron activity in mouse peripheral nerve system using ultrasound-guided focused ultrasound in vivo</p> <p>Min Gon Kim, et al Columbia University</p>	<p><b>3H-1</b> Experimental Validation of an Improved Local Speed-of-Sound Estimator Using Pulse-Echo Ultrasound</p> <p>Marko Jakovljevic, et al Stanford University</p>	<p><b>4H-1</b> Segmenting bone structures in ultrasound images with Locally Weighted SLSC (LW-SLSC) beamforming</p> <p>Eduardo Gonzalez, et al Johns Hopkins University</p>	<p><b>5H-1</b> Omnidirectional spiral surface acoustic waves for particles manipulation and multi-size particles separation in a microliter sessile drop</p> <p>Naiqing Zhang, et al University of California, San Diego</p>	<p><b>6H-1</b> Fabrication of transparent capacitive micromachined ultrasonic transducers (CMUTs)</p> <p>Zhenhao Li, et al University of Alberta</p>	<p><b>7H-1</b> Radiative damping of vibrational modes of a microsphere on an elastic substrate</p> <p>Alexei Maznev, et al MIT</p>	<p><b>8H-1</b> The impact of local structural heterogeneity on piezoelectric properties of perovskite ferroelectrics</p> <p>Shujun Zhang, et al University of Wollongong</p>	
08:15 am	<p><b>1H-2</b> Ultrasound Shear Wave Elastography of Small Inclusions Using Local Phase Velocity Based Imaging (LPVI) Approach</p> <p>Piotr Kijanka, et al Mayo Clinic</p>	<p><b>2H-2</b> Low intensity pulsed ultrasound stimulation improves sensorimotor function in a mouse model of Parkinson's disease</p> <p>Hui Zhou, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>3H-2</b> Fully automatic real-time ejection fraction and MAPSE measurements in 2D echocardiography using deep neural networks</p> <p>Erik Smistad, et al Norwegian University of Science and Technology (NTNU)</p>	<p><b>4H-2</b> Influence of beamforming methods on velocity estimation: in vitro experiments</p> <p>Maxime Polichetti, et al University Lyon, INSA-Lyon, UCBL, UJM-Saint-Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206, F-69100 Villeurbanne, France</p>	<p><b>5H-2</b> Safe and rapid recharging in lithium metal batteries possessing significantly greater charge capacities via integrated surface acoustic wave turbulent electrolyte mixing</p> <p>An Huang, et al University of California, San Diego</p>	<p><b>6H-2</b> Research on Ultrasound-sensitive Ion Channels by using Ultrasound Neuro-modulation Chip</p> <p>Xinhui Wang, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>7H-2</b> Coupled phonons, photons and RF read-out for phononic circuits</p> <p>Daniel Navarro Urrios, et al Universidad de Barcelona</p>	<p><b>8H-2</b> Piezoelectric Single Crystal Standard Development</p> <p>Lynn Ewart, et al Naval Undersea Warfare Center</p>	
08:30 am	<p><b>1H-3</b> Enhanced Shear Wave Elastography for HIFU Monitoring of Stiff Uterine Fibroids</p> <p>Sua Bae, et al Sogang University</p>	<p><b>2H-3</b> Focused Ultrasound-enabled Brain Tumor Liquid Biopsy</p> <p>Lifei Zhu, et al Washington University in St. Louis</p>	<p><b>3H-3</b> Zonal segmentation in transrectal ultrasound images of the prostate through deep learning</p> <p>Ruud J. G. van Sloun, et al Eindhoven University of Technology</p>	<p><b>4H-3</b> Evaluation of coherence-based beamforming for B-mode and speckle tracking echocardiography</p> <p>Pedro Santos, et al KU Leuven</p>	<p><b>5H-3</b> Localized Microfluidic Mixer Using Planar Fresnel Type GHz Ultrasonic Transducer</p> <p>Adarsh Ravi, et al Cornell University</p>	<p><b>6H-3</b> Novel pMUT-Based Acoustic Duplexer for Underwater and Intra-Body Communication</p> <p>Flavius Pop, et al Northeastern University</p>	<p><b>7H-3</b> Surface-mediated mechanical coupling of pillar pairs</p> <p>Laetitia Raguin, et al Femto-st, CNRS, Université de Bourgogne Franche-Comté</p>	<p><b>8H-3</b> Piezoelectric PMN-PZT Single Crystal-Polymer Composites with Wide Usage Range of Temperature and Driving Electric Field</p> <p>Dong-Ho Kim, et al Ceramcomp Co., Ltd.</p>	

<p><b>08:45 am</b></p>	<p><b>1H-4</b> Near-field effect on elastic wave propagation in shear wave elastography</p> <p>Salavat Aglyamov, et al <i>University of Houston</i></p>	<p><b>2H-4</b> Improved performance and safety of drug delivery to the brain in vivo with Rapid Short-Pulse (RaSP) sequences</p> <p>Sophie V Morse, et al <i>Imperial College London</i></p>	<p><b>3H-4</b> Automated Detection of Fetal Presentation and Gestational Age using Low-cost Ultrasound and Deep Learning in a Resource-Limited Setting</p> <p>Thomas van den Heuvel, et al <i>Radboud university medical center</i></p>	<p><b>4H-4</b> Assessment of tissue boundary delineation using fundamental and harmonic ADMIRE and SLSC for percutaneous biopsy guidance</p> <p>Kazuyuki Dei, et al <i>Vanderbilt University</i></p>	<p><b>5H-4</b> Real-Time Monitoring of Size and Concentration of Nanoparticles inside a reactor using ultrasound</p> <p>Gert-Jan van Groenestijn, et al <i>TNO</i></p>	<p><b>6H-4</b> Immersion PMUTs Fabricated with a Low Thermal-Budget Surface Micromachining Process</p> <p>Guo-Lun Luo, et al <i>University of California</i></p>	<p><b>7H-4</b> Double Negativity in Double-sided Pillared Metamaterial</p> <p>Bernard Bonello, et al <i>CNRS/Sorbonne Université</i></p>	<p><b>8H-4</b> Progress towards Piezocrystal and Pb-Free Piezoceramic Performance Prediction for High Power Ultrasound Devices</p> <p>Nicola Fenu, et al <i>University of Glasgow</i></p>
<p><b>09:00 am</b></p>	<p><b>1H-5</b> Cellquake elastography: applying shear wave elastography on cells</p> <p>Pol Grasland-Mongrain, et al <i>ENS de Lyon</i></p>	<p><b>2H-5</b> Bi-modal modulation of neuronal excitability by ultrasound stimulation in human temporal lobe epilepsy</p> <p>Zhengrong Lin, et al <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China</i></p>	<p><b>3H-5</b> Fully Automatic Assessment of Mitral Valve Morphology from 3D Transthoracic Echocardiography</p> <p>João Pedrosa, et al <i>KU Leuven</i></p>	<p><b>4H-5</b> Clinical Feasibility of Coherence-Based Beamforming to Distinguish Solid from Fluid Hypoechoic Breast Masses</p> <p>Alycen Wiacek, et al <i>Johns Hopkins University</i></p>	<p><b>5H-5</b> Evaluation of viscoelastic properties of liquids based on the oblique incidence technology using shear horizontal waves at frequencies above 100 megahertz from c-axis tilted SCAIN thin films</p> <p>Yui Yamakawa, et al <i>Waseda University</i></p>	<p><b>6H-5</b> Neuronal stimulation and calcium imaging of retinal neurons using surface acoustic waves</p> <p>Melanie Stamp, et al <i>University of Melbourne</i></p>	<p><b>7H-5</b> Topologically Valley-protected Lamb Waves in Pillared Metamaterial</p> <p>Wei Wang, et al <i>Sorbonne Université, UPMC Université Paris 06 (INSP-UMR CNRS 7588)</i></p>	<p><b>8H-5</b> Determination of elastic and piezoelectric properties of Al<sub>0.84</sub>Sc<sub>0.16</sub>N thin films</p> <p>Nicolas Kurz, et al <i>University Freiburg</i></p>
<p><b>09:15 am</b></p>	<p><b>1H-6</b> Dispersion analysis of guided waves in bounded media induced by acoustic micro-tapping</p> <p>Liang Gao, et al <i>University of Washington</i></p>	<p><b>2H-6</b> High-resolution, focused ultrasound-mediated neuromodulation and detailed analysis of electromyography characteristics reveals a high degree of spatial specificity in elicited responses in mice in vivo</p> <p>Christian Aurup, et al <i>Columbia University</i></p>	<p><b>3H-6</b> Semi-automatic 3D geometry assessment of bifurcated carotid artery</p> <p>Joerik de Ruijter, et al <i>Eindhoven University of Technology</i></p>	<p><b>4H-6</b> Cardiac deformation imaging based on coherent compounding of diverging waves with coded excitation</p> <p>Feifei Zhao, et al <i>Department of Biomedical Engineering, Tsinghua University, Beijing</i></p>	<p><b>5H-6</b> Forces and torques on rods in an ultrasonic standing wave</p> <p>David Greve, et al <i>DWGreve Consulting</i></p>	<p><b>6H-6</b> Evaluation of SH-SAW Biosensor in Whole Blood</p> <p>Koji Kano, et al <i>Japan Radio Co., Ltd.</i></p>	<p><b>7H-6</b> Lamb wave propagation in coupled-resonator elastic waveguides</p> <p>Yan-Feng Wang, et al <i>Beijing Jiaotong University</i></p>	<p><b>8H-6</b> High Piezoelectric Properties and Complex Phase Transformations in New Ternary Perovskite Single Crystals</p> <p>Zuo-Guang Ye, et al <i>Simon Fraser University</i></p>


Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**THURSDAY ORAL**

10:30 am -12:00 pm					Oral --- Thursday, October 25				
	Session 1I. Shear Wave Methods II  Chair: Kathy Nightingale Duke University	Session 2I. Neuromodulation and Cellular Bioeffects  Chair: Eleanor Stride University of Oxford	Session 3I. Machine Learning for Image Reconstruction and Interpretation  Chair: Olivier Bernard INSA Lyon	Session 4I. Compressed Imaging  Chair: Yonina Eldar Technion	Session 5I. Material and Defect Characterization  Chair: Walter Arnold Saarland University	Session 6I. Multi-Parametric and Multi-Wave Tissue Characterization  Chair: Roberto Lavarello Pontificia Universidad Católica del Perú	Session 7I. PMI: Modelling and Inversion  Chair: Robert Thalhammer Broadcom Ltd	Session 8I. Multimodal Imaging Transducers  Chair: Christine Démoré Sunnybrook Research Institute	
	Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)	
10:30 am	<p><b>1I-1</b> Feasibility of monitoring HIFU treatments by passive elastography</p> <p>Bruno Giammarinaro, et al LabTAU, INSERM, Centre Léon Bérard, Université Lyon 1</p>	<p><b>2I-1</b> Controllable Single Neuron GHz Ultrasonic Stimulation of Ion Channels in Vitro</p> <p>Priya S. Balasubramanian, et al Cornell University</p>	<p><b>3I-1</b> Machine learning to improve breast cancer diagnosis by multimodal ultrasound</p> <p>Laith Sultan, et al University of Pennsylvania</p>	<p><b>4I-1</b> Structured Ultrasound Microscopy</p> <p>Jovana Janjic, et al Erasmus MC</p>	<p><b>5I-1</b> Ultrasonic evaluation of segmental variability in additively manufactured metal components</p> <p>Manish Roy, et al University of Utah</p>	<p><b>6I-1</b> In vivo assessment of interstitial fibrosis in renal allografts using quantitative ultrasound – comparison with estimated glomerular filtration rates</p> <p>Roberto Lavarello, et al Pontificia Universidad Católica del Perú</p>	<p><b>7I-1</b> Redatuming for Breast Ultrasound</p> <p>Ulas Taskin, et al TU Delft</p>	<p><b>8I-1</b> Technology development of Photoacoustic imaging system in CANON</p> <p>Ken-ichi Nagae, et al Canon Inc.</p>	
10:45 am	<p><b>1I-2</b> Real-time X-Plane Shear Wave Elastography Feasibility on Philips 2D xMatrix Transducer</p> <p>Man Nguyen, et al Philips Research North America</p>	<p><b>2I-2</b> Low-Frequency, Low-Intensity Ultrasound Induces Autophagy in SH-SY5Y Neuronal Cells</p> <p>Xiaowei Huang, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>3I-2</b> Machine learning for quality assurance of myocardial strain curves</p> <p>Mahdi Tabassian, et al KU Leuven</p>	<p><b>4I-2</b> Joint optimization of coding mask and scan positions for compressive single sensor imaging</p> <p>Pim van der Meulen, et al Delft University of Technology</p>	<p><b>5I-2</b> Full waveform inversion for material property mapping using ultrasonic phased arrays</p> <p>Katherine Tant, et al University of Strathclyde</p>	<p><b>6I-2</b> Evaluation of the microstructural changes occurring in the myopic sclera using high-frequency quantitative ultrasound</p> <p>Jonathan Mamou, et al Riverside Research</p>	<p><b>7I-2</b> Sparse recovery of strong reflectors with an application to non-destructive evaluation</p> <p>Eric Bezzam, et al Ecole Polytechnique Fédérale de Lausanne</p>		
11:00 am	<p><b>1I-3</b> 3D Shear Wave Elasticity Tomography based on Laser Speckle Contrast Imaging</p> <p>Pei-Yu Chao, et al National Taiwan University</p>	<p><b>2I-3</b> Bioelectric identification of aggressive prostate cancer using ultrasound cell stimulation</p> <p>Haichong K. Zhang, et al Johns Hopkins University</p>	<p><b>3I-3</b> High-quality Reconstruction of Plane-wave Imaging Using Generative Adversarial Network</p> <p>Xi Zhang, et al Tsinghua University</p>	<p><b>4I-3</b> Sparse Beamforming based on Cantor Arrays</p> <p>Regev Cohen, et al Technion</p>	<p><b>5I-3</b> Online and Offline Ultrasonic NDE of Additively Manufactured Components</p> <p>Martin Spies, et al Fraunhofer Institute for Nondestructive Testing IZFP</p>	<p><b>6I-3</b> Multi-parametric Acoustic Imaging of Cervical Insufficiency</p> <p>Yan Yan, et al Wayne State University</p>	<p><b>7I-3</b> Resolution analysis and uncertainty quantification for ultrasound computed tomography</p> <p>Christian Boehm, et al ETH Zurich</p>	<p><b>8I-2</b> Development of a Transrectal Probe for Combined Ultrasound and Photoacoustic Imaging</p> <p>Jihun Jang, et al Sogang University</p>	



11:15 am	<p><b>11-4</b> 3-D Speckle Tracking with Two-Pass Searching and Phase-Rotated Correlation Filtering</p> <p>Geng-Shi Jeng, et al <i>University of Washington</i></p>	<p><b>21-4</b> Ex-vivo recording of LEUS-generated neural responses from mouse brain slices using a MicroElectrode Array (MEA) system</p> <p>Ivan Suarez Castellanos, et al <i>INSERM</i></p>	<p><b>31-4</b> Automatic functional imaging in echocardiography using deep learning based segmentation and flow estimation</p> <p>Andreas Østvik, et al <i>Norwegian University of Science and Technology</i></p>	<p><b>41-4</b> 3D anatomical scanning using a conical transmit wave: preliminary simulation findings</p> <p>Pedro Santos, et al <i>KU Leuven</i></p>		<p><b>61-4</b> Acoustically stimulated electromagnetic imaging in biomedical tissues</p> <p>Kenji Ikushima, et al <i>Tokyo University of A &amp; T</i></p>	<p><b>71-4</b> Modeling of Wave Propagation in Heterogeneous Media Using a Modified Mixed Domain Method</p> <p>Juanjuan Gu, et al <i>North Carolina State University</i></p>	<p><b>81-3</b> Dual Frequency array for contrast superharmonic imaging</p> <p>Emmanuel Cherin, et al <i>Simmybrook Research Institute</i></p>
11:30 am	<p><b>11-5</b> Passive elastography: a seismic imaging of soft tissues</p> <p>Stéfan Catheline, et al <i>LabTAU</i></p>	<p><b>21-5</b> Experimental identification of the locus of interaction between Low-Energy UltraSound and the nervous system of lumbricus terrestris during the phenomenon of neurostimulation</p> <p>Jérémy Vion-Bailly, et al <i>INSERM</i></p>	<p><b>31-5</b> Deep Convolutional Neural Network for Ultrasound Image Enhancement</p> <p>Dimitris Perdios, et al <i>Ecole Polytechnique Fédérale de Lausanne (EPFL)</i></p>	<p><b>41-5</b> Performance of F-DMAS beamforming with adjustable maximum spatial lag in Multi-Line Transmission ultrasound imaging</p> <p>Giulia Matrone, et al <i>University of Pavia</i></p>	<p><b>51-4</b> Wide-Angle Ultrasonic Backscatter: Concept for Enhanced Array-Based Inspection of Composite Materials</p> <p>Patrick Johnston, et al <i>NASA Langley Research Center</i></p>	<p><b>61-5</b> Carotid artery plaque components classification using homodyned-K parametric maps, elastograms and echogenicity analysis</p> <p>Marie-Hélène Roy Cardinal, et al <i>University of Montreal Hospital</i></p>	<p><b>71-5</b> Strongly Nonlinear Ultrasound Simulations in an Axisymmetric Coordinate System using k-Wave</p> <p>Bradley Treeby, et al <i>University College London</i></p>	<p><b>81-4</b> High performance ultrasonic transducers from nanostructured and multilayered piezoelectric materials</p> <p>Kui Yao, et al <i>IMRE, A*STAR</i></p>
11:45 am		<p><b>21-6</b> Potential of Low Energy UltraSound for inducing cardioprotection mechanisms: in-vitro investigations on a hypoxo-reoxygenation model of cardiac cells</p> <p>Lorena Petrusca, et al <i>Univ Lyon, UJM-Saint-Etienne, INSA, CNRS UMR 5520, INSERM U1206, CREATIS, F-42023, SAINT-ETIENNE</i></p>	<p><b>31-6</b> Ultrasound image processing based on deep learning</p> <p>Fabian Dietrichson, et al <i>Norwegian University of Science and Technology (NTNU)</i></p>	<p><b>41-6</b> Compressed Sensing Reconstruction of Synthetic Transmit Aperture Dataset for Volumetric Diverging Wave Imaging: A Simulation Study</p> <p>Yinran Chen, et al <i>Department of Biomedical Engineering, Tsinghua University</i></p>	<p><b>51-5</b> Mechanical Properties of Comet 67P/Churyumov-Gerasimenko Measured by CASSE and DIM on Board Rosetta's Lander Philae</p> <p>Walter Arnold, et al <i>Saarland University</i></p>	<p><b>61-6</b> Fatty liver assessment using ultrasound multifeatures based on machine learning</p> <p>YingHsiu Lin, et al <i>ChangGungUniversity</i></p>	<p><b>71-6</b> Distinguishing between noncausal and nonlocal behavior in a time-fractional wave equation</p> <p>James F. Kelly, et al <i>Michigan State University</i></p>	<p><b>81-5</b> A novel Row-Column Addressed stack architecture for enhanced cardiac imaging</p> <p>Guillaume Ferin, et al <i>Vernon SA</i></p>

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**THURSDAY ORAL**

01:30 pm -03:00 pm		Oral --- Thursday, October 25							
		Session 1J. Deep Neural Networks for Ultrasound Formation <i>Chair: Adrian Basarab University of Toulouse</i>	Session 2J. Ultrasound Mediated Agent Delivery <i>Chair: Mark Borden University of Colorado Boulder</i>	Session 3J. High Frame Rate Cardiac Imaging <i>Chair: Massimo Mischi Eindhoven University of Technology</i>	Session 4J. Flow Processing: Methods and Applications <i>Chair: Lasse Lovstakken NTNU</i>	Session 5J. Sensors and Actuators <i>Chair: Robert Addison Rockwell Science Center</i>	Session 6J. New Class of SAW Device <i>Chair: Clemens Ruppel</i>	Session 7J. PGP & PNL: General Physical and Non-Linear Acoustics <i>Chair: Dave Feld Broadcom Ltd</i>	Session 8J. Compressed Sensing and Quantification <i>Chair: Miaomiao Zhang KU Leuven</i>
		Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)
01:30 pm	<p><b>1J-1</b> Evaluating the Robustness of Ultrasound Beamforming with Deep Neural Networks</p> <p>Adam Luchies, et al <i>Vanderbilt University</i></p>	<p><b>2J-1</b> Focused Ultrasound Enhanced Intranasal Delivery of Neurotrophic Factors Exhibit Neurorestorative Effects in Parkinson's Disease Mouse Model</p> <p>Robin Ji, et al <i>Columbia University</i></p>	<p><b>3J-1</b> High frame rate imaging of natural shear waves in the human heart</p> <p>Pedro Santos, et al <i>KU Leuven</i></p>	<p><b>4J-1</b> Dual-Frequency Alias-Free Color Doppler using Chirping and Pulse Compression</p> <p>Vincent Perrot, et al <i>Univ.Lyon, INSA-Lyon, UCB Lyon 1, UJM-Saint Etienne, CNRS, Inserm</i></p>	<p><b>5J-1</b> High-temperature Microwave Acoustic Vibration Sensor</p> <p>Anin Maskay, et al <i>University of Maine</i></p>	<p><b>6J-1</b> Prof. Eric Adler's Legacy to Microwave Acoustics</p> <p>Mauricio Pereira da Cunha, et al <i>University of Maine</i></p>	<p><b>7J-1</b> Multiple steerable acoustic fields using a single element bowl transducer and 3D-printed kinoform</p> <p>Michael Brown, et al <i>University College London</i></p>	<p><b>8J-1</b> Ultrasound signal reconstruction from sparse samples using a low-rank and joint-sparse model</p> <p>Miaomiao ZHANG, et al <i>KU Leuven</i></p>	
01:45 pm	<p><b>1J-2</b> Beamforming and speckle reduction using deep neural networks</p> <p>Dongwoon Hyun, et al <i>Stanford University</i></p>	<p><b>2J-2</b> Comparison of focused ultrasound-mediated intranasal brain drug delivery and focused ultrasound-induced blood-brain barrier disruption in the delivery of gold nanoclusters to the brainstem</p> <p>Dezhuang Ye, et al <i>Washington University in St Louis</i></p>	<p><b>3J-2</b> Longitudinal and Transversal Particle Motion Induced by Aortic Valve Closure in the Interventricular Septum</p> <p>L.B.H. Keijzer, et al <i>Erasmus MC</i></p>	<p><b>4J-2</b> In-vivo Abdominal Microvasculature Evaluation based on Ultrafast Curved Array Imaging</p> <p>Jinbum Kang, et al <i>Sogang University</i></p>	<p><b>5J-2</b> Ultra-Wide-Band SAW Sensor with HFM Etched Reflectors</p> <p>Victor Plessky, et al <i>GVR Trade SA</i></p>	<p><b>6J-2</b> Source Correction for k-space Pseudospectral Time Domain Models</p> <p>Ben Cox, et al <i>University College London</i></p>	<p><b>7J-2</b> Compressive Multiplexing of Ultrasound Signals</p> <p>Adrien Besson, et al <i>Ecole Polytechnique Fédérale de Lausanne</i></p>		
02:00 pm	<p><b>1J-3</b> Reverberation Noise Suppression in the Aperture Domain Using 3D Fully Convolutional Neural Networks</p> <p>Leandra Brickson, et al <i>Stanford University</i></p>	<p><b>2J-3</b> Ultrasound and microbubble-mediated targeted delivery of drug-loaded nanoparticles to porcine liver</p> <p>Tommaso Di Ianni, et al <i>Stanford University</i></p>	<p><b>3J-3</b> Monitoring canine myocardial infarction formation and recovery with transthoracic cardiac strain imaging</p> <p>Vincent Sayseng, et al <i>Columbia University</i></p>	<p><b>4J-3</b> High Sensitivity Liver Vasculature Visualization Using a Real-time Coherent Flow Power Doppler (CFPD) Imaging System: A Pilot Clinical Study</p> <p>You Li, et al <i>Stanford University</i></p>	<p><b>5J-3</b> Microwave Resonator Ultrasound Receivers</p> <p>Tom S Robbins, et al <i>University College London</i></p>	<p><b>6J-2</b> Suprious-Free, Near-Zero-TCF Hetero Acoustic Layer (HAL) SAW Resonators Using LiTaO3 Thin Plate on Quartz</p> <p>Michio Kadota, et al <i>Tohoku university</i></p>	<p><b>7J-3</b> Changing the Speed of Ultrasonic Pulses Through Spatial Structuring of the Acoustic Wavefront</p> <p>Grace Richard, et al <i>University of Glasgow</i></p>	<p><b>8J-3</b> Strategic lateral undersampling and Compressed Sensing recovery in ultrasound imaging</p> <p>Anand R, et al <i>Indian Institute of Technology Madras(IITM)</i></p>	


02:15 pm	<p><b>1J-4</b> A fully convolutional neural network for beamforming ultrasound images</p> <p>Arun Nair, et al <i>Johns Hopkins</i></p>	<p><b>2J-4</b> Focused-ultrasound mediated anti-alpha-synuclein antibody delivery for the treatment of Parkinson's disease</p> <p>Hairong Zhang, et al <i>Columbia University</i></p>	<p><b>3J-4</b> An angle independent motion estimator for high frame rate cardiac data sets</p> <p>Bidisha Chakraborty, et al <i>KU Leuven</i></p>	<p><b>4J-4</b> In vivo Adaptive focusing for clinical Transcranial Ultrafast Imaging by Time Reversal of Moving Speckle Noise</p> <p>Justine Robin, et al <i>Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</i></p>	<p><b>5J-4</b> Wireless inertial sensing platform self-powered by piezoelectric energy harvester for industrial predictive maintenance</p> <p>Maxime Benchemoul, et al <i>Vermon SA</i></p>	<p><b>6J-3</b> Transverse Modes in I.H.P. SAW Resonator and Their Suppression Method</p> <p>Hideki Iwamoto, et al <i>Murata Manufacturing Co., Ltd.</i></p>	<p><b>7J-4</b> Focused Ultrasonic Transducer with Electrically Controllable Focal-Point Location</p> <p>Lurui Zhao, et al <i>UNIVERSITY OF SOUTHERN CALIFORNIA</i></p>	<p><b>8J-4</b> In-silico validation of microstructure estimation from cortical bone backscatter</p> <p>Juan Du, et al <i>Charité - Universitätsmedizin Berlin</i></p>
02:30 pm	<p><b>1J-5</b> Ultrasound image reconstruction using deep learning: a new paradigm</p> <p>Maxime Gasse, et al <i>Creatis Medical Imaging Research Centre</i></p>	<p><b>2J-5</b> Ultrasound-Enhanced Distribution and Treatment Efficacy of Dox-loaded Intratumoral In Situ Forming Implants in Murine HCT-15 Tumors</p> <p>Selva Jeganathan, et al <i>Case Western Reserve University</i></p>	<p><b>3J-5</b> 4D ultrafast imaging of myocardial contraction activation in normal and pathological isolated rat hearts</p> <p>Victor Finel, et al <i>Institut Langevin, INSERM U979, ESPCI, CNRS UMR 7587, ART</i></p>	<p><b>4J-5</b> High frequency functional ultrasound in mice</p> <p>Bas Koekkoek, et al <i>Erasmus MC</i></p>	<p><b>5J-5</b> Modeling and experimental parametric study of a dual-cantilever piezo-magneto-elastic energy harvester</p> <p>Xiaobo Rui, et al <i>State Key Laboratory of Precision Measurement Technology and Instrument, Tianjin University</i></p>	<p><b>6J-4</b> Oriented single-crystal LiTaO3 thin film on Silicon for high performances SAW components</p> <p>Marie Gorisse, et al <i>Soitec</i></p>	<p><b>7J-5</b> Bayesian spectrum analysis of non-linear ultrasound contrast microbubble signals</p> <p>Konstantinos Diamantis, et al <i>Heriot-Watt University</i></p>	<p><b>8J-5</b> Quantification of multispectral photoacoustic images: unsupervised unmixing methods comparison</p> <p>Aneline Dolet, et al <i>CREATIS</i></p>
02:45 pm		<p><b>2J-6</b> Abraxane delivery with microbubble-assisted ultrasound in human pancreatic cancer mouse model</p> <p>Jean-Michel Escoffre, et al <i>Inserm UMR1253 iBrain</i></p>	<p><b>3J-6</b> Enhancing Cardiac Positron Emission Tomography using Ultrafast Ultrasound Imaging</p> <p>Jonathan Porée, et al <i>Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</i></p>	<p><b>4J-6</b> Simultaneous Noise Suppression and Incoherent Artifact Reduction In Ultrafast Ultrasound Microvessel Imaging</p> <p>Chengwu Huang, et al <i>Mayo Clinic</i></p>	<p><b>5J-6</b> Accelerated aging procedures of bending piezoelectric structures using electrical stress induced approaches</p> <p>Thien Hoang, et al <i>Vermon SA</i></p>	<p><b>6J-5</b> Spurious Free SAW Resonators on Layered Substrate with Ultra-High Q, High Coupling and Small TCF</p> <p>Shogo Inoue, et al <i>Qorvo, Inc.</i></p>	<p><b>7J-6</b> HIFU beam: a software package for modeling axially-symmetric nonlinear ultrasound beams radiated by focused therapeutic transducers</p> <p>Petr Yuldashev, et al <i>Physics Faculty, Moscow State University</i></p>	<p><b>8J-6</b> Improved arbitrary waveform synthesis for tri-state transmitters by an impulse response factorization enabling use of the Viterbi algorithm</p> <p>John Flynn, et al <i>Verasonics, Inc</i></p>

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**THURSDAY ORAL**

04:00 pm -05:30 pm		Oral --- Thursday, October 25								
		Session 1K. Fourier Beamforming and Passive Imaging  Chair: Marvin Doyley University of Rochester	Session 2K. Coding, Beamforming and Parametric Contrast Imaging  Chair: Chih-Kuang Yeh National Tsing Hua University	Session 3K. Cardiovascular Imaging  Chair:	Session 4K. Flow Processing: Segmentation  Chair: Matthew Bruce University of Washington	Session 5K. Structural Health Monitoring  Chair: Patrick Johnston NASA Langley Research Center	Session 6K. Material for Acoustic Wave Device  Chair: Omar Elmazria Université de Lorraine	Session 7K. Ultrasonic Devices  Chair: Margaret Lucas University of Glasgow	Session 8K. Novel Designs and Applications  Chair: Valsala Kurusingal Thales Australia	
		Topaz (400)	Diamond (300)	Emerald (280)	Sapphire (220)	Ikuta (200)	Nunobiki (150)	Kikusui (140)	Ruby (200)	
04:00 pm	<p><b>1K-1</b> Implications of lag one coherence on real-time adaptive frequency selection</p> <p>James Long, et al Duke University</p>	<p><b>2K-1</b> Nondestructive targeted microbubble detection using a dual-frequency beamforming deep neural network</p> <p>Dongwoon Hyun, et al Stanford University</p>	<p><b>3K-1</b> Differentiation of carotid artery plaque composition in asymptomatic individuals using compound ultrasound strain imaging validated by magnetic resonance imaging</p> <p>Hendrik Hansen, et al Radboud university medical center</p>	<p><b>4K-1</b> Non-Contrast Perfusion Ultrasound Imaging for Assessment of Trans-arterial Chemoembolization of Hepatic Malignancy</p> <p>Jaime Tierney, et al Vanderbilt University</p>	<p><b>5K-1</b> Exploiting complex boundaries through full waveform ultrasonic imaging</p> <p>Fan Shi, et al Imperial College London</p>	<p><b>6K-1</b> SAW based wireless flexible temperature sensors for on-body applications</p> <p>Cécile Floer, et al Université de Lorraine - CNRS</p>	<p><b>7K-1</b> A novel swimmer actuator via leaky surface acoustic wave</p> <p>Deqing Kong, et al Tokyo Institute of Technology</p>	<p><b>8K-1</b> Fibonacci Spiral Arranged Ultrasound Phased Array for Mid-Air Haptics</p> <p>Adam Price, et al Ultrashtics</p>		
04:15 pm	<p><b>1K-2</b> Regularized Inversion Method for Frequency-Domain Reconstruction of Full Synthetic Aperture Dataset From Focused Transmissions</p> <p>Rehman Ali, et al Stanford University</p>	<p><b>2K-2</b> Improved Contrast-Enhanced Ultrasound Imaging by combining Hadamard-encoded Multi-pulses with Multiplane Wave Transmission</p> <p>Ping Gong, et al Mayo Clinic College of Medicine and Science</p>	<p><b>3K-2</b> New Denoising Unsharp Masking Methods for Improved Intima Media Thickness Measurements with Active Contour Segmentation</p> <p>Asraf Moubark, et al University of Leeds</p>	<p><b>4K-2</b> Adaptive SVD clutter filter for Ultrafast Doppler imaging using Spatial Similarity Matrix</p> <p>Jerome Baranger, et al Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</p>	<p><b>5K-2</b> Ultrafast Phased Array Imaging: an Application to Closed Crack Characterization</p> <p>Yoshikazu Ohara, et al Tohoku University</p>	<p><b>6K-2</b> Piezoresistive Graphene SAW Transducer</p> <p>Benyamin Davaji, et al Cornell University</p>	<p><b>7K-2</b> Ultrasonic Propeller with Electrically Controllable Propulsion Direction</p> <p>Lurui Zhao, et al UNIVERSITY OF SOUTHERN CALIFORNIA</p>	<p><b>8K-2</b> Lead-free sodium potassium niobate based piezoelectric thick film bimorph structure for energy harvesting</p> <p>Claire Bantignies, et al VERMON</p>		
04:30 pm	<p><b>1K-3</b> Frequency domain Two-Stage Beamforming for Phased Array Imaging using the Fast Hankel Transform</p> <p>Fabian Fool, et al Delft University of Technology</p>	<p><b>2K-3</b> Acoustic sub-aperture processing (ASAP) for super-contrast microvascular imaging: in vivo demonstration for preclinical contrast and non-contrast imaging</p> <p>Chee Hau Leow, et al Imperial College London</p>	<p><b>3K-3</b> Non-invasive myocardial performance mapping using 3D echocardiographic stress-strain loops: validation against PET</p> <p>João Pedrosa, et al KU Leuven</p>	<p><b>4K-3</b> 3D HOSVD clutter filtering with automatic cutoff selection applied to circular wave cardiac Doppler imaging</p> <p>Julia Faurie, et al Université de Montreal</p>	<p><b>5K-3</b> High frequency ultrasonic and photoacoustic studies of polymer composites with nano-inclusions</p> <p>Vytautas Samulionis, et al Physics Faculty of Vilnius University</p>	<p><b>6K-3</b> Investigation of Temperature Characteristics and Substrate Influence on AlScN-based SAW Resonators</p> <p>Anli Ding, et al Fraunhofer IAF</p>	<p><b>7K-3</b> Special Nonlinear Effects of the Harmonic 3rd Overtone Thickness-shear Mode on its Fundamental Mode in f-3f Modal Interactions and Drive Level Dependency</p> <p>Yook-Kong Yong, et al Rutgers University</p>	<p><b>8K-3</b> Sparse volumetric PZT array with density tapering</p> <p>Hendrik J. Vos, et al Erasmus MC</p>		

04:45 pm	<p><b>1K-4</b> Full-wave ultrasound reconstruction with linear arrays based on a Fourier split step approach</p> <p>Hans-Martin Schwab, et al <i>Ruhr-University Bochum</i></p>	<p><b>2K-4</b> Multi-Parametric Assessment of Treatment Response from 3D Dynamic Contrast-Enhanced Ultrasound</p> <p>Ahmed El Kaffas, et al <i>Stanford University</i></p>	<p><b>3K-4</b> 3D direct visualization and non-invasive localization of atrial and ventricular arrhythmias using Electromechanical Wave Imaging in patients</p> <p>Lea Melki, et al <i>Columbia University</i></p>	<p><b>4K-4</b> Noise Debiasing for Real-Time SVD Clutter Filter-Based Ultrafast Microvessel Imaging</p> <p>Chengwu Huang, et al <i>Mayo Clinic</i></p>	<p><b>5K-4</b> GPU-accelerated matrix-free 3D reconstruction for ultrasonic nondestructive testing</p> <p>Jan Kirchhof, et al <i>Fraunhofer IZFP</i></p>	<p><b>6K-4</b> Polarity inverted ScAIN multilayer for application to transformer in rectifying antenna</p> <p>Rei Karasawa, et al <i>Waseda University</i></p>	<p><b>7K-4</b> A Quasi-LTI Frequency-Selective SAW Circulator</p> <p>Giuseppe Michetti, et al <i>Northeastern University</i></p>	<p><b>8K-4</b> A Broadband Technique for Couplant-Corrected Pulse-Echo Measurements in a Large Volume Pressure Cell</p> <p>Blake Sturtevant, et al <i>Los Alamos National Laboratory</i></p>
05:00 pm	<p><b>1K-5</b> Advanced beamforming techniques for passive imaging of stable and inertial cavitation</p> <p>Maxime Polichetti, et al <i>University Lyon, INSA-Lyon, UCBL, UJM-Saint-Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206, F-69100 Villeurbanne, France</i></p>	<p><b>2K-5</b> High-contrast 3D in vivo microvascular imaging using scanning 2D ultrasound and acoustic sub-aperture processing (ASAP)</p> <p>Chee Hau Leow, et al <i>Imperial College London</i></p>	<p><b>3K-5</b> Ultrafast imaging of the heart dynamics with cascaded-wave ultrasound</p> <p>Yang Zhang, et al <i>The University of Hong Kong</i></p>	<p><b>4K-5</b> Non-invasive small vessel imaging of human thyroid using motion-corrected Power Doppler Imaging: Preliminary in vivo study</p> <p>Rohit Nayak, et al <i>Mayo Clinic</i></p>	<p><b>5K-5</b> Outer wall inspection using acoustic irradiation induced vibration from UAV for noncontact acoustic inspection method</p> <p>Tsuneyoshi Sugimoto, et al <i>Toin University of Yokohama</i></p>	<p><b>6K-5</b> Extraction of electromechanical coupling coefficient of film/substrate structure by using the ratio of a third mode resonant frequency to a fundamental mode resonant frequency</p> <p>Makoto Totsuka, et al <i>Waseda University</i></p>	<p><b>7K-5</b> A Radio Frequency Non-reciprocal Network Based on Switched Low-Loss Acoustic Delay Lines</p> <p>Ruo Chen Lu, et al <i>University of Illinois at Urbana-Champaign</i></p>	<p><b>8K-5</b> A 30 MHz, 3D Imaging, Forward Looking Miniature Endoscope based on a 128-element Relaxor Array</p> <p>Katherine Latham, et al <i>Dalhousie University</i></p>
05:15 pm	<p><b>1K-6</b> Decimated Analytic Signal based Beamformer for Efficient Reconstruction of Passive Acoustic Mapping</p> <p>Pilsu Kim, et al <i>Sogang University</i></p>	<p><b>2K-6</b> Novel Motion Correction Algorithm for 3D Dynamic Contrast Ultrasound Without Anatomical Bmode Images</p> <p>Ahmed El Kaffas, et al <i>Stanford</i></p>	<p><b>3K-6</b> Ventricular tachycardia re-entry mapping with 3D electromechanical wave imaging</p> <p>Julien Grondin, et al <i>Columbia University</i></p>	<p><b>4K-6</b> Wall Signal Removal in Doppler Ultrasound using Principal Component Pursuit</p> <p>Gustavo Chau, et al <i>Stanford University</i></p>	<p><b>5K-6</b> Progressive online 3-D SAFT processing by matrix structure exploitation</p> <p>Fabian Krieg, et al <i>Fraunhofer Institute for Nondestructive Testing IZFP</i></p>	<p><b>6K-6</b> A new method for extracting Q factor of the piezoelectric film without removing substrate</p> <p>Sarina Kinoshita, et al <i>Waseda University</i></p>	<p><b>7K-6</b> Measurement of elastic constants of monoclinic Ga2O3 using resonant ultrasound spectroscopy</p> <p>Takeuchi Naoto, et al <i>Osaka university</i></p>	<p><b>8K-6</b> Backside clamped phased array transducer : From FEM to characterization</p> <p>Cyril Meynier, et al <i>Vernon SA</i></p>

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**THURSDAY POSTER**

09:30 am - 04:00 pm		Poster --- Thursday, October 25			Kairaku (posters 1)
<p><b>Session P1-C2.</b> <i>Improving Image Quality with Limited Data</i></p> <p><i>Chair: Pieter Kruizinga</i> Erasmus Medical Center</p>	<p><b>Session P1-C3.</b> <i>Modelling in Beamforming</i></p> <p><i>Chair: Sebastian Salles</i> NTNU</p>	<p><b>Session P1-C5.</b> <i>Elasticity Imaging of the Skin</i></p> <p><i>Chair: Brett Byram</i> Vanderbilt University</p>	<p><b>P1-C6-6</b> 2D motion estimation based on diverging wave coherent compounding and transverse oscillations</p> <p>Feifei Zhao, et al Department of Biomedical Engineering, Tsinghua University, Beijing</p>	<p><b>P1-C7-9</b> Ultrasound Imaging Improved by the Context Encoder Reconstruction Generative Adversarial Network</p> <p>Chao-Yi Huang, et al National Chung Cheng University</p>	
<p><b>P1-C2-1</b> Sparse Orthogonal Diverging Wave Imaging on a High-Frequency Phased Array Endoscope</p> <p>Christopher Samson, et al Dalhousie University</p>	<p><b>P1-C3-1</b> Determination of Delay Resolution in Baseband IQ Beamformer Using Error Model of Array Gain</p> <p>Jintae Jang, et al Sogang University</p>	<p><b>P1-C5-1</b> Young's Modulus of Dermis and Hypodermis of Healthy Volunteers Measured with High Frequency Transient Elastography</p> <p>Caroline Chartier, et al UMR Inserm U1253, Tours, France</p>	<p><b>P1-C6-7</b> Influence of Factors on Motion Artifacts in Strain Estimation with Spatial Angular Compounding</p> <p>Zonghui Pan, et al Department of Biomedical Engineering, Tsinghua University</p>	<p><b>P1-C7-10</b> RF Data Restoration using Deep Neural Network in Subjects Including Bone for Ultrasound Computed Tomography</p> <p>Yoshiki Watanabe, et al The University of Tokyo</p>	
<p><b>P1-C2-2</b> Deepforming: a deep learning strategy for ultrasound beamforming applied to sub-sampled data</p> <p>Walter Simson, et al Chair for Computer Aided Medical Procedures &amp; Augmented Reality, Technische Universität München</p>	<p><b>P1-C3-2</b> A simple, artifact-free virtual source model</p> <p>Ole Marius Hoel Rindal, et al University of Oslo</p>	<p><b>P1-C5-2</b> Clinical Interest of High Frequency Transient Elastography to Assess Dermis Fibrosis in Patients with Venous Insufficiency</p> <p>Yassine Mofid, et al UMR Inserm U1253, Tours, France</p>	<p><b>P1-C6-8</b> Shear-wave based monitoring of radiofrequency ablations at clinically relevant depths</p> <p>Jochen Kruecker, et al Philips Research North America</p>	<p><b>P1-C7-11</b> Machine learning of regional myocardial strain curves to predict myocardial viability</p> <p>Mahdi Tabassian, et al KU Leuven</p>	
<p><b>P1-C2-3</b> The partial Hadamard matrix for performance optimization of compressed sensing based synthetic transmit aperture</p> <p>Jing Liu, et al School of Medicine, Tsinghua University</p>	<p><b>P1-C3-3</b> Modeling the acoustic field produced by diagnostic ultrasound arrays in plane wave mode</p> <p>Ting-Yu Lai, et al University of Washington</p>	<p><b>P1-C5-3</b> On-Axis Acoustic Radiation Force-based Elasticity Measurement in Homogeneous and Layered, Skin-Mimicking Phantoms</p> <p>Kristy Walsh, et al Vanderbilt University</p>	<p><b>Session P1-C7.</b> <i>Machine Learning for Image Processing</i></p> <p><i>Chair: Grant Kruger</i> University of Michigan</p>		
<p><b>P1-C2-4</b> Virtually Extended Array imaging improves lateral resolution in high frame rate volumetric imaging</p> <p>Mehdi Soozande, et al Erasmus MC</p>	<p><b>Session P1-C4.</b> <i>Bubbles Imaging</i></p> <p><i>Chair: Wei-Ning Lee</i> University of Hong Kong</p>	<p><b>P1-C5-4</b> Noninvasive measurement of lung and skin stiffness for assessing interstitial lung disease and skin involvement in systemic sclerosis</p> <p>Xiaoming Zhang, et al Mayo Clinic</p>	<p><b>P1-C7-1</b> Automatic classification of cardiac events from ultrasound images using deep learning</p> <p>Adrian Meidell Fiorito, et al Norwegian University of Science and Technology</p>	<p><b>Session P1-C8.</b> <i>Signal Processing for Hard and Soft Tissue Imaging</i></p> <p><i>Chair: Veronica He</i> Infraredx Inc.</p>	
<p><b>P1-C2-5</b> Gap-filling method for suppressing the grating lobes in ultrasound imaging</p> <p>Bae-Hyung Kim, et al Mayo Clinic College of Medicine &amp; Science</p>	<p><b>P1-C4-1</b> Comparing Microbubble Detection Algorithms for Super-Resolution Imaging</p> <p>Jemma Brown, et al King's College London</p>	<p><b>P1-C5-5</b> High resolution SAW elastography for ex-vivo porcine skin specimen</p> <p>Kairui Feng, et al University of Dundee</p>	<p><b>P1-C7-2</b> Ultrasound image synthesis and anatomical encoding using generative adversary neural networks</p> <p>Oudom Somphone, et al Philips Research France</p>	<p><b>P1-C8-1</b> Enhancing Microcalcifications in Breast Images by Shrinkage of Wavelet Coefficients</p> <p>Stine M. Hverven, et al University of Oslo</p>	



<p><b>P1-C2-6</b> Optimal virtual sources distribution in 3-D Diverging Wave Ultrasound Imaging: an experimental study</p> <p>Paolo Mattesini, et al University of Florence</p>	<p><b>P1-C4-2</b> Development of Simultaneous Optical Imaging and Super-Resolution Ultrasound to Improve Microbubble Localisation Accuracy</p> <p>Jemma Brown, et al King's College London</p>	<p style="text-align: center;"><b>Session P1-C6.</b> <b>Methods for Elasticity Imaging</b></p> <p style="text-align: center;"><i>Chair: Hideyuki Hasegawa</i> <i>University of Toyama</i></p>	<p><b>P1-C7-3</b> Ultrasound – computerized tomography registration using generative adversarial networks</p> <p>Naama Cohen, et al Technion</p>	<p><b>P1-C8-2</b> Parameter-sweep inversion for thickness and elastic velocities of long bone using axially-transmitted ultrasonic guided waves</p> <p>Tho N.H.T. Tran, et al University of Alberta</p>	
<p><b>P1-C2-7</b> Improving contrast and grating lobe suppression in sparse array imaging using convolutional neural network</p> <p>Viksit Kumar, et al Mayo clinic</p>	<p><b>P1-C4-3</b> Subharmonic Plane Wave Imaging of Liposome-loaded Microbubbles</p> <p>Luzhen Nie, et al University of Leeds</p>		<p><b>P1-C6-1</b> Optimization of angular displacement compounding in plane-wave ultrasound imaging to improve accuracy of lateral displacements and strain estimates.</p> <p>Gijs Hendriks, et al Radboud university medical center</p>	<p><b>P1-C7-4</b> Deep learning applied to multi-structures segmentation in 2D echocardiography : a preliminary investigation of the required database size</p> <p>Sarah Leclerc, et al CREATIS</p>	<p><b>P1-C8-3</b> Application of Dynamic Time Warping Technique to Evaluate Microstructures of Cancellous Bones</p> <p>Boyi Li, et al Fudan University</p>
<p><b>P1-C2-8</b> Portable Ultrasound through Compressive Beamforming with Improved Contrast</p> <p>Jovan Mitrovic, et al University of Rochester</p>	<p><b>P1-C4-4</b> 3D In Vitro Ultrasound Super-Resolution Imaging using a Clinical System</p> <p>Kirsten Christensen-Jeffries, et al Kings College London</p>		<p><b>P1-C6-2</b> Multi-frequency 3D phase tracking method with phased-array beamforming in Cartesian coordinate system</p> <p>Soichiro Nunome, et al University of Toyama</p>	<p><b>P1-C7-5</b> The Feasibility of Classification of thyroid nodules integrated experiences based inference of radiologist and extracted feature vectors in ultrasound images</p> <p>Shijie Zhang, et al Peking University</p>	<p><b>P1-C8-4</b> Ringdown suppression for a sonothrombolysis catheter using principal component analysis filtering</p> <p>Adam J. Dixon, et al University of Virginia</p>
<p><b>P1-C2-9</b> Artifact Suppressed Sparse Coherent Plane Wave Compounding Using Modified Vernier-Interpolation Angle Sequence</p> <p>Ya-Ling Hsieh, et al National Tsing Hua University</p>	<p><b>P1-C4-5</b> A study of radiation force effects in plane-wave transmission mode</p> <p>Francesco Guidi, et al University of Florence</p>		<p><b>P1-C6-3</b> Intra-Scan Variability of Natural Shear Wave Measurements</p> <p>L.B.H. Keijzer, et al Erasmus MC</p>	<p><b>P1-C7-6</b> Deep CNN based ultrasound super resolution for high-speed high-resolution B-mode imaging</p> <p>Woosuk Choi, et al KAIST</p>	<p><b>P1-C8-5</b> Reconstruction acceleration for compressed sensing based synthetic transmit aperture using quadrature sampling</p> <p>Jing Liu, et al School of Medicine, Tsinghua University</p>
<p><b>P1-C2-10</b> High-frame rate 3D-synthetic transmit aperture imaging with a reduced number of receiving channels</p> <p>Ying Li, et al Ryerson University</p>	<p><b>P1-C4-6</b> Poisson Statistical Model of Ultrasound Super-Resolution Image Acquisition Time</p> <p>Kirsten Christensen-Jeffries, et al King's College London</p>		<p><b>P1-C6-4</b> Fast randomized singular value decomposition based clutter filtering for shear wave imaging</p> <p>Yuanyuan Wang, et al Department of Biomedical Engineering, Tsinghua University</p>	<p><b>P1-C7-7</b> Cardiac Motion Estimation with Dictionary Learning and Robust Sparse Coding in Ultrasound Imaging</p> <p>Nora Ouzir, et al University of Toulouse</p>	<p><b>P1-C8-6</b> Wavelet-based Cepstral Analysis for the Estimation of the Mean Scatterer Spacing</p> <p>Remie Nasr, et al Lebanese University</p>
<p><b>P1-C2-11</b> Ultrafast Ultrasound Imaging with Stretchable Probe on Nonplanar Surface: A Simulation Study</p> <p>Congzhi Wang, et al Shenzhen Institutes of Advanced Technology, the Chinese Academy of Sciences</p>	<p><b>P1-C4-7</b> Chirp-Coded Excitation for Enhancing the Transcranial Penetration in Ultrasound Localization Microscopy: An ex vivo Validation Study</p> <p>Fu-Feng Lee, et al Department of Biomedical Engineering, Tsinghua University</p>		<p><b>P1-C6-5</b> A Comparative Study of Displacement De-noising Strategies: An In Vivo Feasibility Study Using 3D Whole Breast Ultrasound Data</p> <p>Jingfeng Jiang, et al Michigan Technological University</p>	<p><b>P1-C7-8</b> Quality assessment of transperineal ultrasound images of the male pelvic region using deep learning</p> <p>Saskia Camps, et al Eindhoven University of Technology</p>	<p><b>P1-C8-7</b> Jointly Optimized Modulation / Filtering Technique for Pseudo-Orthogonal Binary Sequences</p> <p>Denis Bujoreanu, et al Univ.Lyon, INSA-Lyon, UCBL1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206</p>

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**THURSDAY POSTER**

09:30 am - 04:00 pm	Poster --- Thursday, October 25			Kairaku (posters 1)	
<p><b>Session P1-C9.</b> <b>Musculoskeletal System</b></p> <p><i>Chair: Tadashi Yamaguchi</i> <i>Chiba University</i></p>	<p><b>Session P1-C10.</b> <b>Liver</b></p> <p><i>Chair: Michael Oelze</i> <i>University of Illinois</i></p>	<p><b>P1-C11-4</b> Accumulation of Magnetic Nanoparticles Employing High Intensity Focused Ultrasound for Drug Targeting Applications</p> <p>Michael Fink, et al <i>University of Erlangen Nuremberg</i></p>	<p><b>P1-C12-7</b> Theoretical Electroelastic Moduli of Porous Textured Piezoceramics</p> <p>Antoine Balé, et al <i>Université de Tours - GREMAN UMR 7347 CNRS</i></p>	<p><b>P1-C14-4</b> Near-field multiple traps of acoustic vortices generated by a sector transducer array and its application in object manipulation</p> <p>Qingyu Ma, et al <i>Nanjing Normal University</i></p>	
<p><b>P1-C9-1</b> Ultrasound radiation from bovine cortical bone</p> <p>Taiki Makino, et al <i>Doshisha university</i></p>	<p><b>P1-C10-1</b> Sensitivity analysis of reference-free quantitative ultrasound tissue classification.</p> <p>Trong Nguyen, et al <i>University of Illinois at Urbana Champaign</i></p>	<p><b>P1-C11-5</b> Controlled Transdermal Hepatitis B Immunization using Focused Ultrasound</p> <p>Mei Yang, et al <i>Shenzhen University</i></p>	<p><b>P1-C12-8</b> Eccentric design of Fabry-Perot interferometer for high sensitivity and broadband ultrasound sensing</p> <p>Bingxue Liu, et al <i>School of Instrumentation Science and Opto-electronics Engineering, Beihang University</i></p>	<p><b>P1-C14-5</b> Ultrasonic auger for narrow-gauge bore-hole drilling</p> <p>David Firstbrook, et al <i>University of Glasgow</i></p>	
<p><b>P1-C9-2</b> Ex vivo radius fracture discrimination from cortical thickness and porosity obtained by axial transmission</p> <p>Jean-Gabriel Minonzio, et al <i>Sorbonne Université</i></p>	<p><b>P1-C10-2</b> Investigation of A Method for Quantifying Diffuse Liver Disease Based on Histogram of Ultrasound Signal-to-Noise Ratio</p> <p>Takuma Oguri, et al <i>GE Healthcare</i></p>	<p><b>P1-C11-6</b> Ultrasound targeted microbubble destruction promotes the homing of MSCs in rat model of acute injury liver</p> <p>Ting Sun, et al <i>Shanghai General Hospital</i></p>	<p><b>Session P1-C13.</b> <b>Therapeutic Transducers</b></p> <p><i>Chair: Ho-yong Lee</i> <i>Ceracomp Co., Ltd</i></p>	<p><b>P1-C14-6</b> Lead free Ceramic Transducers for Sonar Applications</p> <p>Valsala Kurusingal, et al <i>Thales Australia</i></p>	
<p><b>P1-C9-3</b> Interpretation of Physical Meaning of Speed of Sound in Cartilage Tissue: Through Comparison with Elasticity and Magnetic Resonance Parameters</p> <p>Naotaka Nitta, et al <i>National Institute of Advanced Industrial Science and Technology (AIST)</i></p>	<p><b>P1-C10-3</b> Quantitative Ultrasound Spectroscopy to Differentiate Between Cirrhotic and Non-Cirrhotic Patients</p> <p>Ahmed El Kaffas, et al <i>Stanford University</i></p>	<p><b>P1-C11-7</b> Photoacoustic Imaging in the Spinal Cord: Monitoring Stem Cell Therapies for Image-Guided Regenerative Medicine</p> <p>Kelsey Kubelick, et al <i>Georgia Institute of Technology &amp; Emory University</i></p>	<p><b>P1-C13-1</b> Miniaturized Sub-megahertz Focused Ultrasound Transducers Composed of Multilayer Hard PZT ceramics</p> <p>Ho-Wuk Kim, et al <i>North Carolina State University</i></p>		
<p><b>P1-C9-4</b> A three-parameter empirical model of the angular dependence of the speed of sound in cortical bone</p> <p>Quentin Grimal, et al <i>Sorbonne Université, UPMC Univ Paris 06, INSERM, CNRS, Laboratoire Imagerie Biomédicale</i></p>	<p><b>P1-C10-4</b> Envelope statistics and backscattered power-spectrum analysis of rat livers with high-frequency annular array</p> <p>Takeru Mizoguchi, et al <i>Chiba University</i></p>	<p><b>P1-C11-8</b> Ultrasound stimulation of synthetic platelets in vitro. Influence of cross-linkage, applications to healing and effect on drug release kinetics.</p> <p>Seema Nandi, et al <i>North Carolina State University</i></p>	<p><b>P1-C13-2</b> High intensity focused ultrasound (HIFU) combines Optical Coherence tomography (OCT) for skin superficial diseases treatment and evaluation</p> <p>Guan Wang, et al <i>University of Dundee</i></p>		
<p><b>P1-C9-5</b> Study on the wave convergence in bone for the effective ultrasound radiation</p> <p>Masaya Saeki, et al <i>Doshisha university</i></p>	<p><b>P1-C10-5</b> Characterization of concentrated scattering media using ultrasound parametric imaging based on Homodyned-K Distribution</p> <p>Jui Fang, et al <i>Chang Gung University</i></p>	<p><b>Session P1-C12.</b> <b>Transducer Modeling and Characterization</b></p> <p><i>Chair: Stefan Rupitsch</i> <i>Friedrich-Alexander University</i></p>	<p><b>P1-C13-3</b> Development of low frequency (20 kHz) clinically viable ultrasound applicator for chronic wound treatment</p> <p>Olivia Ngo, et al <i>Drexel University School of Biomed</i></p>		


<p><b>P1-C9-6</b> In-bioreactor ultrasonic monitoring of human engineered cartilage</p> <p>Guillermo Rus, et al <i>University of Granada</i></p>	<p><b>P1-C10-6</b> Quantitative evaluation method for liver fibrosis in clinical ultrasound B-mode image based on optimized multi-Rayleigh model</p> <p>Shohei Mori, et al <i>Tohoku University</i></p>	<p><b>P1-C12-1</b> Assessment of Electromechanical Coupling Coefficient for a Completed PIN-PMN-PT Array</p> <p>Douglas N. Stephens, et al <i>University of Calif, Davis</i></p>	<p><b>P1-C13-4</b> Virtual Prototyping of a Catheter Transducer Array for Internal Hepatic Sonoporation</p> <p>Alexandru Moldovan, et al <i>University of Strathclyde</i></p>
<p><b>P1-C9-7</b> Monitoring of Tetanic Contractions of Skeletal Muscle Using Wearable Ultrasonic Sensors</p> <p>Ibrahim AlMohimeed, et al <i>Carleton University</i></p>	<p><b>P1-C10-7</b> Verification of frequency dependence and accuracy in backscatter coefficient analysis of fatty liver</p> <p>Atsuko Yamada, et al <i>Chiba University</i></p>	<p><b>P1-C12-2</b> Comparison of two models for power dissipation and temperature in piezoelectric transducers</p> <p>Marcus Wild, et al <i>University of South-Eastern Norway</i></p>	<p><b>P1-C13-5</b> Lead Free Piezoceramic Based Ultrasonic Device for Medical Application</p> <p>Muhammad Sadiq, et al <i>Active Needle Technology Ltd.</i></p>
<p><b>P1-C9-8</b> Inferring porosity from frequency dependent attenuation in bone mimicking porous materials</p> <p>Marie Muller, et al <i>North Carolina State University</i></p>	<p><b>Session P1-C11.</b> <b>Applications of Therapeutic Ultrasound</b></p> <p><i>Chair: Hong Chen</i> <i>Washington University at St. Louis</i></p>		<p><b>P1-C12-3</b> A FEM-based Method for Complete Parameter Identification of Thin Piezoceramic Bars</p> <p>Amirfereydoon Mansoori, et al <i>University College of Southeast Norway</i></p>
<p><b>P1-C9-9</b> Effects of Microstructure on Ultrasonic Attenuation in Skull Bone</p> <p>Jinjin Liu, et al <i>The First Affiliated Hospital of Wenzhou Medical University</i></p>	<p><b>P1-C11-1</b> Tumor Recruitment by Fusogenic Nanodroplets in Stem Cell-Mediated Drug-Delivery System</p> <p>Yi-Ju Ho, et al <i>National Tsing Hua University</i></p>	<p><b>P1-C12-4</b> Temporal evolutional acoustic pattern generated by a 3D printed Fresnel lens-focused transducer</p> <p>Chunlong Fei, et al <i>Xidian University</i></p>	<p><b>P1-C14-1</b> Development of anti-cavitation hydrophone -Study on the novel hydrophone with new cap structure titanium front plate -</p> <p>Michihisa Shiiba, et al <i>Nihon Institute of Medical Science</i></p>
<p><b>P1-C9-10</b> Influence of porosity on apparent absorption coefficient in porous structures mimicking cortical bone</p> <p>Yasamin Karbalaeeisadegh, et al <i>North Carolina State University</i></p>	<p><b>P1-C11-2</b> Catalase-Loaded Mesoporous Zeolite as Implantable Nanocapsules for Ultrasound-Guided Oxygen Self-Sufficient Photodynamic Therapy against Pancreatic Cancer</p> <p>Zonghai Sheng, et al <i>Shenzhen Institute of Advance Technology Chinese Academy of Sciences</i></p>	<p><b>P1-C12-5</b> Multilayered Carbon Nanotube Yarn Based Optoacoustic Transducer</p> <p>Zeyu Chen, et al <i>University of Southern California</i></p>	<p><b>P1-C14-2</b> High efficiency ultrasonic transducer using polarity inverted ZnO thin film</p> <p>Tsuyoshi Majima, et al <i>Waseda University</i></p>
<p><b>P1-C9-11</b> Neural Network based Bone Density Estimation from the Ultrasound Waveforms inside Cancellous Bone derived by FDTD simulations</p> <p>Yoshiki Nagatani, et al <i>Kobe City College of Technology</i></p>	<p><b>P1-C11-3</b> Investigation of Combined Sonodynamic and Radiotherapy for Pancreatic Cancer</p> <p>Richard Browning, et al <i>University of Oxford</i></p>	<p><b>P1-C12-6</b> Micro-Stereolithography of KNN Piezoceramics for Ultrasonic Transducers</p> <p>Weicen Chen, et al <i>Nanjing University of Aeronautics and Astronautics</i></p>	<p><b>P1-C14-3</b> New Lead-Free Bi4Ti3O12 Based Sol-Gel Composites for Ultrasonic Transducers</p> <p>Shohei Nozawa, et al <i>Kumamoto University</i></p>

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**THURSDAY POSTER**

09:30 am - 04:00 pm	Poster --- Thursday, October 25			Waraku (posters 2)
<p><b>Session P2-C1.</b> <b>PGP &amp; PNL: General Physical and Non-Linear Acoustics</b></p> <p><i>Chair: Yun Jing</i> North Carolina State University</p>	<p><b>P2-C2-2</b> A cylindrical ultrasonic vibration mixer for continuous flow chemical process</p> <p>Kazuki Harita, et al Graduate School of Natural Science and Technology, Okayama University, okayama, Japan</p>	<p><b>P2-C3-5</b> Volumetric Color Flow Mapping using a Row-Column Array</p> <p>Jørgen Jensen, et al Technical University of Denmark</p>	<p><b>P2-C4-8</b> Imaging-guided dual-target brain stimulation on mouse using array ultrasound</p> <p>Guofeng Li, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>P2-C6-2</b> Preparation and sonocatalytic performance of a hierarchical structures Bi<sub>2</sub>WO<sub>6</sub> microsphere for degradation of Methylene blue</p> <p>Apeng Sun, et al Shaanxi Normal University</p>
<p><b>P2-C1-1</b> Ultrasound radiation force to remotely control implanted medical devices</p> <p>Samuel Callé, et al GREMAN UMR 7347, Université de Tours, CNRS, INSA Centre Val de Loire</p>	<p><b>P2-C2-3</b> A cryogenic rotary valve using bolt-clamped type transducer</p> <p>Takefumi Kanda, et al Okayama University</p>	<p><b>P2-C3-6</b> Relative blood volume estimation from clinical super-resolution US imaging in breast cancer</p> <p>Stefanie Dencks, et al Ruhr-Universität Bochum</p>	<p><b>P2-C4-9</b> Revolving Permanent Magnet for Magnetomotive Ultrasound</p> <p>Sandra Sjöstrand, et al Lund University</p>	<p><b>P2-C6-3</b> Degradation of Rhodamine B in seawater using ultrasonic combined with periodate</p> <p>Dongdong Du, et al Shaanxi Normal University</p>
<p><b>P2-C1-2</b> Scattering cross-section estimation using passive imaging in reverberating elastic plates : case study of rigid isotropic inclusion</p> <p>Lynda chehami, et al Univ. Valenciennes, CNRS, Univ. Lille, YNCREA, Centrale Lille, UMR 8520 - IEMN, DOAE, F-59313 Valenciennes</p>	<p><b>P2-C2-4</b> Vibration Amplitude Modulation for Roughness Sensation Rendering with Ultrasonic Vibration</p> <p>Masaya Takasaki, et al Saitama University</p>	<p><b>P2-C3-7</b> The use of ultrasound Doppler in Dentistry: pulpal blood flow measurement and its clinical advantage over electric pulp tester.</p> <p>Dohyun Kim, et al Yonsei University, Dept. of Conservative Dentistry</p>	<p><b>P2-C4-10</b> Sources of 2nd harmonic generation in a medical ultrasound probe</p> <p>Thong Huynh, et al University College in Southeastern Norway</p>	<p><b>P2-C6-4</b> Design of an Underwater Vector Hydrophone using a Shear Mode Accelerometer made of Piezoelectric Single Crystals</p> <p>Seonghun Pyo, et al Kyungpook National University</p>
<p><b>P2-C1-3</b> Effects of Ultrasonication on Gold Nanowire Arrays</p> <p>Hannah Johnston, et al Queen's University Belfast</p>	<p><b>P2-C2-5</b> An ultrasonic motor with 2 mm in rotor diameter using transmission line and a spring washer driven by a Langevin transducer.</p> <p>Keishu Hosokawa, et al University of Yamanashi</p>	<p><b>P2-C3-8</b> Functional ultrasound imaging in the non-human primate posterior parietal cortex during a memory-guided saccade task</p> <p>David Maresca, et al California Institute of Technology</p>	<p><b>Session P2-C5.</b> <b>Transducers</b></p> <p><i>Chair: Jiomaru Tsujino</i> Kanagawa University</p>	<p><b>P2-C6-5</b> Experimental Evaluation of High Intensity Ultrasound Source System using Acoustic Waveguide and Concave Transducer with 100 mm Diameter for Calibration of Hydrophone</p> <p>Shigeru Igarashi, et al Polytechnic University</p>
<p><b>P2-C1-4</b> Electrification of sonoluminescing bubble in water</p> <p>Hyang-Bok Lee, et al Meiji University</p>	<p><b>P2-C2-6</b> Modeling and Experimental Study on the Current Harmonics of a High Power Ultrasonic Motor</p> <p>Xiaoni Li, et al Nanjing University of Aeronautics and Astronautics</p>	<p><b>P2-C3-9</b> 3D Printed Flow Phantoms with Fiducial Markers for Super-Resolution Ultrasound Imaging</p> <p>Martin Lind Ommen, et al Technical University of Denmark</p>	<p><b>P2-C5-1</b> Design, realization and characterization of a differential charge amplifier for ultrasonic piezopolymer transducers</p> <p>Pietro Giannelli, et al University of Florence</p>	<p><b>Session P2-C7.</b> <b>Material and Defect Characterization</b></p> <p><i>Chair: Patrick Johnston</i> NASA Langley Research Center</p>
<p><b>P2-C1-5</b> Looking at the skull in a new light: Rayleigh-Lamb waves in cranial bone.</p> <p>Hector Estrada, et al Helmholtz Center Munich</p>	<p><b>P2-C2-7</b> Numerical Simulation of Non-reciprocal Acoustic Waveguide based on Indirect Interband Transitions</p> <p>Junyi Ge, et al Okayama University</p>	<p><b>Session P2-C4.</b> <b>Multimodal Systems</b></p> <p><i>Chair: Mohammad Mehrmohammadi</i> Wayne State University</p>	<p><b>P2-C5-2</b> Performance prediction of ultrasonic sensor for automotive application</p> <p>Youngsoo Choi, et al Hyundai Mobis, APS Control Engineering Team</p>	<p><b>P2-C7-1</b> Ultrasonic detection of stress corrosion cracks in pipe samples using guided waves</p> <p>Petter Norli, et al Halfwave</p>

<p><b>P2-C1-6</b> Effect of Electrode Configurations on the Q-factor and Spurious modes for a Doubly Rotated Contoured Quartz Resonator</p> <p>Mihir Patel, et al Schlumberger Tech Corp</p>	<p><b>P2-C2-8</b> Design of Non-reciprocal Lamb Wave Filter by Heterojunction Phononic Crystals</p> <p>Kenji Tsuruta, et al Okayama University</p>	<p><b>P2-C4-2</b> An open real-time photoacoustic imaging scanner</p> <p>Aneline Dolet, et al CREATIS</p>	<p><b>P2-C5-3</b> Multielement Interdigital Transducers for Structural Health Monitoring</p> <p>Andrea Bulletti, et al Università degli Studi di Firenze</p>	<p><b>P2-C7-2</b> Forward and inverse researches on scattering of ultrasonic surface waves by near-surface cavities</p> <p>Bin Wang, et al Nanjing University of Aeronautics and Astronautics</p>
<p><b>P2-C1-7</b> The use of airborne ultrasound for Varroa destructor mite control in beehives</p> <p>Brendan Barry, et al University College Cork</p>	<p><b>Session P2-C3.</b> <b>Volume and 2D/3D Flow Imaging</b></p> <p><b>Chair: Charlie Demené</b> INSERM</p>	<p><b>P2-C4-3</b> A configurable module-based ultrasound imaging system: all-in-one ultrasound, photoacoustics, and elasticity imaging</p> <p>Heechul Yoon, et al Georgia Institute of Technology</p>	<p><b>P2-C5-4</b> Detection effect of resonance frequency of both laser Doppler vibrometer and internal defect of concrete structure by spatial spectral entropy</p> <p>Kazuko Sugimoto, et al Toin University of Yokohama</p>	<p><b>P2-C7-3</b> Characterizing Micro- and Nano-Materials based on their Ultrasonic Dispersion Properties: A Feasibility Study</p> <p>Daniel Alabi, et al University of Florida</p>
<p><b>P2-C1-8</b> Localization of fatigue cracks using low-frequency nonlinear Lamb waves in numerical perspective</p> <p>Xu Jichao, et al East China University of Science and Technology</p>	<p><b>P2-C3-1</b> 4D Ultrasensitive Doppler monitoring of in situ thromboembolic stroke and reperfusion using tissue-type plasminogen activator in mouse model</p> <p>Vincent Hingot, et al Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979</p>	<p><b>P2-C4-4</b> Design, Development and Cadaveric Validation of a Minimally Invasive Theranostic Device for Ablative Neuro-Oncology</p> <p>Nao Gamo, et al Johns Hopkins University</p>	<p><b>P2-C5-5</b> Autonomous Ultrasonic Inspection for Complex Geometry Using Unmanned Aerial Vehicle</p> <p>Dayi Zhang, et al University of Strathclyde</p>	<p><b>P2-C7-4</b> Characterization of ferroelastic martensites by resonant ultrasound spectroscopy.</p> <p>Hanus Seiner, et al Institute of Thermomechanics, Czech Academy of Sciences</p>
<p><b>P2-C1-9</b> What Information about High-Pressure Thermophysical Properties of Liquids Can be Provided by Low-Intensity Ultrasonic Waves?</p> <p>Piotr Kielczynski, et al Polish Academy of Sciences</p>	<p><b>P2-C3-2</b> 3D Flow Reconstruction and Wall Shear Stress Evaluation with 2D Ultrafast Ultrasound Particle Imaging Velocimetry</p> <p>Xinhuan Zhou, et al Imperial College London</p>	<p><b>P2-C4-5</b> Design, Modeling, and characterization of a subject specific acoustic collimator for multi-index ultrasound neuron modulation system</p> <p>Chih-Hsien Huang, et al imec</p>	<p><b>P2-C5-6</b> Estimating Rheological Properties of Non-Newtonian Drilling Fluids using Machine Learning and Ultrasonic Through-Transmission Techniques</p> <p>Morten Hansen Jondahl, et al University College of Southeast Norway</p>	<p><b>P2-C7-5</b> Study on The Effect of Fiber Weaving on Properties of Composite Materials by Acoustic Emission</p> <p>Yuan Mi, et al Nanjing University of Aeronautics and Astronautics</p>
<p><b>Session P2-C2.</b> <b>PUM &amp; PNR: Ultrasonic Devices and Non-Reciprocal Acoustics</b></p> <p><b>Chair: Yun Jing</b> North Carolina State University</p>	<p><b>P2-C3-3</b> 3D coronary blood flow imaging: A comparison of automatic adaptive clutter filter algorithms</p> <p>Cristiana Golfetto, et al NTNU</p>	<p><b>P2-C4-6</b> Design and Implementation of a Dual-Transmit/ Receive-Mode Therapeutic Ultrasound Phased Array System for Brain Therapy</p> <p>Hao-Li Liu, et al Chang Gung University</p>	<p><b>Session P2-C6.</b> <b>Underwater Acoustics</b></p> <p><b>Chair: Jafar Santie</b> Illinois Institute of Technology</p>	<p><b>P2-C7-6</b> Defect Imaging Using Sub-Sampled Array Data with Least-Squares Migration</p> <p>Katherine Tant, et al University of Strathclyde</p>
<p><b>P2-C2-1</b> High-power non-metal ultrasonic motor with an alumina vibrator</p> <p>Jiang Wu, et al Tokyo Institute of Technology</p>	<p><b>P2-C3-4</b> 3D velocity and volume flow measurement using speckle decorrelation and high frame rate contrast-enhanced ultrasound</p> <p>Xiaowei Zhou, et al Imperial College London</p>	<p><b>P2-C4-7</b> Precise Transcranial Ultrasound Imaging/HIFU by Adaptive Beamforming via a Dual-Mode Hand-Held Probe</p> <p>Kiyanoosh Shapoori, et al Institute for Diagnostic Imaging Research (IDIR)</p>	<p><b>P2-C6-1</b> Design of an Acoustic Modular Projector for Active Sonobuoys</p> <p>Hayeong Shim, et al Kyungpook National University</p>	<p><b>P2-C7-7</b> Effect of Spot Weld Indentation on Spot Weld Nugget Characterization</p> <p>Xiaoli Han, et al Institute of Acoustics, Chinese Academy of Sciences</p>

Key: Group 1  Group 2  Group 3  Group 4  Group 5 

**THURSDAY POSTER**

09:30 am - 04:00 pm	Poster --- Thursday, October 25		Waraku (posters 2)	
<p><b>P2-C7-8</b> Numerical investigations on localization of material degradation using guided mixing wave</p> <p>Tang Bo, et al East China University of Science and technology</p>	<p><b>P2-C9-4</b> Diamond SAW resonators made by Minimal-Fab process</p> <p>Satoshi Fujii, et al National Institute of Technology, Okinawa College</p>	<p><b>P2-C11-3</b> Flexible Lamb wave resonators based on lithium niobate thin film</p> <p>Xin Sun, et al Tianjin University</p>		
<p><b>Session P2-C8.</b> <i>Flow Measurement and Microfluidics</i></p> <p><i>Chair: Nishal Ramadas</i> Elster Instronet</p>	<p><b>P2-C9-5</b> Suppression of Propagation Losses in TC SAW Resonators Using Thin Plates of LiTaO3 Bonded to Quartz Substrates</p> <p>Natalya Naumenko, et al National University of Science and Technology 'MISIS'</p>	<p><b>P2-C11-4</b> An Improved Design for 2D Arrays of Capacitive Micromachined Ultrasound Transducers: Modeling, Fabrication, and Characterization</p> <p>Mario Baum, et al Fraunhofer ENAS</p>		
<p><b>P2-C8-1</b> Surface Acoustic Wave Based Acoustofluidic Device for Particle Size Filtering</p> <p>Jin-Chen Hsu, et al National Yunlin University of Science and Technology</p>	<p><b>Session P2-C10.</b> <i>SAW Sensor &amp; Actuator II</i></p> <p><i>Chair: Gerhard Fischerauer</i> gerhard.fischerauer@uni-bayreuth.de</p>	<p><b>P2-C11-5</b> Apodization technique for significant spurious mode suppression of AIN plate mode resonators</p> <p>Yao Zhu, et al Institutes of Microelectronics, A*STAR</p>		
<p><b>P2-C8-2</b> Analysis of Influence of Inconsistent Performances of Array Elements on Flexural Ultrasonic Phased Array for Measurement of Ultrasonic Generation and Reception in Fluids</p> <p>Lei Kang, et al University of Warwick</p>	<p><b>P2-C10-1</b> AIN/Si based SAW resonators for very high sensitivity temperature sensors</p> <p>Alexandra Nicoloiu, et al IMT-Bucharest</p>	<p><b>P2-C11-6</b> Quality Factor Improvement of a 2.4GHz AIN Checker Mode Resonator by Novel Distributed Anchor Design</p> <p>Yao Zhu, et al Institutes of Microelectronics, A*STAR</p>		
<p><b>P2-C8-3</b> Selective killing of tumor cells based on patterned gold nanoparticles via surface acoustic wave device</p> <p>Wei Zhou, et al Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</p>	<p><b>P2-C10-2</b> Displacement of Microparticles on Surface Acoustic Wave Delay Line Using High RF Power</p> <p>Melvin Paquit, et al AR-Electronique</p>	<p><b>Session P2-C12.</b> <i>Material for Acoustic Wave Device II</i></p> <p><i>Chair: Sylvain Ballandras</i> frec/n/sys SASU</p>		
<p><b>P2-C8-4</b> Minimizing the zero-flow error in transit time ultrasonic flow meters</p> <p>Douwe van Willigen, et al Delft University of Technology</p>	<p><b>P2-C10-3</b> PbS colloidal quantum dots coated SAW-based sensor for nitrogen dioxide room temperature detection</p> <p>Chen Fu, et al Shenzhen University</p>	<p><b>P2-C12-1</b> The dielectric loss of wurtzite Al<sub>0.67</sub>Sc<sub>0.33</sub>N thin films for mass production of piezoelectric MEMS</p> <p>Andrea Mazzalai, et al Evatec AG</p>		



<p><b>P2-C8-5</b> Viscosity Dependence of Harmonics and Ultra-harmonics of Acoustic Cavitation Noise</p> <p>Takanobu Kuroyama, et al National Institute of Technology, Gifu College</p>	<p><b>P2-C10-4</b> Towards an AlScN-based packageless acoustic wave sensor with RFID capabilities, for applications above 350°C.</p> <p>Pascal Nicolay, et al CTR AG</p>	<p><b>P2-C12-2</b> Study of Cr5Si3 Electrodes on Langasite Surface Acoustic Wave Resonators for High Temperature Sensing</p> <p>Jérémy Streque, et al Université de Lorraine, CNRS</p>		
<p><b>P2-C8-6</b> Acoustic field characterisation of an ultrasonic phased array for a novel flow sensor using an optical microphone.</p> <p>Reinhard Klambauer, et al Graz University of Technology</p>	<p><b>P2-C10-5</b> Development of surface acoustic wave magnetic field sensor incorporating with FeCo dot array</p> <p>Yana Jia, et al Institute of Acoustics, Chinese Academy of Sciences</p>	<p><b>P2-C12-3</b> Evaluation of Piezoelectric Ta2O5 Thin Films Using Line-Focus-Beam Ultrasonic Material Characterization System</p> <p>Ryota Suenaga, et al University of Yamashita</p>		
<p><b>Session P2-C9. SAW Device &amp; Application II</b></p> <p><i>Chair: Shogo Inoue Qorvo, Inc.</i></p>	<p><b>P2-C10-6</b> Pd-Cu nanowires coated SAW sensor for fast Hydrogen gas sensing</p> <p>Wen Wang, et al Institute of Acoustics, Chinese Academy of Sciences</p>	<p><b>P2-C12-4</b> The influence of negative ions generation on the arc-melted and hot press sintered ScAl alloy targets to the crystalline orientation and kt2 of the ScAlN films</p> <p>Yuka Endo, et al Waseda University</p>		
<p><b>P2-C9-1</b> Programmable Low Loss Orthogonal Frequency Coded SAW Correlator Filters</p> <p>Marshall Smith, et al University of Central Florida</p>	<p><b>Session P2-C11. MEMS &amp; Application II</b></p> <p><i>Chair: Jan Kuypers Blickfeld GmbH</i></p>			
<p><b>P2-C9-2</b> Surface acoustic wave velocity anomaly in thin piezoelectric film detected by Picosecond Acoustics: application to extraction of piezoelectric coefficients</p> <p>Arnaud DEVOS, et al IEMN CNRS</p>	<p><b>P2-C11-1</b> Micromachined Aluminum Scandium Nitride Lamb Wave Resonators Utilizing Low Order Symmetric Modes</p> <p>Fazel Parsapour, et al EPFL</p>			
<p><b>P2-C9-3</b> SH-type Spurious Response Free TC-SAW Resonators Using Low Acoustic Velocity Rayleigh SAW on LiNbO3 Substrate</p> <p>Masakazu Mimura, et al Murata Manufacturing Co., Ltd.</p>	<p><b>P2-C11-2</b> ACTIVE AND INACTIVE FRAMES IMPROVE FIGURE OF MERIT OF TWO DIMENSIONAL MODE RESONATORS</p> <p>Jeronimo Segovia-Fernandez, et al Texas Instruments Kilby Labs</p>			

## - Posters of Student Paper Competition -

<p><b>Session P1-SPC.</b> <b>Student paper competition</b></p> <p><i>Chair: Thanasis Loupas</i> <i>Philips Ultrasound</i></p>	<p><b>P1-SPC-4</b> Ultrafast 4D Doppler Imaging of the rat brain with a large aperture Row Column addressed probe</p> <p><b>Jack Sauvage<sup>1</sup></b>, Jonathan Porée<sup>1</sup>, Claire Rabut<sup>1</sup>, Baptiste Heiles<sup>1</sup>, Guillaume Ferin<sup>2</sup>, Martin Flesch<sup>2</sup>, An Nguyen-Dinh<sup>2</sup>, Mickaël Tanter<sup>1</sup>, Mathieu Pernot<sup>1</sup>, Thomas Deffieux<sup>1</sup> <sup>1</sup>Institut Langevin, ESPCI Paris, PSL Research University, CNRS UMR 7587, INSERM U979, France, <sup>2</sup>Vernon SA, 180 rue du General Renault, 37000 TOURS, France, France</p>	<p><b>P1-SPC-8</b> 3D flow mapping for Lorentz force driven liquid metal flows in crystallization experiments</p> <p><b>Kevin Mäder<sup>1</sup></b>, Norman Thieme<sup>1</sup>, Dagmar Meier<sup>2</sup>, Richard Nauber<sup>1</sup>, Lars Büttner<sup>1</sup>, Olaf Pätzold<sup>2</sup>, Jürgen Czarske<sup>1</sup> <sup>1</sup>Laboratory of Measurement and Sensor System Techniques, Technische Universität Dresden, Dresden, Germany, <sup>2</sup>Institute of Nonferrous Metallurgy and Purest Materials, Technische Universität Bergakademie Freiberg, Freiberg, Germany</p>	<p><b>P1-SPC-12</b> A Quasi-LTI Frequency-Selective SAW Circulator</p> <p><b>Giuseppe Michetti<sup>1</sup></b>, Cristian Cassella<sup>1</sup>, Flavius Pop<sup>1</sup>, Ahmed Kord<sup>2</sup>, Dimitrios Sounas<sup>2</sup>, Andrea Ali<sup>2</sup>, Matteo Rinaldi<sup>1</sup> <sup>1</sup>Northeastern University, Boston, MA, United States, <sup>2</sup>University of Texas at Austin, United States</p>	<p><b>P1-SPC-16</b> In vivo imaging of a porcine coronary artery with a 30/80 MHz dual frequency intravascular ultrasound catheter</p> <p><b>Chelsea Munding<sup>1</sup></b>, Emmanuel Cherin<sup>2</sup>, Natasha Alves<sup>2</sup>, David Goertz<sup>1,2</sup>, Brian Courtney<sup>2,3,4</sup>, F. Stuart Foster<sup>1,2</sup> <sup>1</sup>University of Toronto, Toronto, ON, Canada, <sup>2</sup>Sunnybrook Research Institute, Toronto, ON, Canada, <sup>3</sup>Sunnybrook Health Sciences Centre, Toronto, ON, Canada, <sup>4</sup>Conavi Medical Inc., Toronto, ON, Canada</p>
<p><b>SPC-1</b> Nonlinear X-wave ultrasound imaging of acoustic biomolecules</p> <p><b>Daniel Sawyer<sup>1</sup></b>, David Maresca<sup>2</sup>, Guillaume Renaud<sup>3</sup>, Audrey Lee-Gosselin<sup>2</sup>, Mikhail Shapiro<sup>4</sup> <sup>1</sup>Bioengineering, Caltech, Pasadena, CA, United States, <sup>2</sup>Chemical Engineering, Caltech, United States, <sup>3</sup>Sorbonne Université, France, <sup>4</sup>Caltech, United States</p>	<p><b>P1-SPC-5</b> Single-Chip Reduced-Wire CMUT-on-CMOS System for Intracardiac Echocardiography</p> <p><b>Gwangrok Jung<sup>1</sup></b>, Amirabbas Pirouz<sup>1</sup>, Coskun Tekes<sup>2</sup>, Thomas M. Carpenter<sup>3</sup>, M. Wasequr Rashid<sup>1</sup>, Ahmad Rezvanitabar<sup>1</sup>, David Cowell<sup>2</sup>, Steven Freear<sup>3</sup>, Maysam Ghovanloo<sup>1</sup>, F. Levent Degertekin<sup>1,2</sup> <sup>1</sup>School of Electrical &amp; Computer Engineering, Georgia Institute of Technology, Atlanta, GA, United States, <sup>2</sup>G.W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA, United States, <sup>3</sup>School of Electronic and Electrical Engineering, University of Leeds, Leeds, United Kingdom</p>	<p><b>P1-SPC-9</b> Design of Lab-on-a-Chip Surface Acoustic Resonance (SAR) Sensor with Enhanced Sensitivity and Integrated EIS</p> <p><b>Kiryl Kustanovich<sup>1</sup></b>, Aldo Jesorka<sup>1</sup>, Ventsislav Yantchev<sup>1</sup> <sup>1</sup>Chalmers University of Technology, Goteborg, Sweden</p>	<p><b>P1-SPC-13</b> Novel pMUT-Based Acoustic Duplexer for Underwater and Intra-Body Communication</p> <p><b>Flavius Pop<sup>1</sup></b>, Bernard Herrera<sup>1</sup>, Guofeng Chen<sup>1</sup>, Emrecan Demiroz<sup>1</sup>, Raffaele Guida<sup>1</sup>, Cristian Cassella<sup>1</sup>, Tommaso Melodia<sup>1</sup>, Matteo Rinaldi<sup>1</sup> <sup>1</sup>Northeastern University, Boston, MA, United States</p>	<p><b>P1-SPC-17</b> ASIC design for a single-cable 64-element ultrasound probe</p> <p><b>Douwe van Willigen<sup>1</sup></b>, Jovana Janjic<sup>2</sup>, Eunchul Kang<sup>1</sup>, Zu Yao Chang<sup>1</sup>, Emile Noothout<sup>3</sup>, Martin D. Verweij<sup>2,3</sup>, Nicolaas de Jong<sup>2,3</sup>, Michiel Pertijs<sup>1</sup> <sup>1</sup>Electronic Instrumentation Laboratory, Delft University of Technology, Delft, Netherlands, <sup>2</sup>Thorax Centre, Erasmus MC, Rotterdam, Netherlands, <sup>3</sup>Laboratory of Acoustical Wavefield Imaging, Delft University of Technology, Delft, Netherlands</p>
<p><b>P1-SPC-2</b> A fast 4D B-spline framework for model-based reconstruction and regularization in vector flow imaging</p> <p><b>Thomas Groenli<sup>1,2</sup></b>, Morten Wigen<sup>1,2</sup>, Patrick Segers<sup>3</sup>, Lasse Lovstakken<sup>1,2</sup> <sup>1</sup>Department of Circulation and Medical Imaging, Norwegian University of Science and Technology (NTNU), Trondheim, Norway, <sup>2</sup>Centre for Innovative Ultrasound Solutions (CIUS), Norway, <sup>3</sup>IBiTech-bioMMeda, Ghent University, Ghent, Belgium</p>	<p><b>P1-SPC-6</b> Prostate Shear Wave Elastography: Multiresolution Reconstruction Dependence on Push Beam Spacing</p> <p><b>Derek Y. Chan<sup>1</sup></b>, Samantha Lipman<sup>1</sup>, Mark Palmeri<sup>1</sup>, D. Cody Morris<sup>1</sup>, Thomas J. Polascik<sup>2</sup>, Ned C. Rouze<sup>1</sup>, Kathryn Nightingale<sup>1</sup> <sup>1</sup>Biomedical Engineering, Duke University, Durham, NC, United States, <sup>2</sup>Surgery, Duke University, Durham, NC, United States</p>	<p><b>P1-SPC-10</b> Redatuning for Breast Ultrasound</p> <p><b>Ulas Taskin<sup>1</sup></b>, Joost van der Neut<sup>1</sup>, Koen w.a. van Dongen<sup>1</sup> <sup>1</sup>Department of Imaging Physics, Faculty of Applied Sciences, TU Delft, Delft, Netherlands</p>	<p><b>P1-SPC-14</b> Use of Hierarchical Cascading Technique for FEM Analysis of Transverse Mode Behaviors in SAW Devices</p> <p><b>Xinyi Li<sup>1,2</sup></b>, Jingfu Bao<sup>1</sup>, Yulin Huang<sup>1,2</sup>, Benfeng Zhang<sup>2,3</sup>, Tatsuya Omori<sup>2</sup>, Ken-ya Hashimoto<sup>2,3</sup> <sup>1</sup>University of Electronic Science and Technology of China, Chengdu, China, People's Republic of, <sup>2</sup>Chiba University, Chiba, Japan, <sup>3</sup>Shanghai Jiao Tong University, China, People's Republic of</p>	<p><b>P1-SPC-18</b> Modular fabrication and assembly of large 2D Arrays with interface ASICs, PIN-PMN-PT composite, and 3D printed backing</p> <p><b>Robert Wodnicki<sup>1</sup></b>, Haochen Kang<sup>1</sup>, Jayesh Adhikari<sup>1</sup>, Rui Zhang<sup>2</sup>, Ruimin Chen<sup>1</sup>, Laiming Jiang<sup>1</sup>, Nestor Cabrera-Munoz<sup>1</sup>, Yu Liu<sup>2</sup>, Victoria Chiu<sup>2</sup>, Hayong Jung<sup>1</sup>, Josquin Foiret<sup>2</sup>, Qifa Zhou<sup>1,3</sup>, Douglas N. Stephens<sup>2</sup>, Katherine Ferrara<sup>2</sup> <sup>1</sup>Department of Biomedical Engineering, University of Southern California, Los Angeles, CA, United States, <sup>2</sup>Department of Biomedical Engineering, University of California, Davis, Davis, CA, United States, <sup>3</sup>Department of Ophthalmology, University of Southern California, Los Angeles, CA, United States</p>
<p><b>P1-SPC-3</b> Ultrasound/Photoacoustic Imaging Platform to Expedite Development of Novel Glaucoma Treatments</p> <p><b>Kelsey Kubelick<sup>1</sup></b>, Eric Snider<sup>1</sup>, Andrei Karpiouk<sup>2</sup>, C. Ross Ethier<sup>1</sup>, Stanislav Emelianov<sup>1,2</sup> <sup>1</sup>Wallace H. Coulter Department of Biomedical Engineering, Georgia Institute of Technology and Emory University, Atlanta, GA, United States, <sup>2</sup>School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA, United States</p>	<p><b>P1-SPC-7</b> Omnidirectional spiral surface acoustic waves for particles manipulation and multi-size particles separation in a microliter sessile drop</p> <p><b>Naiqing Zhang<sup>1</sup></b>, Gopesh Tilwawala<sup>1</sup>, James Friend<sup>1</sup> <sup>1</sup>Center for Medical Devices and Instrumentation, University of California, San Diego, La Jolla, CA, United States</p>	<p><b>P1-SPC-11</b> Trajectory Optimization of Levitated Particles in Mid-air Ultrasonic Standing Wave Levitators</p> <p><b>Tatsuki Fushimi<sup>1</sup></b>, Asier Marzo<sup>1</sup>, Thomas L. Hill<sup>1</sup>, Bruce W. Drinkwater<sup>1</sup> <sup>1</sup>Department of Mechanical Engineering, University of Bristol, Bristol, United Kingdom</p>	<p><b>P1-SPC-15</b> S0-Mode Lithium Niobate Acoustic Delay Lines with 1 dB Insertion Loss</p> <p><b>Ruochen Lu<sup>1</sup></b>, Tomas Manzanque<sup>1</sup>, Yansong Yang<sup>1</sup>, Songbin Gong<sup>1</sup> <sup>1</sup>University of Illinois at Urbana-Champaign, Urbana, IL, United States</p>	