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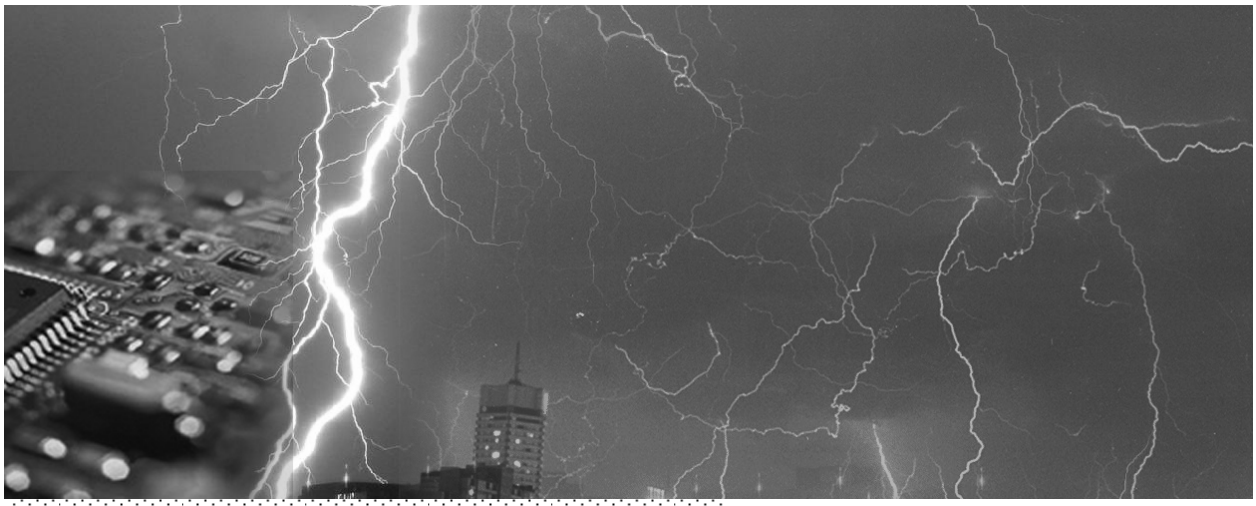

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Calendar of Events

Thursday, March 22

6:00 pm -8:00 pm : Signals Mixer
Graduates of the Last Decade and Women In Engineering are hosting another trademark "Signals Mixer" tentatively at "Proof" NYC, 239 Third Ave.

Tuesday, March 28

6:00 pm -8:00 pm : Instrumentation & Measurement Chapter
Supervisory Control and Data Acquisition (SCADA) Vulnerabilities and Security Issues. SCADA or "Supervisory Control and Data Acquisition" systems are real-time industrial process control systems used to centrally monitor and control remote or local industrial equipment such as motors, valves, pumps, relays, etc. Thomas N. McKee received his B.S. in Mechanical Engineering from Manhattan College in 1991.

Thursday, April 20

6:00 pm -8:00 pm : April 2006 Forum
Real-time Vision for Transit Operations and Security By Dr. Visvanathan Ramesh, Siemens Corporate Research and PATH New Signal System By Daniel J. Reitz, PATH. Online at the VTS NY Website, or contact Mr. Anthony McKenzie at 718 243 3125.

"The Field" The Quest for the Secret Force in the Universe (Lynne McTaggert)

Reviewed by Ken Vought IEEE NY Section Chair

Until reading Lynne McTaggert's thought provoking book, I had no idea that Newton's Law, $F = ma$, universally accepted and applied for 300 years, had not been mathematically derived nor proven until the mid 1990's.

She wrote "We are on the brink of a revolution as daring and profound as Einstein's discovery of relativity." This brief review can not do full justice to her book. If you read it, you will have an opportunity to revisit flawed, but previously sacred tenets and wisdom including:

> Nothing travels faster than the speed of light, The Brain is an organ and the home of consciousness, Time and Space are finite, universal orders, and Man is a survival machine, powered by chemicals & DNA.

By understanding the Quantum Physics concepts introduced for the "Zero Point Field," you may find those "truths" convincingly challenged. The book described Hal Puthoff's theory of gravity. While gravity eluded Einstein's capacity to explain, Puthoff found gravitational effects were entirely consistent with Zero-Point Field particle motion.

Alfonso Rueda drew upon Puthoff's Zero-Point Field work to demonstrate and mathematically calculate that the property of inertia was simply resistance to being accelerated through the Zero-Point Field, or *F=ma*.

How is the Zero-Point Field defined?

1. As Edgar (Ed) Mitchell was returning from the moon in Apollo 14, he experienced a feeling of connectedness, as if all the planets and people were connected by some invisible web. The force field seemed to connect all people, their intentions, thoughts, animate and inanimate forms of matter for all time.
2. Warner Heisenberg developed the uncertainty principle of Quantum Physics: "No particle ever stays completely at rest but is constantly in motion due to a ground state field of energy constantly interacting with subatomic matter." Random subatomic fluctuations of energy, however brief, when added across the universe, give rise to more energy than is contained in all matter in the world.
3. Walter Schempp's explosive discovery about quantum memory introduced the most outrageous idea of all: Short-and long-term memory does not reside in our brain, instead, memory is stored in the Zero-Point Field.

Clearly described work by Engineers, Mathematicians, Quantum Physicists, and Psychologists are cleverly linked within Ms. McTaggart's book. You may enjoy learning:

Energy within one cubic meter of the Zero-Point Field is sufficient to boil all of our oceans waters.

Releasing and harnessing energy within the Zero-Point Field is a high priority, global, technological challenge.

Our brains perceive and make our own record of the world in pulsing waves.

A substructure underpins the universe that is essentially a recording medium of everything, providing a means for everything to communicate with us and everything else.

Our consciousness has incredible powers to heal ourselves, to heal the world – in a sense to make it as we wish it to be.

While fascinating, it is wise to keep in mind the well known dictum that the right idea can never get definitely proven. The best science can hope to achieve is to disprove wrong ideas.

Vehicular Technology Society

April 20th Technology-Sharing Forum

Join the NY Section of the VTS presenting

Real-time Vision for Transit Operations and Security
By Dr. Visvanathan Ramesh, Siemens Corporate Research
&
PATH New Signal System
By Daniel J. Reitz, PATH

April 20, 2005, 6:00 to 8:00 PM
Refreshments and Registration: 5:30PM

Hosted by: Cisco Systems, Inc. 9th Floor
One Penn Plaza, New York City

Dr. Ramesh will give an overview of real-time vision system developments with specific emphasis on **transit security, safety and operations**. Dr. Ramesh will highlight specific technologies for object detection, tracking, and event/behavior analysis and their applications in transportation settings. In addition, Dr. Ramesh will illustrate Siemens' systems engineering methodology for how performance characterization of such intelligent video analysis functions can be achieved to gauge the applicability of these systems to specific settings.

Daniel J. Reitz a Senior Member of the PATH New Car and Signal System procurement team will give a brief history on the **PATH signal system** – Progressing from relay based logic, to WTC microprocessors, to CBTC and bring us up to date on the PATH New Signal System procurement.

Advance registration is required for admission.

There is a $35.00 charge for the forum and refreshments, Checks Payable to IEEE NY Section

Registration:
Mail to Mr. Michael Fitzmaurice
Parsons
100 Broadway
New York, New York 10005

Online at http://www.ieee.org/vtsny

IEEE Members and non-members may register for the April forum. If you are an IEEE member, please provide your membership number. Program specifics and directions: Online at the VTS NY Website, or contact Mr. Anthony McKenzie at 718 243 3125.

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Professional Activities Committee for Engineers (P.A.C.E.)

Professional Activities for 2006:
Wed, Mar 22 – Career Fair @ Poly
Thu, Mar 23 to 25 – NYC First Robotics
Thu, Mar 22 – 'Signals' Event
Sun, Apr 2 – Hudson Valley Engineering EXPO in Rockland County:
http://www.engineeringexpo.org/

Tue, Apr 11 – S-PAC @ Columbia
Sat, Apr 29 – Tri-County Tech. Fair
Thu, May 18 – 'Signals' Event
*See updated PACE website for more info:
http://www.ieee.org/NYS-PACE

IEEE eNewsletters:
- Spectrum Career Alert (weekly)
- Spectrum Tech Alert (weekly)
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IEEE Spectrum Geek Guide to NYC http://www.spectrum.ieee.org/nyc_guide
New York State Office of the Professions http://www.op.nysed.gov/
New York City Workforce1 Career Centers http://www.nyc.gov/html/sbs/wf1
PE / EIT Exam Information http://www.ncees.org/

For information on government policies effecting engineers, login to the IEEE-USA Legislative Action Center (IEEE web account required):
https://www.capitolconnect.com/ieee

Are there other events going on that we haven't mentioned, that would be interesting Professional Activities? Please let us know if there are existing events in NYC, or if you would like to recommend something specific of interest.

If you or someone you know is interested in becoming an IEEE New York Section volunteer, please let us know by submitting a resume and a cover letter indicating areas of interest and a brief bio.

Warm Regards,

Matthew B. Nissen, PACE Chairman Matt.Nissen@ieee.org

Eyal Novotny, PACE Vice-Chairman Eyal.Novotny@ieee.org

IEEE New York Section
Instrumentation & Measurement Chapter
Manhattan College
Joint Sponsorship

Supervisory Control and Data Acquisition (SCADA) Vulnerabilities and Security Issues

SCADA or "Supervisory Control and Data Acquisition" systems are real-time industrial process control systems used to centrally monitor and control remote or local industrial equipment such as motors, valves, pumps, relays, etc. SCADA is used to control chemical plant processes, oil and gas pipelines, electrical generation and transmission equipment, manufacturing facilities, water purification and distribution infrastructure, etc. SCADA is intimately related to national security. In the post September 11th world reliability of the nation's infrastructure has become critical. Technologies that were once considered obscure are now being looked at as potential vulnerabilities. This talk will define SCADA and explore the technology used to implement it in a number of industries. The legacy issues of SCADA, which leave it open to manipulation, will be discussed. A number of examples of SCADA system compromises will be presented. Finally, a number of solutions to SCADA vulnerabilities will be offered.

Speaker

Thomas N. McKee received his B.S. in Mechanical Engineering from Manhattan College in 1991. He holds a Nuclear Plant Senior Reactor Operator License Certification (1996) and received an M.S. Degree in Mechanical Engineering from Manhattan College in 1999. Additionally he holds an M.S. Degree in Computer Science from Pace University (2004). He has been working in the power industry at the Indian Point Units since 1991 and has held positions in the Plant Performance, Instrument and Controls, Operations, Engineering, and Training departments. In addition, Tom McKee is an adjunct instructor at Manhattan College in the department of Electrical and Computer Engineering where he has taught numerous courses in computer technology and information processing.

Plan to attend this informative presentation

1 CEH credit will be awarded

Date: Tuesday, March 28, 2006.
Time: Pre-meeting reception with refreshments 5:00 – 6:00PM;
Meeting 6:00PM
Place: Manhattan College
Information/reservations: 718-862-7153; gsilverman@ieee.org; parking available.
Directions:
By Train: Take the Broadway #1 line to 238th Street. Walk West on 238th Street one (short) block to Corlear Ave. Turn right., LEO Engineering is directly ahead.
By Car: Take Major Deegan to Exit 11 (Van Cortlandt Park So.). Proceed due West on Van Cortlandt Park So. Past Broadway to Corlear Avenue. (Van Cortlandt Park will be on your right as you proceed west. Do not follow sign to Manhattan College but proceed directly under the elevated subway line at Broadway.). Just past the elevated subway, turn left onto Corlear Avenue. LEO Engineering is on your right. Parking lot is just beyond the LEO Building.

POWER ENGINEERING SOCIETY AND INDUSTRY APPLICATIONS SOCIETY NEW YORK & LONG ISLAND CHAPTER

Current Transformer Theory and Application

Anthony Sleva, Manager of Electrical Engineering Altran Solutions, has experience in design and analysis of transmission and distribution substations, power plant electrical systems, railway systems, and industrial plant electrical systems with an emphasis on protective relaying, short circuit analysis, and electrical system operations.

Tony is a Senior Member of IEEE, past Chair of the Lehigh Valley Section of IEEE, a member of IEEE's Power System Relaying Committee (PSRC), a graduate of Penn State University, a licensed professional engineer and an adjunct instructor at University of Wisconsin – Milwaukee's School of Continuing Education. Tony holds a patent for an "Electric Power Clipper" that can be used to reduce residential and industrial load during various power system transients.

Session Outline includes:

A review of transformer theory, differences between power and current transformers, current transformer characteristics (primary current, turns ratio, secondary voltage, polarity, grounding), current transformer loading, and failure modes. Calculation of CT performance.

Figures illustrating current transformer polarity diagrams, schematic diagram with secondary load and excitation characteristic curve.

Sample Calculations illustrating: Secondary voltage during fault conditions for a 2000/5, C400 CT supplying electromechanical and microprocessor relays. More detailed handouts will be available.

NO WALK-INS allowed for security reasons
Tuesday, March 21st 2006
Program: 5:00 – 7.00 pm
Location: Con Edison Executive Dining Room, 19th Floor — 4 Irving Place, NY 10003

Nearest Subway: Union Square
Refreshments will be served at: 5:15 PM
Call for Advance Reservation to:
John A. Michelsen Tel: 914 798 9821, Fax 914 968 8468
or email: johnm@graphalloy.com

NY GOLD Update

Nikolas Nonis
n.nonis@ieee.org

NY-GOLD chapter would like to share our 2006 calendar of events.

- ☑ March 22: "Signals" Mixer
- ☑ April 11: Professional/Technical Society
- ☑ May 18: "Signals" Mixer
- ☑ August 17: "Signals" Mixer
- ☑ September 21: Professional/Technical Society
- ☑ October: Open for career fairs
- ☑ November 11: "Signals" Mixer

"Signals" social networking events, with IEEE-NY Women In Engineering, are looking for established professionals as featured guest speakers to talk about their work/life experiences. If you know of someone and a great venue, please share.

Our professional events, with IEEE-NY PACE, are looking for qualified panelists on various topics such as resume writing, job interviewing workshops, financial counseling and general career advisement.
Corporate venues are preferable.

Partnerships with IEEE-NY Technical Societies are also welcomed for joint programming.

Lastly, the NY Section Student Activity Committee (SAC) and GOLD will coordinate to assist our local student members bridge the way into their professional careers. These special events will focus on SPACS/SPAVS, career fairs, & graduate open houses within NYC.

So act now, before the above dates are formalized.

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