

IEEE Region 2, Central Area

Jim Beck
Central Area Chair

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Susquehanna: **Robert Lesniewski**

West Virginia: **Asad Davari**

Erie: **Sudarshan Nelatury**

Johnstown: **M. Edward Brandau**

Central PA: **Sawyer Campbell**

Pittsburgh: **Andrew Lowery**

IEEE Region 2 Meeting
April 22, 2017, Wilmington, DE

IEEE Central Area Membership

<u>Section</u>	<u>Members</u>
Susquehanna	583
West Virginia	99
Erie	103
Johnstown	99
Central PA	368
Pittsburgh	1842
Total:	3094

* Source: February 2017 data from RVC minutes



Susquehanna Section

Officers

- ▶ Chair: **Robert Lesniewski**
- ▶ Vice Chair: **Arnold Offner**
- ▶ Secretary: **Yaang Zhou**
- ▶ Treasurer: **Jeff Watson**
- ▶ Consumer Elect. Chair: Dr. Aldo Morales
- ▶ Nanotechnology Chair: Dr. Wolfram Bettermann
- ▶ Penn State Harrisburg Student Branch
- ▶ Elizabethtown College Student Branch
- ▶ 3 other members of EXCOM
- ▶ Membership: 630

- **2016 Reported L31 Meetings**
 - 2 Admin (EXCOM)
 - 4 Chapter
 - 7 Section
 - 4 Section (Joint)
- **2016 GOLD AWARD** for member recruitment & retention
- **5 2016 PACE Projects**
 - Congressional Visit Day
 - SI Symposium
 - Capitol Area Science & Engineering Fair
 - IEEE Xtreme Programming
 - Harrisburg Area High School Robotics Competition
- Launched new Section web site: sites.ieee.org/susquehanna

2017 Events

- 3 EXCOM meetings
- 4 Chapter meetings
- 7 Section meetings
- 4 Joint Section meetings

- 6 PACE Projects

- Initiate live web casting of Section meetings in Sept.

Goals for 2017

- Continue to provide members with quality technical briefings to enhance their knowledge in various technologies that will benefit their work place skills.
- Continue joint meetings with our local universities to encourage students to continue their IEEE membership and participate in the Section meetings upon graduation.
- Conduct senior membership drives and encourage life member participation in the Affinity Group projects.
- Target Section membership to 740 by year end.
- Launch live web casting of Section meetings which will be archived on the Section web site.



Susquehanna Section

ISSUES AND CONCERNS

- ▶ H1B visas continue to reduce availability of jobs for American resident engineers.
- ▶ Off shoring engineering jobs continues to impact IEEE membership retention
- ▶ Membership cost has a big impact on IEEE retention given the 2 items listed above.
- ▶ IEEE lobbying at the Federal level has zero impact & high cost

West Virginia Section

Officers

- ▶ Chair: Asad Davari, Ph.D.
 - ▶ Vice Chair: Yadi Eslami, Ph.D.
 - ▶ Secretary: Kenan Hatipoglu, Ph.D.
 - ▶ Treasurer: Mingyu Lu, Ph.D.
 - ▶ Membership: Russ Safreed, PE
 - ▶ PACE: yadi Eslami, Ph.D.
 - ▶ Membership: 112
- (Current Active members – 04/04/2017)

2016 Activities

- 2/11 - Technical presentation: **“Adjustable Speed Drives, Motor Torque and HP Considerations”** by Russ Safreed, PE
- 3/17 - Technical Presentation: **“Big Data Analytics in Cyber-Physical Systems: Enabling the Move from Internet of Things to Real-Time Control”** by Houbing Song, Ph.D.
- 09/20 - Technical Presentation: **“Distributed Control of Clustered-Networks of Dynamic Systems”** by Dr. Almuatazbella (Muataz) Boker
- 10/20 - Technical Presentation: **“Partial discharge testing - active preventative maintenance without outages”** by Jeff Altizer, PE
- **2016 Student projects contest** - 04/28/2016

2017 Activities

- 2/14 - Technical presentation: **“ Understanding and Reducing Arc-Flash Hazards in Power Distribution Systems”** by Russ Safreed, PE
- 2/28 - Technical Presentation: **“Big Data Analytics for Smart Cities: A Data Mining Approach to Public Transportation”** by Yongxin Liu , Ph.D candidate.
- 3/28 - Technical Presentation: **“Unmanned Aerial Vehicle (UAV) Obstacle Detection”** by Mr. Jian Wang

UPCOMING EVENTS

- April/2017: **2017 Student projects contest**
- September/2017 - Technical presentation: **Building occupancy simulation and estimation**, by Sanish Rai, Ph.D.
- November/2017 - Technical presentation: TBD

Goals for 2017

- Provide members with quality technical briefings to enhance their knowledge in various technologies that will benefit their work place skills.
- Conduct joint meetings with our local universities to encourage students to continue their IEEE membership and participate in the Section meetings upon graduation.
- Conduct senior membership drives and encourage life member participation in the Affinity Group projects.



WEST VIRGINIA Section

ISSUES AND CONCERNS

- ▶ The high cost of membership dues keep potential members away considering the only benefit is a Spectrum magazine. To access periodical requires additional costs, to join societies requires additional costs as well.

Erie Section

OFFICERS

- Chair: Sudarshan Nelatury
- Vice Chair: Yong-Kyu Jung
- Secretary: Sreela Sasi
- Treasurer: Brian Bogacki
- Membership Chair : Mohammad Rasouli

- Membership: ~107

UPCOMING EVENTS

- April: Member Tours: Visit Small Business Development Center (SBDC) at Gannon University
- Sep: Member -Tour
- Oct.: Erie Section Open Meeting with members and Picnic and Invited Talk (plan as a joint event)
- Nov.: New Members' Dinner and Invited Talk

OUTSTANDING MEETINGS (> 50 ~ >6 ATTENDEES)

- 8 Monthly Excomm Meetings (Feb. ~ Dec.)
- 3 Invited Talks
 - John Pacerba, "Managing to manage your careers"
 - Dr. Sen, "Power flow Control Techniques"
 - Dr. Gilbert Jacobs, "Leadership"
- 4 IEEE Students Paper Competitions at Gannon Univ.and PSU-Erie
- New Members Dinner & Invited Talk
 - Dr. Ram Narayanan, "Noise in Circuits and Systems"

GOALS FOR 2017

- Provide events and meeting for professional and student members to technical and career related topics.
- Membership increment from the student branches and industrial members & Senior membership drive.
- Offer a couple of joint events with other sections (i.e., Pittsburgh and Cleveland Sections) in Region 2.
- Continue to support local high schools' activities, including Math Count.
- Support R2 Student Activity Conference

Johnstown Section

Membership

- ▶ Was over 200 in the early 1990's
- ▶ Has been about 150 or so since the 2000's
 - IEEE membership often driven by one key employer
- ▶ Now down around 100 members
 - Cannot access dashboard due to password issue
- ▶ Other local professional groups struggling as well

Johnstown Section

Demographics

- ▶ Stretches the vast area between Pittsburgh, State College, Harrisburg, and West Virginia
- ▶ Johnstown and Altoona are the largest areas
 - Both distressed communities
 - Most of members are in Johnstown, followed by Clearfield, DuBois, Cumberland
 - Rather rural in between
 - About 2+ hour drive from Johnstown to edges of territory
- ▶ Demographics aging
 - Becoming more retirees due to reasonable cost of living, grads and jobs leaving
 - Johnstown median income has dropped to about \$21,000/year

Johnstown Section

Attrition is our largest obstacle over the years

- ▶ Historically, lose members and officers to job loss
 - Ed Brandau, current chair, has been chair repeatedly
 - Treasurer, and Secretary have been long-time supporters as well
 - Vice-Chair is now open – just lost his job/moved
- ▶ Area technical employment dwindling
 - Probably lost at least one officer annually since 2012 or so
 - Roughly 2013-2016 lost several officers each year
 - Just lost Vice-Chair, Treasurer commutes, but still member
 - Dwindling IEEE and community support, layoffs
- ▶ Moving for a push this year
 - Last year+ has been very difficult to regain momentum
 - 2017 Activities planned, some with PSPE who is also struggling
 - Request for officers – usually works to some degree

Johnstown Section

Employer Summary

- ▶ Bethlehem Steel was king up to late 1990's, but minimal IEEE support
- ▶ Electric utility had likely second largest employment up to late 1990's, largest IEEE supporter
- ▶ Long-term Congressman-Chair of Defense Appropriations till 2010 death
 - Lots of government contracts
 - At least 4 technical companies with 100-1500 employees
 - Dozens of small/midsize technical companies, mostly gone now
 - Eroding contracts, technical employment, IEEE support, high paying jobs
- ▶ Concurrent Technologies Corporation (CTC) transforming
 - Was lead IEEE employer, mandated professional membership
 - Now dwindling IEEE support, layoffs
 - Went from occupying four large buildings down to two not even full
 - Employed 1,500, now perhaps 500
- ▶ Hospital now lead employer, overall healthcare now king
 - Minimal IEEE support

Johnstown Section

2017 Planned Activities

- ▶ Largest event has been Engineer's Week Banquet
 - Long term event with over 100 attendees, perhaps 15-20 IEEE members
 - Joint with PSPE as the lead organizer
 - Awards given to students for Mathcounts and others
 - CANCELLED this year due to PSPE reorganization and leadership issues
- ▶ We sponsor several key projects
 - Senior engineer or two at UPJ involved in IEEE
 - Possibly fund senior projects
 - UPJ senior project competition/awards
 - Mathcounts
 - Local middle/senior high robotics team, financial and technical support
- ▶ Pizza/career discussion at UPJ and possibly PSU Altoona
- ▶ 115/230 kV Substation tour with new cap bank and reactors
- ▶ Regular participation from Chair on UPJ Industrial Advisory Board
 - ABET requirement for certification
- ▶ Talk on professional registration – discussed, not final

Johnstown Section

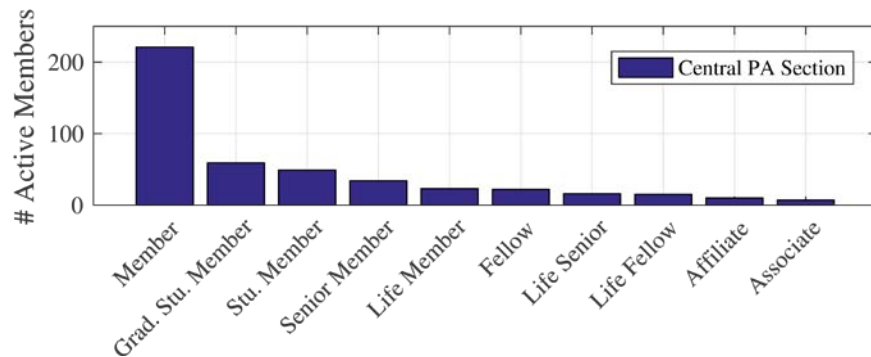
Wrap Up

- ▶ Johnstown still determined to survive
 - Organized in 1948
 - Chair has been involved since 1992, Secretary and Treasurer long term and also not ready to quit yet
- ▶ This may be the pivotal time for survival
- ▶ Possible to add adjacent pieces of Pittsburgh to Johnstown???

Central PA Section

Officers

- ▶ Interim Chair: Dr. Sawyer D. Campbell
- ▶ Membership: ~456 Active Members



2016 Activities

- March: Guided tour of Three Mile Island Nuclear Facility
- July: Sponsored undergraduate student participant at IEEE-USA Future Leaders Forum
- October: Guided tour of Locust Ridge Windfarm managed by Avangrid Renewables

Goals for 2017

- Transition Section leadership to new executive committee.



Central PA Section

ISSUES AND CONCERNS

- ▶ Student Section captures most interest of undergraduate students. With little industrial base in the section, these students ultimately leave and are not retained once they find employment.
- ▶ Remaining membership is mostly graduate students, post-docs, and faculty who concentrate almost entirely on technical sub-groups & societies.
- ▶ Graduate student unionization effort at Penn State shows students' growing concern over the economy, jobs, lack of university involvement in career guidance, and capitalism as a whole. A number of people have inquired about IEEE and unionization. They could see value in being an IEEE member if it means increased salary & benefits and, especially, job security.

Pittsburgh Section

OFFICERS

- Chair: Andrew Lowery
- Vice Chair: Daniel Wilson
- Secretary: Navid Binesh
- Treasurer: Gene Kern
- Asst. Treasurer: Ted Zyra

- Membership: ~2400

UPCOMING EVENTS

- April: Autonomous Sample Return Robot, Scalable Strategies for Image Analysis in Neuroscience, Enabling Technologies in Control and Power Electronics for Power and Energy Systems
- May: Annual History and Awards Dinner, Electromagnetic Environmental Effects in the Military, Maximize Your Technology – Go Global
- August: Section Baseball Outing at PNC Park, Sections Congress

OUTSTANDING MEETINGS (>30 ATTENDEES)

- Non-Volatile Memory Technology Symposium
- Welcome Reception at IEEE Computer Society Annual Symposium on VLSI
- IEEE Magnetics Society DL: Josep Fontcuberta
- Multi-Terminal VSC HVDC Effective Power Sharing
- IEEE Magnetics Society DL: Teruo Ono
- Modern Hybrid Electric Cars: A Chevrolet Volt Owner's Experience
- What's this UAV thing all about?
- Shop Floor Voltage and Frequency for Today's Production Facilities
- Reliability of Power Electronic Converters

GOALS FOR 2017

- Provide members with quality technical events to enhance their knowledge and abilities.
- Increase the total membership, number of technical and professional meetings, number of local societies, and funding opportunities within the Section.
- Continue supporting joint events between industrial, commercial, and academic units.
- Conduct events to engage Women in Engineering and Young Professional members

Pittsburgh Section

ISSUES AND CONCERNS

- Overall membership retention and elevation (e.g. Student/Graduate Student member to Member, and Member to Senior Member)
- Membership, recruitment, and retention of Millennials.
- Fundraising and funding for new membership development opportunities (e.g. International Distinguished Lecturers, Industrial Relations, Entrepreneurship)
- Recruiting and developing members for leadership roles (to have more than just a Chapter Chair) in local Chapters and Affinity Groups.