IEEE Rochester Section

Serving Rochester Engineers for over 100 years

April, 2017

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2017 Joint Chapters Meeting

April 5, 2017 from 4pm – 9pm

RIT - Louis Slaughter building
Room 2210 & 2220

Keynote Presentation

Rick Fremming
Senior Operations Engineer

Topic: *Robert Moses Niagara Falls Hydroelectric Plant*

Rick's role is to monitor and support the safe, reliable and efficient operation of 13 hydro generators (225 MVA each), 12 pump generators, 20 billion gallon reservoir & 21 transmission lines. He is also responsible for troubleshooting these systems and finding engineering solutions. He has been with the New York Power Authority (NYPA) for 18 years.

CHAPTER POSTER SESSION (5:30 – 7:00PM) **Best student poster will win $100 prize!**

Technical Presentations I & II:

- CS/CIS - A Vision for Human-Centered Cybersecurity – Dr. M. Wright
- GRSS - Unmanned Aerial Vehicles/Systems – Dr. Jan Aardt
- SPS - Analyzing/Tracking Persons 3D Gaze – Dr. Gabriel Diaz
- EMBS – An Adaptable Framework to Extract Abnormal Brain Networks – Dr. Archana Venkataraman
- APS/MTTS – Gallium Nitride Power MMICs – Fact and Fiction – Dr. Campbell

Registration is required to attend this meeting. **Register before March 20** to take advantage of early-bird discounts. No charge to attend technical presentations!

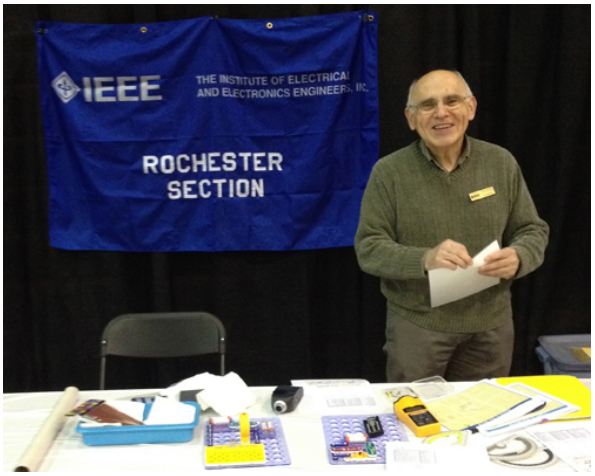
Register on-line at https://events.vtools.ieee.org/m/43769

Dinner: "All American Buffet" including sliced Strip loin, roasted salmon, vegetarian penne arrabiata and much, much more.

Networking oportunities abound at Rochester Section Joint Chapter Meetings

IEEE Rochester Section

Serving Rochester Engineers for over 100 years



IEEE Member Joe DeVita at the E^3 Fair

E^3 Fair

Engineering – Experimentation - Exploration - and beyond…

RIT – Clark Gym. April 27, 2017 – 9AM- 1PM

- Design Contests (including Robotics)
- Middle School Student Projects – Grade 6-8
- Hands-on Activities for Students and Adults
- Industry Booths – Meet area engineers
- **Free Admission – Free Parking – Groups welcome.**

E^3 Fair administered by The Rochester Engineering Society. For more information, call **585-442-8386**

Rochester Section Membership Report

The Rochester Section welcomes the following new graduate student members including: Asma Aloufi, Kyle Mimken, McKay Williams, Peng Xiang Yu, Shitiz Kumar, and Yang Li. In addition, we welcome the following new undergraduate student members including: Dylan Domenico, and Jacob Sommer.

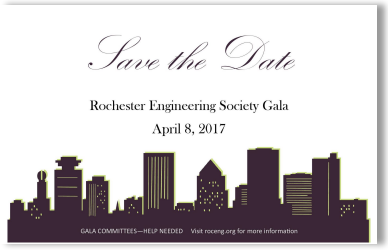
Congratulations to Tolga Soyata, James Mathews, Emmett Ientilucci, Daryl Johnson, and Girish Behal for being elevated to Senior Members of IEEE!

IEEE Members (April 2017)	
Associate Members	12
Fellow	16
Graduate Student Member	68
Life Fellow	10
Life Member	98
Life Senior	35
Member	427
Senior Member	87
Student Member	41
Total Members	**794**

Rochester Section EXCOM Meeting

April 4th, 2017 @ 12:00 - 13:00

If you are looking for a cheap lunch ($5 for members and $3 for students), join us for the next monthly Rochester Section IEEE Executive Committee meeting. All current and prospective IEEE members may attend! Please join us to learn more about the Society and how you may contribute. We are always looking for new members and volunteers. **Location: Jade Garden Buffet in South Town Plaza 3333 W. Henrietta Rd, Henrietta, New York. Please visit our website to see more upcoming events!** https://events.vtools.ieee.org/m/44000



Rochester Engineering Society Gala

Saturday, April 8, 2017 at the Rochester Riverside Convention Center
123 East Main Street, Rochester – 5:00 PM – 10:00 PM
Gala Program includes a reception and silent auction – Growth in the Rochester Development Arena! Dinner, awards, and entertainment.

Honoring: 2016 Engineer of the Year; 2016 Young Engineer of the Year; 2016 Finalist for Young Engineer of the Year; 2016 Engineers of Distinction; Scholarship to high schools & college students.

Registration is available online. For more information about the event, ticket price, and sponsorship go to: **http://www.roceng.org/event-2423204**

Talks earlier this month!

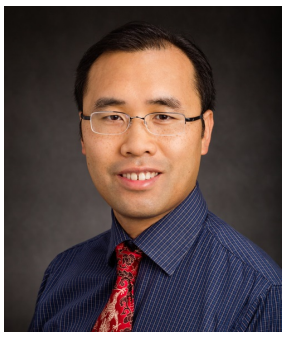
Engineering in Medicine and Biology Society

21 March 2017

Electromagnetics in Emerging Medical Technologies

Speaker: Dr. Jayanti Venkataraman
Professor, Electrical and Microelectronic Engineering Department
Rochester Institute of Technology, Rochester, NY

CS/CIS



24 March 2017

User Expectations in Mobile App Security

Speaker: Dr. Tao Xie
Associate Professor and Willett Faculty Scholar
Department of Computer Science
University of Illinois at Urbana-Champaign, USA.
He is an IEEE Computer Society Distinguished Visitor

2017 Rochester Section Joint Chapters Meeting

Rochester Institute of Technology Louise Slaughter (SLA) Building, Rochester, NY

April 5, 2017

Registration and refreshment, Rooms 2210 & 2220	4:00 – 4:30 PM
Chapter Technical Presentations I, Rooms 2120, 2130 or 2140	4:30 – 5:30 PM
Chapter Technical Presentations II, Rooms 2120, 2130 or 2140	5:30 – 6:30 PM
Student Poster Session, Rooms 2210 & 2220	5:30 – 7:00 PM
Networking (cash bar), Rooms 2210 & 2220	6:30 – 7:15 PM
Dinner & Keynote Presentation, Rooms 2210 & 2220	7:15 – 9.00 PM

Keynote Presentation

"Robert Moses Niagara Falls Hydroelectric Plant"

By Rick Fremming, Senior Operations Engineer

Rick's role is to monitor, troubleshoot and ensure the safe, reliable and efficient operation of 13 hydro generators (225 MVA each), 12 pump generators, 20 billion gallon reservoir & 21 transmission lines. He has been with the New York Power Authority (NYPA) for 18 years.

Technical Presentations I - 4:30 – 5:30 PM

Room 2120	Room 2130	Room 2140
CS&CIS **"A Vision for Human-Centered Cybersecurity" by Dr. M. Wright**	**GRSS** **"Multi-modal unmanned aerial system development and applied research at RIT" by Dr. Jan Aardt**	**SPS** **"Analyzing/Tracking Persons 3D Gaze" by Dr. Gabriel Diaz**

Technical Presentations II - 5:30 – 6:30 PM

EMBS	APS&MTTS	PES&IAS
"An Adaptable Framework to Extract Abnormal Brain Networks" by Dr. Archana Venkataraman	**"Gallium Nitride Power MMICs-Fact and Fiction" by Dr. Charles Campbell**	**"IEEE SMART Village Initiative" and "HVDC – Powering the future" by Girish Behal**

For Chapter Technical Presentation updates please visit: http://rochester.ieee.org

PDH Certificates pending for Keynote and Technical Presentations

Registration Required (Fee increases after March 20).

Discounted fee until March 20, 2017: $25.00 (IEEE Member or IEEE Member significant other), $35.00(Non-Member), $10.00 (IEEE Student Member), $15.00 (Full-Time Student Non-Member), $20 (IEEE Fellow or Senior Member)

Registration fee after March 20, 2017: $30.00 (IEEE Member or IEEE Member significant other), $40.00(Non-Member), $15.00 (IEEE Student Member), $20.00(Student Non-Member), $25 (IEEE Fellow or Senior Member)

Register on-line at https://events.vtools.ieee.org/m/43769 **(pay-pal accepted)**

DINNER: "ALL AMERICAN BUFFET" including sliced strip loin, roasted salmon, vegetarian penne arrabiata and much, much more.

CHAPTER POSTER SESSION (5:30 – 7:00 PM)

Local research will be on display for interactive Q/A. Best student poster prize of $100.

Joint Chapter Meeting – CS/CIS Technical Presentation
A Vision for Human-Centered Cybersecurity

Technical Presentations I, Room 2120

Dr. **Matthew Wright**

Date and Time

Date: **05 April 2017**
Time: **04:30 PM to 05:30 PM**

Abstract:
While most research attention in cybersecurity is on technology, from cryptography on chips to using machine learning to detect attacks, many security problems in practice are due to people, such as a user opening a malicious email attachment. Understanding and designing for the human beings using, administering, and even attacking our systems is the key to making them more secure, not just on paper but in practice. In this talk, I will discuss some of the research efforts at RIT in human-centered cybersecurity, including new password technologies, measuring the effectiveness of two-factor authentication, understanding the source of security bugs, and modeling attackers. This research forms the core of RIT's new Center for Cybersecurity, housed in the Golisano College of Computing and Information Sciences.

Biography:
Matt Wright is the Director of the Center for Cybersecurity at RIT and a Professor of Computing Security. He graduated with his PhD from the Department of Computer Science at the University of Massachusetts in May, 2005, where he earned his MS in 2002. His dissertation work examined attacks and defenses for systems that provide anonymity online. His other interests include understanding the human element of security and security and privacy in all sorts of distributed systems, including peer-to-peer, mobile, and Internet of Things. Previously, he earned his BS degree in Computer Science at Harvey Mudd College. He is a recipient of the NSF CAREER Award, the Outstanding Paper Award at the 2002 Symposium on Network and Distributed System Security, and the Outstanding Student Paper Award at the 2016 European Symposium on Research in Computer Security.

Joint Chapter Meeting – GRSS Technical Presentation Multi-Modal Unmanned Aerial System Development and Applied Research at RIT

Technical Presentations II, Room 2130

Speaker: Dr. Jan van Aardt

Date and Time

05 April 2017
05:30 PM to 06:30 PM

ABSTRACT

The application of unmanned aerial systems (UAS), which encompass the aerial platform, operating infrastructure, and sensing modalities, has received much attention of late, given system developments and operational/legislative leeway. The benefits of such systems are manifold, but mainly relate to rapid and relatively cost-efficient deployment, collection of high spatial and temporal resolution remote sensing data, and flexibility in mission characteristics. Researchers at Rochester Institute of Technology's (RIT) Chester F. Carlson Center for Imaging Science have successfully executed multiple high spatial resolution color (RGB) and multispectral (6-band Tetracam) missions during summer 2016; these UAS campaigns focused on assessment of infrastructure and precision agriculture. We specifically have been investigating the efficacy of high resolution UAS imagery for 3D assessment of bridge/pipeline infrastructure condition and yield mapping in corn crops, as well as using multispectral imagery for detecting disease in snap beans. Initial results have been promising, with structure-from-motion approaches being effective at characterizing top-surface corn structure, and spectral classification showing promise in differentiating between different fungicide treatments at the New York State Agricultural Experiment Station's research farms, operated by Cornell University. The next step involves development of a multi-modal sensor suite, onboard a next generation DJI Matrice M600 rotary platform, for infrastructure assessment and precision agriculture applications. We will present the outcomes of early UAS research, as well as the development of our modular next generation UAS, which will include a light detection and ranging (lidar) sensor, a thermal imager, visible-near-infrared and shortwave-infrared imaging spectrometers, a 6-band multispectral imager, and a high spatial resolution RGB sensor. These sensors can be operated in various configurations, designed to address specific application needs, while ensuring adequate flight times. In the latter case, collaborators from RIT's Golisano Institute of Sustainability are working on development of fuel cells to address the need for extended operational flight times, which also will be presented at the meeting. Finally, we will prognosticate about applications, system needs, and operational viability of the various UAS technologies.

Joint Chapter Meeting – SPS Technical Presentation Analyzing/Tracking Persons 3D Gaze

Technical Presentations I, Room 2140

Speaker: Dr. Gabriel Diaz

Date and Time

05 April 2017

04:30 PM to 5:30 PM

Abstract:

In the PerForM (Perception for Movement) Lab, we aim to develop computational models of visually guided human behaviors, such as driving, catching a ball, or walking through complex environments. Our approach involves the empirical study of these behaviors within controlled but naturalistic virtual reality (VR) environments, where the stimulus is computationally generated and parameterized, and movements are monitored with a combination of motion capture and eye tracking technology. In this talk, I will discuss current research on eye / hand coordination in goal directed behavior in VR (e.g. catching a ball), and related work addressing limitations in the eye tracking technology when used in the 3D context. For example, whereas there are well-defined algorithms for characterizing gaze behavior when the stimulus is confined to a 2D computer screen, these algorithms do not generalize to a 3D context in which the head is allowed to move. To resolve these issues, we are developing machine learning classifiers to characterize and classify coordinated movements of the eyes and head with labels more fitting to the 3D context than those traditionally used in 2D, such as fixation (prolonged foveation), pursuit (fixation of a moving object), and saccade (a high-velocity relocation of the gaze vector).

Biography:

Dr. Diaz is an Assistant Professor in the Chester F. Carlson Center for Imaging Science at the Rochester Institute of Technology. He studies the visual guidance of action. How is it that visual information is used to guide movements of the body when performing everyday actions, like catching a ball, or driving a car? He investigates using a variety of techniques and equipment, including computational modelling, eye-tracking, virtual reality, and motion capture.

https://www.youtube.com/watch?v=BJr5FTSiLFY

Joint Chapter Meeting – EMBS Technical Presentation
An Adaptable Framework To Extract Abnormal Brain Networks

Technical Presentations II, Room 2120

Dr. Archana Venkataraman
Assistant Professor
ECE Department, Johns Hopkins University

Date and Time

05 April 2017
05:30 PM to 06:30 PM

Abstract:
There is increasing evidence that complex neurological disorders reflect distributed impairments across multiple brain systems. These findings underscore the importance of network-based approaches for functional data. However, network analytics in clinical neuroimaging are limited to aggregate graph measures, which do not pinpoint a concrete etiological mechanism. In contrast, I will present a novel Bayesian framework that captures the underlying topology of the altered functional pathways.
In the first part of this talk, I will introduce our core framework to extract abnormal network foci from functional MRI data. This model relies on a latent structure, which captures hidden interactions within the brain; the latent variables are complemented by an intuitive likelihood model for the observed neuroimaging measures. The resulting variational EM algorithm produces clinically meaningful results by simultaneously localizing the centers of abnormal activity and the network of altered connectivity. Next, I will address three technical challenges: flexible network topology, multimodal integration and patient-specific analysis. I will demonstrate that our core framework can elegantly be adapted to each of these scenarios and yields novel insights into autism, schizophrenia and epilepsy, respectively. Finally, I will highlight some exciting projects in my lab that revolve around clinical understanding and interventions.

Presenter Bio:
Archana Venkataraman is an assistant professor in the Department of Electrical and Computer Engineering at Johns Hopkins University. She directs the Neural Systems Analysis Laboratory and is affiliated with the Malone Center for Engineering in Healthcare. Her research lies at the intersection of multimodal integration, network modeling and clinical neuroscience. Her objective is to develop a comprehensive and system-level understanding of the brain by strategically combining analytical tools, such as matrix factorization, signal processing and probabilistic inference, with application-driven hypotheses. This approach promises to yield novel insights into debilitating neurological disorders, with the long-term goal of improving patient care.
Archana completed her B.S., M.Eng. and Ph.D. in Electrical Engineering at MIT in 2006, 2007 and 2012, respectively. She is a recipient of the CHDI Grant on network models for Huntington's Disease, the MIT Lincoln Lab campus collaboration award, the NIH Advanced Multimodal Neuroimaging Training Grant, the National Defense Science and Engineering Graduate Fellowship, the Siebel Scholarship and the MIT Provost Presidential Fellowship.

Joint Chapter Meeting - MTTS & APS Technical Presentation Gallium Nitride Power MMICs - Fact and Fiction

Technical Presentations I, Room 2130

The Rochester Section Joint Microwave Theory and Techniques & Antennas and Propagation Society is honored to host Dr. Charles Campbell as this year's MTT/AP JCM speaker. The title of Dr. Campbell's presentation is Gallium Nitride Power MMICs - Fact and Fiction. **Dr. Charles Campbell** is employed with the Infrastructure and Defense Products Division of Qorvo.

Gallium Nitride (GaN) based transistor technology's characteristics of very high current density combined with high voltage operation have held promise to vastly improve many microwave circuit applications that presently utilize Gallium Arsenide (GaAs) devices. Today, GaN transistors are capable of high voltage operation while simultaneously demonstrating *FT* & *Fmax* characteristics more typical of lower voltage GaAs PHEMT devices. The potential benefits of GaN device characteristics combined with monolithic microwave integrated circuit (MMIC) technology are many. Highly efficient switched modes of power amplifier operation should be possible at higher output power levels and frequency. High output impedance typical of transistors operated at three to five times the voltage of GaAs should facilitate lower loss matching networks due to the reduced transformation ratio. Alternately, transistor periphery and corresponding output power could be dramatically increased while maintaining impedance transformation ratios similar to that of existing GaAs PHEMT amplifiers. The higher output power density of GaN devices should lead to greatly reduced die size for GaN implementations of existing power amplifier functions. The improved heat flow realized by the high thermal conductivity Silicon Carbide (SiC) substrate material should allow for acceptable junction temperatures even with the much higher power dissipation. Very high power switches could be designed by using large control voltages and taking advantage of the high current capability (high *Imax*) of GaN. While the advantages of GaN are manifest, many of the features that make GaN transistors attractive can be shown to create significant issues that are typically not encountered with lower voltage technologies. In this talk, examples and scenarios are discussed highlighting the benefits and issues associated GaN MMIC technology.

Date and Time

05 April 2017
05:30 PM to 06:30 PM

https://events.vtools.ieee.org/m/44294

Joint Chapter Meeting – PES & IAS Technical Presentation IEEE Smart Village Initiative and HVDC - Powering the Future

Technical Presentations II, Room 2140

Speaker: Girish Behal

Date and Time

05 April 2017

05:30 PM to 06:30 PM

ABSTRACT

The War of Currents between Alternating Current and Direct Current has been waging since the late 1880's and is often highlighted as a battle between Edison and Westinghouse. Development of solid state devices in 1970's has spurred the development of High Voltage Direct Current (HVDC) transmission systems. In this presentation, we will discuss the development of HVDC technology and the future impacts on High Voltage Electricity Grid.

Biography:

Girish has more than 11 years of experience in a variety of Transmission and Distribution projects for voltage levels from 11 kV to 345 kV, involving substation, overhead and underground transmission lines, Statcom, Static Var Compensator and Phase shifting transformers. Girish also has experience working on hydrocarbon refinery projects in an Engineering Procurement Construction (EPC) environment. His responsibilities have included Project Development, Project Management, Contract Management and Negotiation, Engineering Management, planning, coordination of various disciplines, construction supervision and outage management. Girish's current focus is to provide value-added transmission development solutions to the clients utilizing his engineering and business experience. Girish is currently managing a portfolio of several strategic mandates for a key client in the area of FERC 1000 project development in the United States. Prior to that, he has managed several transmission and distribution projects from project scope definition to commissioning and closeout, including managing a group of Project Managers and teams to support client needs. Girish has experience with siting and permitting of Transmission and Distribution facilities including representing the client in front of regulatory and public agencies.

Rochester Section AES/COM Chapter Technical Presentation on April 7

Wireless Leak Detection with Applications in Earth and Space

After several years of research and development, WiSe-Net lab researchers at University of Maine created a standalone wireless device for detecting air leaks inside pressurized space vehicles or habitats. This system includes multiple ultrasonic sensors that listen for acoustic waves emitted from a small hole causing air leak. The large amount of data collected from these sensors are then statistically analyzed using a number of different algorithms and signal processing methods to find the most likely location of the leak. This can help save crew time, save precious air in deep space missions, and has the potential to be used here on earth for safety at homes or inside gas and oil pipelines.

This presentation discusses hardware, software, and algorithmic challenges for localizing air leaks on the International Space Station (ISS) using an array of ultrasonic sensors. Three devices were built, flight certified, and deployed to the ISS for data collection in Jan 2017. This research was funded by NASA and featured on Discovery Channel, Phys.org, and several other media outlets in 2016.

https://events.vtools.ieee.org/m/44403

Date and Time

Date: **07 April 2017**
Time: **04:00 PM to 05:30 PM**

Location

University of Rochester
Rochester, New York
Building: Robert B. Goergen Hall
Room Number: 108

Contact

Email event contact
Co-sponsored by WiseNet and NASA

Professor Ali Abedi of University of Maine

Dr. Ali Abedi is Professor of Electrical and Computer Engineering and Director of the Center for Undergraduate Research (CUGR) at the University of Maine, Orono. Ali served as Principal Investigator on several NASA, Army, and NSF funded projects including Wireless Sensing of Lunar Habitat and Leak Detection for the International Space Station.

He received his BSEE and MSEE from Sharif University of Technology in 1996 and 1998, followed by PhD degree in Electrical and Computer Engineering from University of Waterloo in 2004. He held visiting researcher appointments at Queens University (2004), University of Maryland (2012), NIST (2012) and NASA (2016). Dr. Abedi is Co-founder of two startup companies in the biomedical field and author of over 90 publications in IEEE conferences and journals including several books and patents.

2017 Annual Engineering Symposium in Rochester

Earn up to 7 PDHs

sponsored by Rochester's Technical and Engineering Societies and RIT

Tuesday, April 18, 2017

Courses available in: Civil, Electrical, Lighting, Mechanical, HVAC, Plumbing...

Click here for a tentative schedule...

SAME LOCATION AS LAST YEAR: Hyatt Regency Downtown Rochester, 125 East Main Street, Rochester, NY

TIME: 7:30 am to 6:30 pm

Register here and choose to pay by credit card or to mail your check to (check payable to RES), The Rochester Engineering Society, 657 East Avenue, Rochester, NY 14607

www.engineeringsymposiumrochester.com

	Registration and Continental Breakfast					
	Welcoming Remarks: Chris Devries, Chair of the 2017 ESR Committee					
	Civil Engineering Sponsored by ASCE	Civil Engineering Sponsored by ASCE	Mechanical Engineering Sponsored by ASME	Electrical Sponsored by IEEE	Mechanical, Plumbing, & Fire Protection Sponsored by ASHRAE and ASPE	Lighting and Power Sponsored by Elect. Assoc. of W N Y
Room	Grand Ballroom, (E,F,G)	Regency Ballroom A	Regency Ballroom C	Regency Ballroom B	Loftus C. Carson Room	Wilmorite Room
Host	Jim Baker	Tim Webber	Ron Salzman	Dave Krispinsky	Jennifer Wengender	Joe Dombrowski
	STAMP Infrastructure Case Study Andrew Kosa, PE and Thomas Carpenter, PE	Structural Building Conditions Reviews: Beyond Distress James D'Alosio, PE	Heat Treatment of steel alloys Art Reardon, PE	In Ground Electrical Structures Mike Manzi	2016 NYS Code Changes: Mechanical, Plumbing/FP, Energy Jennifer Wengender, PE	Power Quality Rick Denno
	Break					
	3D Scanning Greg Hale	Civil Engineering Applications of Drones Chris Cornwell, PE and Casey Knapp, PE	Safety and Good Gasket Practices Jim Drago	HVDC – Powering the future and Energy - Past, Present and Future Girish Behal	Lead in Drinking water: Testing and Building Systems Implications Randy Shafer	Prefabricated Buildings and NYS Building Codes Rick Denno
	Break					
	Carriage Factory Browfield Site - Environmental Redevelopment Lessons to Learn Mike Storonsky	ADS High Performance HP Sanitary Sewer Solutions Ian Kuchman, Rob LeMIre & Tom Gable	Intellectual Property and Patents Wayne Evans	Photovoltaic Economics for the Homeowner Rick Church, PE	Basics of Building Fire Protection Design Ted Sherwood, P.E., CFPS	Emergency Generators and the NEC Steve Huber
	Lunch and Keynote Program To Be Announced Later!					
	Civil Engineering Sponsored by ASCE	Civil Engineering Sponsored by ASCE/NYSATE	Mechanical Engineering Sponsored by ASME	Electrical Sponsored by IEEE	Mechanical, Plumbing, & Fire Protection Sponsored by ASHRAE and ASPE	Lighting and Power Sponsored by IES Rochester
Room	Grand Ballroom, E,F,G	Regency A	Regency C	Regency B	Loftus C Carson Room	Wilmorite Room
Host	Erin McCormick	Paul Presutti	Steve Ivancic	Dave Krispinsky	Christina Walter	Joe Dombrowski
	Lead in Drinking Water & New Regulations for Schools Clem Chung, P.E.	Old 219 Design Build Project Sam Anthony and Cold Springs	Global Warming Caused by Human Activity Michael Patterson	The Internet of Things and Wireless QoS Joseph Nygate, Ph.D	Operating Room Air Distribution Solutions Dennis Sikkema	LED Lighting Basics Mike Trippe
	Break					
	Ginna Retirement Transmission Alternatives (GRTA) Project Jon Fairchild, P.E.	Bridge Deck Rehabilitation Options John Picard	Fatigue and Fracture Analysis Ronald Salzman	Toward Diagnostic and Surgical Data Science: Biomedical Imaging and Visualization for Computer-integrated Diagnosis and Therapy Dr. Cristian Linte	Principles of Laboratory Design and Fume Hood Operation James Hall	Analog Addressable Fire Alarm Systems Brian Butterfield
	Break					
	Semi-Automated Masonry Zachary Podkaminer	Monroe Avenue Parking and Mobility Study Bill Price	Climate Change Mitigation – Engineering & Policy Solutions Bill Bishop	Surge Suppression David Komm	You Can't Afford Discomfort Dan Int-Hout	Lighting Controls Mike Piraino
	Cocktails and Conversation in the Lounge (Main Street Gallery)					

Fellows Night

Thursday April 13th, 2016

Thursday, April 13th
6:15 pm
University Sheraton
801 University Ave
Syracuse, NY 13210
RSVP

Cost to attend:
Members and 1st guest- $20 each
Fellows, Life Members, Student Members and 1 guest- $10 each
Non-members (other than 1st guest of a member) $35 each

Join us for an evening to honor the IEEE Syracuse Section's Fellows with dinner, socializing, and a special presentation.

6:15 pm Registration and Social Hour (with music by CNY Jazz quartet)

7:30 pm Dinner

Invited lecture:

The IMAX Laser Projection System: From 0 to Insane in Under 2 Years

Barry Silverstein, IMAX Business Unit, IMAX Rochester

Out of the ashes of Kodak's Entertainment Imaging business was born the world's first cinema-quality laser projection prototype. Learn about the creation of the newly formed IMAX business unit, IMAX Rochester. Follow the technical journey (adventure) of taking a prototype 10,000 lumen, 2k resolution laser projector and turbo charging it to deliver six times the brightness in order to light screens that are more than 100 feet wide at 4k resolution. The projection system born out of this effort is currently delivering stunning images at IMAX's most iconic locations around the globe…. a mere two years later. The revolutionary optical-mechanical system is unlike anything ever built for a projector and was designed in Rochester. It is currently in production in Canada by a simultaneously created custom assembly line. IMAX, in conjunction with local suppliers, managed to deliver this system on time while working across three countries and two continents. The performance of this system has exceeded expectations and is receiving accolades from the industries experts.

2017 IEEE Region 1 Annual Student Conference

April 7-9, 2017 – University at Buffalo (SUNY)

Connecting Students with Professionals and IEEE Leaders

The IEEE Region 1 Student Conference is the premier annual event where all student branches from IEEE Region 1 (Northeastern United States) meet to discuss mutual challenges and compete in regional competitions.

The conference objective is to encourage lively student engagement and provide an opportunity for the students to network and learn from other students from across the Region 1, while applying practical engineering knowledge in the various competitions.

It also provides the great opportunity for the student members to network with the Industry Professionals and the IEEE Leaders.

Conference Highlights:

- *Undergraduate Student Paper Contest*
- *MicroMouse Workshop for Newbies and Pros*
- *Regional MicroMouse Competition*
- *Student Ethics Competition*
- *Award Ceremony and Dinner*
- *Networking Opportunity*
- *Meet IEEE Leaders and Industry Professionals*

To submit a paper for the Student Paper Contest or register for other Competitions, follow the directions on the Hotel and Conference Registration Page at:
https://meetings.vtools.ieee.org/m/44086

Hotel Registration Deadline: ***March 16, 2017***
Conference Registration Deadline: ***March 31, 2017***

About the Hotel Accommodations:
DoubleTree by Hilton Buffalo-Amherst *(10 Flint Road, Amherst, New York 14226) Hotel accommodations will be provided (via a rooming list – do NOT book directly with the hotel) on a first come first serve basis for those traveling more than 100 miles each way. Teams will be required to share a room (4 students per room). Hotel accommodations will not be provided for local participants but meals will be provided during the conference. Those non-students wanting a room should contact Dr. Rubenstein at c.rubenstein@ieee.org to obtain one within our block at $120/night.*

The 2017 Region 1 MicroMouse Competition & Workshop is proudly sponsored by:

IEEE★USA

http://ieeeusa.org


CMTI
CENTER for MEDICAL
TECHNOLOGY & INNOVATION
HAJIM
SCHOOL OF ENGINEERING
& APPLIED SCIENCES
UNIVERSITY of ROCHESTER
DESIGN
DAY 2017
05
MAY
Each year, our biomedical engineering students partner with companies and institutions to solve real-world engineering problems though developing prototype medical devices and research instruments. Come see what our students are working on this year!
SAVE
THE
DATE
The Goergen Athletic Center
University of Rochester
River Campus

Rochester Section Summer Event: SEABREEZE

Join the Rochester Section during our casual summer event!

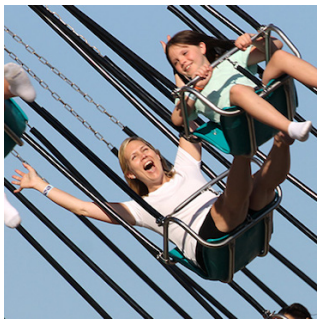
The only goal of this event is to have FUN! Bring your entire family!
Register today!
Going to Seabreeze with dinner normally costs $30/person.
Enjoy large savings in joining IEEE during their summer family event!
Register before June 30th and enjoy savings for you and your family. **Only $5/person.**
The rate increases to $10/person on June 30th!

About Seabreeze
Give your family all the fun and excitement of more than 70 great attractions. You'll find thrilling adult rides and classic family rides - plus some cool kiddie rides too. Make a splash in the waterpark, play great games, enjoy classic summertime food, and attend live shows as part of the ultimate family fun experience in Upstate New York.

Seabreeze is clean, safe, and manageable. It's not too big and not too small - just the right size for your family. The park is close by, easy to get to with highway access, and there's plenty of free parking. Whether you want to experience all the great rides and slides, or just relax and take in the spectacular views and cool summer breezes off Lake Ontario, you'll have a wonderful, memorable day with your family. And it's all yours at a price that will make you smile.

Date and Time
13 July 2017
11:00 AM to 10:00 PM

Location
4600 Culver Road
Rochester, New York



Schedule of FUN!

10AM-11PM	**Enjoy the park all day long**
5:30PM – 6:30PM	**Join us for dinner!**

Dinner: Chicken or Italian Sausage Texas Hot Dogs, Burgers, Veggie Burgers, Potato Salad, Pasta Salad, Baked Beans, Potato Chips, Ice Cream Dessert, and Unlimited Soda.

REGISTER TODAY: https://events.vtools.ieee.org/m/44408