



IEEE Rochester Section

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April 2018

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Message from the Chair

Dear colleagues,

March was a busy month. We had the JCM, with great speakers. The highlight of JCM was the keynote talk by Kelly Robinson, who enthralled us with a scintillating presentation on static and its control on flexible substrates. He used props and instrumentation to illustrate normally "dry" concepts -- bringing them to life.

Our thanks to our volunteers who made this event happen smoothly. Special thanks to Cristian Linte, who coordinated this effort and took care of all the details.

We finalized the date for the talk by John Kriegel, on the Chandra Telescope, which will be a joint talk between the Life member-groups of both the IEEE and ASME. This talk will be held in the Sibley building, in one of the NextCorps' conference rooms, on 12th April. Our thanks to Sujatha Ramanujan for making the arrangements. This talk will be held in the evening and pizza will be served. Registration is free at: <https://events.vtools.ieee.org/m/169706>.

The IEEE is also fielding a table at the Gala of the Rochester Engineering Society, to be held on the 14th of April. One of the two student-scholarships will be named after Thomas Pian, an active member of the IEEE in our section, who passed away last year.

Quite a few IEEE members will be giving talks at the Rochester Engineering Symposium to be held on the 24th of April.

Jean Kendrick will be giving a talk, sometime soon, about the process of elevating members to Senior membership. We have quite a few members who are deserving of Senior membership.

We are also in the process of finalizing the summer outing to Corning. Greg Gdowski is coordinating this activity.

IEEE Rochester Section Members' Presentations at the 2018 Engineering Symposium Rochester

The Engineering Symposium in Rochester is on April 24th, 2018, at the Rochester Riverside Convention Center, 123 East Main Street, from 7:30 AM to 6:30 PM. Register at <http://www.roceng.org/event-2790872>. Registration includes continental breakfast, coffee breaks, lunch, and parking.

Several section members are included in the 2018 program. Dr. Ram Dhurjaty's talk is "High Voltage Power Supplies for Medical X-Ray Generators." Dr. Raymond Ptucha will describe "What Is and How Will Machine Learning Change Our Lives." Prof. Jaime Cardenas, Ph. D will discuss "Optical Packaging of Photonic Chips." Dr. Yossi Nygate will answer "Do machine learning algorithms really learn?". Rick Church, P.E. will describe "Shading Effects on Photovoltaic Systems." Mark Schrader will present "TM-30-15 A New Standard for Measuring Light Quality".

IEEE Rochester Section Photonics Society Talk

Stephanie Law, Ph.D., will describe Plasmons in Complex Materials in her talk on Monday, April 30, 2018 at 2:00 – 3:00 PM, in Gleason Hall (Building 9), Room 2255, at RIT.



Abstract: The fields of plasmonics and metamaterials have seen significant growth in recent years, due to the interest in confining light to subwavelength volumes both for fundamental physics studies as well as novel device architectures. Much of this work has been done in the visible spectral range with traditional metals such as gold and silver. In this talk, I will discuss our recent work using III-V semiconductors and topological insulators for mid-infrared plasmonic and metamaterial devices. First, I will discuss our work using heavily-doped InAs grown by molecular beam epitaxy for mid-infrared plasmonic and metamaterial devices. This material acts as a near-perfect Drude metal with tunable optical properties that can also be integrated with existing semiconductor optoelectronic devices. I will show our results on semiconductor infrared metamaterials, which exhibit negative refraction and collective volume plasmon polariton modes. I will close by discussing our work using topological insulators as THz plasmonic materials. These materials exhibit coupled Dirac plasmons with exceptionally high mode indices and long lifetimes.

IEEE Rochester Section EXCOM Meeting

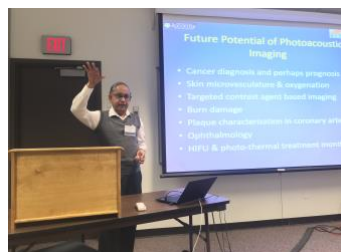
We review plans for upcoming Rochester meetings within our Section, Chapters, and groups at this meeting. If you are looking to become more engaged in IEEE in the Rochester Section, please plan on attending an EXCOM meeting! These meetings are open to the general public and serve as a great platform for networking with fellow engineers over lunch.

We even pick up part of the tab for lunch – a full buffet lunch costs just \$5! If you are student, it gets even better as lunch only costs you \$3! [Click here to register for the EXCOM meeting.](#)

Pictures from the 2018 Rochester Section Joint Chapters Meeting



Dr. Ram Dhurjaty starts the meeting



Dr. Navalgund Rao describes photoacoustic imaging



Dr. William Fowlkes puts patent licensing in context



Dr. Kelly Robinson talks about static control for the flexible packaging industry

IEEE Rochester Section Upcoming Events

<u>Event</u>	<u>When</u>	<u>Where</u>
Chandra X-Ray Space Telescope Talk by Jon Kriegel	April 14, 2018 @ 7:00 PM	NextCorps, 260 E Main St Suite 6000, Rochester, NY
Machine Learning and Deep Learning in Wireless and Cognitive Radio Networks	April 24, 2018 @ 12:30 – 1:30 PM	Computer Studies Building Room 523, University of Rochester
Power & Energy/IAS Tour of New RGE Substation	April 25, 2018 @ 5:00 -7:00 PM	Transmission Substation 262, Corner of Mt Hope Ave. and Hamilton St. RSVP to jeankendrick@ieee.org for mandatory details
Deep Learning Workshop	April 26, 2018 @ 1:00 – 5:00 PM	Larry and Cindy Bloch Alumni and Advancement Center, University of Rochester
EXCOM Meeting	May 1, 2018	Tandoor of India, 376 Jefferson Road
PACE/TEMS: Autonomous Vehicles and Technologies	May 7, 2018 @ 5:30 – 7:00 PM	James E. Gleason Hall (Bldg. 9), Rm. GLE-2255, Rochester Institute of Technology

To find out more about these events, or to register, click on the hyperlinks in the Event column. Please visit our website, sites.ieee.org/rochester/ for more details, and to see more upcoming events!