IEEE Rochester Section

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June 2020 Newsletter

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Message from the Chair

Dear Colleagues,

In the midst of the depressing news cycle focused on COVID-19, IEEE is adapting and focusing on its core mission of fostering technological innovation and excellence for the benefit of humanity. All levels of IEEE are moving events online to continue supporting educational efforts and connecting members. The Rochester section had two successful virtual events (see below) that drew audiences of over 50 people for each event. The Terra Science Fair rapidly changed their in-person event into a set of online events. And at the regional level, IEEE Region 1 Director Ed Palacio began a "Project Management for Engineering Professionals" short course that reached maximum capacity in under 12 hours. The success of these events shows that there is a demand for virtual technical events. With this in mind, the Rochester Section will continue incorporating virtual participation options, when feasible, after we resume in-person events.

Congratulations to Greg Gdowski, current IEEE Region 1 Vice-Chair and past Rochester Section Chair, who was selected as an AAMI (Association for the Advancement of Medical Instrumentation) Fellow in recognition of his work at the University of Rochester Center for Medical Technology and Innovation.

Our next IEEE Rochester Section ExCom Meeting will be held on June 2nd from noon to 1 pm via WebEx. The April ExCom meeting recording is available as https://bit.ly/ieee-r1-roc-002, and the May ExCom meeting recording is available as https://bit.ly/ieee-r1-roc-003.

Stay healthy, and best regards,

Eric T. Brown

Terra Science and Engineering Fair

Two of our members, Sreeram Dhurjaty and Mark Schrader, helped judge entries in the 2020 Terra Science and Engineering Fair. Due to the COVID-19 shutdowns and the need for physical distancing, the entrants used electronic communications to present their work to the judges, who participated from as far away as Texas. More than 50 students, from 19 schools and homeschooling in Monroe, Ontario, and Wayne counties, entered with impressive projects. The judges awarded six "Highest Honor Commendations" to these projects: "Watching our Water 2.0", "A Comparative Analysis of Underactuated 3D Printed Hands", "Bridges", "SODIS Method", "The Effects of K-12 Bliss on Antibiotic Resistant Organisms", and "Green Tea as a Preventive Measure Against Disease Pathways Originating in the Oral Cavity".

Fast Deep Learning Prototypes with Tensorflow and Keras Tutorial

The Rochester Signal Processing Society hosted a virtual zoom session on Thurs, April 30th entitled "Fast Deep Learning Prototypes with Tensorflow and Keras Tutorial", by RIT PhD student Miguel Dominguez. 63 people registered for this hour-long session which included the distribution of iPython notebook sample code and deep learning software installation instructions.

Deep Neural Networks (DNN) are a powerful tool for computer vision, signal processing, and natural language processing tasks. The last few years have seen the development of a plethora of software tools for the development of DNNs. This tutorial discussed using Tensorflow 2.0 with the Keras API to enable rapid prototyping of DNNs with a minimum of code. All software is free open-source code. The tutorial demonstrated how to get several variants of Convolutional Networks up and running, for training, prediction, and logging. See https://bit.ly/ieee-r1-roc-001 for a summary of the tutorial.

Presenter Miguel Dominguez

Talking About Ventilators

The webinar "Talking about Ventilators", presented by distinguished lecturer Sreeram Dhurjaty, was attended virtually by 55 international participants. The presentation lasted for an hour and was followed by an hour-long question and answer session.

Ram has these suggestions for future Internet-based presentations: use a single monitor, and use the presentation mode, rather than the editing mode of applications such as PowerPoint or Keynote; use headphones and keep everyone but the host muted to reduce echoes; use a "raise your hand" feature of the web presentation system to handle questions; and keep answers brief and precise to maximize participation.

Save the Date: October 27, 2020 IEEE Rochester Section Joint Chapters Meeting

The IEEE Rochester Section's Joint Chapters Meeting is now scheduled for Tuesday, October 27th, 2020. We apologize to our members who were looking forward to participating this spring. Plan ahead to save $20—early registration closes September 30th.

IEEE Rochester Section Events

Please check the events to ensure they are as scheduled below. Visit events.vtools.ieee.org/m/*vtools*# for details about any of these events.

Event	Vtools #	When	Where
EXCOM Meeting	230220	June 2nd, 11:50 – 13:00	Via Webex
2020 Joint Chapters Meeting	220441	October 27th, 15:00 – 21:00	Louise Slaughter Hall, Rochester Institute of Technology
Body Language and Networking	225078	October 27th, 17:30 – 18:30	Louise Slaughter Hall, Rochester Institute of Technology