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February 2025 Newsletter

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Message from the Chair



Dear Colleagues,

February is tough because Winter is weary, and Spring remains a distant dream. As winter wears on and Spring approaches, spruce up by learning something new.

Come and learn something new at our IEEE Rochester Section Joint Chapters Meeting on Tuesday, March 25, 2025, at the RIT Inn and Conference Center. You will have some fun, meet interesting people, elevate the practice of engineering, and enrich the experience of your colleagues.

You are all invited to attend the IEEE Rochester Section Executive Committee, which meets on the first Tuesday of each month to organize events. Our February meeting is tentatively scheduled for Tuesday, March 4th, from 12:00 PM to 1:30 PM.

Please feel free to register for in-person or virtual (Zoom) attendance using this link: <https://events.vtools.ieee.org/m/462101>.

I look forward to working with you!

Kelly Robinson, PE, PhD
Chair, IEEE Rochester Section

Rochester Section Joint Chapters Meeting

The JCM will be held at the RIT Inn and Conference Center on March 25. It will have several tracks of technical talks, a student poster session, and a networking reception.

Please watch for an emailed notice with the program and registration details.

Dr. Santosh Kurinec Visits Taiwan – This Is Her Report



A banner at the entrance of the NTOU located at Keelung Harbor, Taiwan

宇泰講座

Semiconductor Technology Node Evolution from Planar to Nanosheets : Towards 2nm & Beyond

講者: **Dr. Santosh Kurinec**

- IEEE Fellow
- Rochester Institute of Technology, Department of Electrical & Microelectronic Engineering 教授

2024.11.20 14:10 - 16:00

國立臺灣海洋大學 光電與材料科技學系
電資暨綜合教學大樓 B1電機資訊學院演講廳

I met with Professor Taih-Cherng LIRN at the Technical University of Applied Sciences, Würzburg-Schweinfurt, Germany (THWS), during the International Teaching Week, where I teach Semiconductor Chip Manufacturing and Photovoltaics courses. Combining these two areas of my teaching and research prompted him to arrange my presentations on both topics in Taiwan. I was thus invited as a guest speaker by the National Taiwan Ocean University (NTOU), Keelung, Taiwan, November 18-21, 2024, with funding received from the National Science Council of Science and Technology (Taiwan). Professor Taih-Cherng LIRN from the Department of Transport & Shipping Management and Professor Tai-Yuan LIN, a Distinguished Professor of the Department of Optoelectronics and Materials Technology, hosted my visit.

They organized my visit to the Taiwan Semiconductor Manufacturing Company (TSMC) at Hsinchu and the TSMC Innovation Museum. I presented RIT's vision and history of semiconductor talent generation, seeking possible RIT & TSMC collaborations. TSMC has committed to 100% renewable energy by 2050 after supplying 100% renewable energy consumed at all its overseas sites.

I presented a seminar on "Semiconductor technology node evolution from planar to nanosheets towards 2nm & beyond". I met with students and faculty and visited their research labs. They are conducting state-of-the-art research on nanomaterials, quantum dot organic photonic coatings, and perovskite photovoltaics. I gave my second presentation on Agri-Photovoltaics at the Department of Physics at Chung Yuan Christian University, Zhongli, Taoyuan City. I had very engaging conversations with attendees. I presented the New York State vision of Agri-PV aiming at using only 2.2% of farmland to generate 43 GW of power by 2040

The third university I visited was National Tsing Hua University (NTHU), a leading comprehensive research university located in Hsinchu, in the heart of high-tech Taiwan. The University has a unique College of Semiconductor

Research (CoSR). I visited their microelectronic fabrication laboratory and met with Prof. Sourav De, who is engaged in cutting-edge research on ferroelectric devices that my group at RIT has been working on.

It was an exotic experience to see their technological achievements blended with culture, history, and passion in person. I sincerely thank the host professors, Dr. Taih-Cherng LIRN and Dr. Tai-Yuan LIN, and the National Science Council of Science and Technology for supporting my visit.

Pictures from the December 2024 IEEE Rochester Section Volunteer and Awards Dinner

