Message from the IEEE North Jersey Section Chair Prof. Hong Zhao

As the new season of Autumn comes, the IEEE North Jersey Section is heating up with a variety of events tailored to meet the diverse interests and needs of our local members. We are kicking off this month with a series of technical seminars that cover the latest advancements in various fields of engineering and technology including Power and Energy, Clean Energy, Telecommunications, Machine Learning, Artificial Intelligence, and Computer Vision.

We also have our annual event, North Jersey Advanced Communication Symposium scheduled for September.

In addition, we also collaborated with other IEEE sections to have joint events. This will bring together experts from various IEEE sections. Stay tuned for more information and announcements about our joint events. We look forward to seeing you there!

Best wishes,

Hong Zhao, IEEE North Jersey Section Chair

IEEE – IMPORTANT EVENTS, ARTICLES, ANNOUNCEMENTS AND REMINDERS:

• This Month's Communications Society News from Around the World
• “Moving Toward Electric Vehicles (EVs)” - An article by Harry Roman
• IEEE North Jersey Section Picnic/Membership Development Event

Move Toward Electric Vehicles (EVs)

Are you aware of an incredible IEEE report, premiered in IEEE Spectrum --- "The EV Transition Explained", by Robert Charette, contributing editor of Spectrum. A self-described "risk ecologist", Charette is interested in the intersections of business, political, technological, and societal risks. Charette is an award-winning author of multiple books and numerous articles on the subjects of risk management, project and program management, innovation, and entrepreneurship. A Life Senior Member of the IEEE, Charette was a recipient of the IEEE Computer Society's Golden Core Award in 2008. And his report is a "Must-Read" if you have an interest in the coming EV revolution. Hint: It is much harder than most people are aware of or believe, and likely fraught with some unpleasant surprises. Here are a few "sticks of dynamite" taken directly from the report to think about.

Transitioning to electric vehicles and renewable energy to combat climate change are valid goals in themselves. Drastically reducing our fossil-fuel use is key to realizing those goals. However, attempting to make such transitions at scale in such a short period is fraught with problems, risks, and unanticipated consequences that need honest and open recognition so they can be actively and realistically addressed. Going to scale means not only manufacturing millions of EVs per year but supporting them from recharging to repair. A massive effort will be needed to make this happen.
Shifting a 125-year-old auto industry that's optimized for ICE-vehicle production to EVs using nascent technology is a monumental challenge. Requiring that automakers do so in 15 years or less is even more daunting, although part of it is their own doing by not recognizing earlier that EVs might be a threat to their business models. EVs require automakers and their suppliers to reinvent their supply chains, hire employees with new software, battery, and mechatronic skill sets, and retrain or else lay off workers whose outdated skills are no longer needed.

EVs alone aren't sufficient to meet carbon-reduction targets, which means enormous lifestyle changes for many of us, as we try to do our part to combat climate change. People will need to drive and fly less, walk and bike more, and take public transportation. We'll need to switch to a more plant-based diet and convert household appliances powered by fossil fuels to electricity, to name only a few looming adjustments. People's willingness to accept these changes and their ability to implement them will be crucial to our success at adapting to climate change and mitigating its impacts.

Download the free report and be informed. Check out this link as well -- https://youtu.be/S1E8SQde5rk

Talk to you again soon...

Harry

(Harry T. Roman: Life Senior Member (htroman49@aol.com)

(Author & Advisor, Edison Innovation Foundation), (Retired-PSE&G Co.), (htroman49@aol.com)

**IEEE North Jersey Section Picnic/Membership Development Event**

The IEEE North Jersey Section held its 2023 Summer Picnic and Membership Development Event on August 20, 2023 at Duke Island Park Bridgewater, NJ. The event started at 12:00pm and was graced by the presence of the enthusiastic members of the North Jersey Section, their family members, some invited IEEE dignitaries from the neighboring sections and Region-1, and many students from graduate and undergraduate levels, award recipients from The North Jersey Science Fair and many others, totaling to about 80 people. The attendees were interested in knowing more about the benefits of becoming IEEE members and the event was the perfect setting for membership development, where many long-time members, Senior Members, Life members etc. were actively involved in interacting with the new and interested attendees. Delicious meals, followed by ice-cream, desserts, tea and other refreshments were served. All members went home with a gift token of appreciation for their volunteering efforts year-round. A few pictures of the events are shared below.
You do not have to be an IEEE member, but prior registration is encouraged to attend any event. IEEE North Jersey Section Website The Section Executive Committee Roster

VOL. 69, NO. 08

SEPTEMBER 2023
You do not have to be an IEEE member, but prior registration is encouraged to attend any event. IEEE North Jersey Section Website The Section Executive Committee Roster

VOL.69, NO. 08

SEPTEMBER 2023
You do not have to be an IEEE member, but prior registration is encouraged to attend any event. IEEE North Jersey Section Website The Section Executive Committee Roster

VOL.69, NO. 08

IEEE

SEPTEMBER 2023
You do not have to be an IEEE member, but prior registration is encouraged to attend any event. IEEE North Jersey Section Website The Section Executive Committee Roster

VOL.69, NO. 08  SEPTEMBER 2023
GRADUATE SCHOOL VIRTUAL OPEN HOUSE!
Tuesday, September 19, 2023, 5 p.m.

Fairleigh Dickinson University
Gildart Haase School of Computer Sciences & Engineering (GHSCSE)
Cybersecurity Leadership: "National Center of Academic Excellence for Cyber Defense Education (CAE-CDE)" by NSA
18 cutting-edge labs, among the best in the North and Mid-Atlantic Regions

Offers 6 Masters of Science (MS) Programs
* Cybersecurity & Information Assurance
* Electrical Engineering
* E-Commerce
* Management Information Systems
* Computer Engineering
* Computer Science (Data Science, Cloud Computing and more)

You do not have to be an IEEE member, but prior registration is encouraged to attend any event. IEEE North Jersey Section Website The Section Executive Committee Roster

GRADUATE SCHOOL VIRTUAL OPEN HOUSE!
Tuesday, October 17, 2023, 5 p.m.

Fairleigh Dickinson University
Gildart Haase School of Computer Sciences & Engineering (GHSCSE)
Cybersecurity Leadership: "National Center of Academic Excellence for Cyber Defense Education (CAE-CDE)" by NSA
18 cutting-edge labs, among the best in the North and Mid-Atlantic Regions

Offers 6 Masters of Science (MS) Programs
* Cybersecurity & Information Assurance
* Electrical Engineering
* E-Commerce
* Management Information Systems
* Computer Engineering
* Computer Science (Data Science, Cloud Computing and more)
IEEE
NORTH JERSEY SECTION
MTT-Society and AP-Society Joint Chapter
PRESENTS

37th ANNUAL SYMPOSIUM AND MINI-SHOW
FOCUS:
SELECTED TOPICS IN RF AND MICROWAVE TECHNOLOGIES FOR COMMERCIAL AND MILITARY APPLICATIONS

SAVE THE DATE
DATE: WEDNESDAY OCTOBER 4, 2023

PLACE: Hanover Manor, 16 Eagle Rock Ave., E. Hanover, NJ 07936. Ph#973-992-7425

SCHEDULE OF EVENTS
9:00 AM TO 4:30 PM

TECHNICAL SESSIONS
10 –12 LECTURES FEATURING SPEAKERS FROM LEADING COMPANIES, WITH EMPHASIS ON MILITARY ELECTRONICS, WIRELESS TECHNOLOGIES AND MICROWAVE COMMUNICATIONS.

MINI SHOW FEATURING LATEST PRODUCTS (APRX. 30-40 EXHIBITORS)

(COMPLIMENTARY LUNCH SERVED)

Details of the schedule and speakers and the topics will be posted on the IEEE North Jersey section website by September 2023.

Registration: [https://events.vtools.ieee.org/m/362122](https://events.vtools.ieee.org/m/362122)

For further information contact:
CHAIR - GENERAL-EXHIBITION: KIRIT DIXIT (201-669-7599), kdixit@ieee.org
CHAIR - TECHNICAL PROGRAMS: GEORGE KANNELL(973-284-3682) george.kannel@L3harris.com
EVENT/LOCATION CO-ORDINATOR: KEN OEXLE k.oexle@verizon.net
CO-CHAIR - TECHNICAL PROGRAMS: HAR DAYAL, dayalhar@gmail.com
APS/MTTS CHAPTER Co-CHAIR: Dr. Anisha Apte, Dr. Edip Niver
SECTION CHAIR: Dr. Hong Zhao zhao@fdu.edu

NOTE: Covid-19 precautions are recommended and will be announced if required.
THERE IS NO CHARGE TO ATTEND THE SYMPOSIUM OR SHOW.
## Calendar of Events

### Upcoming Events: September 2023 Onwards

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Hosts</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairleigh Dickinson University 5th Annual Cybersecurity Symposium: North Jersey Section</td>
<td>06 Sep 2023, 08:00 AM</td>
<td>R10327 - North Jersey Section</td>
<td>Florham Park, New Jersey View</td>
</tr>
<tr>
<td>IEEE North Jersey Section EXCOM - Meeting 6:30 PM: North Jersey Section</td>
<td>06 Sep 2023, 06:30 PM</td>
<td>R10327 - North Jersey Section</td>
<td>Virtual View</td>
</tr>
<tr>
<td>Surge Protection of Power Systems: North Jersey Section Chapter, PE31</td>
<td>08 Sep 2023, 09:00 AM</td>
<td>CH01097 - North Jersey Section Chapter, PE31, CH01092 - North Jersey Section Jt Chapter, AP03/MTT17</td>
<td>South Plainfield, New Jersey View</td>
</tr>
<tr>
<td>Mobile Material Characterization and Localization by Electromagnetic Sensing: North Jersey Section, Jt Chapter, AP03/MTT17</td>
<td>12 Sep 2023, 12:00 PM</td>
<td>CH01092 - North Jersey Section Jt Chapter, AP03/MTT17, CH01178 - North Jersey Section Chapter, PHO36</td>
<td>Virtual View</td>
</tr>
<tr>
<td>Next-generation Computational Imaging and Display Systems Engineering based on End-to-end Optimization of Physical Structure and Signal Processing: North Jersey Section Chapter, SP01</td>
<td>13 Sep 2023, 12:00 PM</td>
<td>CH01091 - North Jersey Section Chapter, SP01, CH01177 - North Jersey Section Chapter, C16, CH01092 - North Jersey Section Jt Chapter, AP03/MTT17, CH01178 - North Jersey Section Chapter, PHO36</td>
<td>Virtual View</td>
</tr>
<tr>
<td>IEEE NJACS-2023: 11th Annual IEEE North Jersey Advanced Communications Symposium (Theme: AI, Deep Learning, and ChatGPT) (Zoom): North Jersey Section Chapter, C16</td>
<td>16 Sep 2023, 01:00 PM</td>
<td>CH01177 - North Jersey Section Chapter, C16, CH01262 - North Jersey/New York Jt Section Chapter, IT12, R103 - Metro Sec. Act. Council, CH01153 - North Jersey Section Chapter, VT06, CH01092 - North Jersey Section Jt Chapter, AP03/MTT17, CH01156 - COM 19, CH01215 - AES10, CH01294 -SYS45, CH01081 - EMB18, R10327 - North Jersey Section,</td>
<td>Zoom Online, New Jersey View</td>
</tr>
<tr>
<td>Redesign Ancillary Services with Clean Energy Resources, Machine Learning, and Ubiquitous Information: North Jersey Section Chapter, CS23</td>
<td>29 Sep 2023, 11:00 AM</td>
<td>CH01095 - North Jersey Section Chapter, CS23, CH01097 - PE31</td>
<td>Newark, New Jersey View</td>
</tr>
<tr>
<td>37th ANNUAL SYMPOSIUM AND MINI-SHOW: North Jersey Section Jt Chapter,AP03/MTT17</td>
<td>04 Oct 2023, 09:00 AM</td>
<td>CH01092 - North Jersey Section Jt Chapter, AP03/MTT17</td>
<td>E. Hanover, New Jersey View</td>
</tr>
</tbody>
</table>

You do not have to be an IEEE member, but prior registration is encouraged to attend any event. [IEEE North Jersey Section Website](#) The Section Executive Committee Roster.
<table>
<thead>
<tr>
<th>Event Title</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Speaker/Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic Aperture Radar (SAR) Signal Processing Challenges and Data Sets for Associated Research: North Jersey Section Chapter, SP01</td>
<td>18 Oct 2023</td>
<td>12:00 PM</td>
<td>North Jersey Section Chapter, SP01, CH01177 - C16, CH01178-PHO36, CH01092 - Jt Chapter, AP03/MTT17</td>
<td>Virtual View</td>
</tr>
<tr>
<td>Co-Design of Algorithms and Architectures for Machine Learning Inference at the Edge for Video Analytics: Long Island Section Chapter, SP01</td>
<td>30 Oct 2023</td>
<td>06:00 PM</td>
<td>Long Island Section Chapter, SP01, CH01258 - North Jersey Section Chapter, TEM14</td>
<td>Virtual View</td>
</tr>
<tr>
<td>Mobile Material Characterization and Localization by Electromagnetic Sensing: North Jersey Section Jt. Chapter, AP03/MTT17</td>
<td>12 Sep 2023</td>
<td>12:00 PM</td>
<td>North Jersey Section Jt. Chapter, AP03/MTT17, CH01178 - North Jersey Section Chapter, PHO36</td>
<td>Virtual View</td>
</tr>
<tr>
<td>Next-generation Computational Imaging and Display Systems Engineering based on End-to-end Optimization of Physical Structure and Signal Processing: North Jersey Section Chapter, SP01</td>
<td>13 Sep 2023</td>
<td>12:00 PM</td>
<td>North Jersey Section Chapter, SP01, CH01177 - C16, CH01092 - Jt. Chapter, AP03/MTT17, CH01178 - PHO36</td>
<td>Virtual View</td>
</tr>
<tr>
<td>37th ANNUAL SYMPOSIUM AND MINI-SHOW: North Jersey Section Jt. Chapter, AP03/MTT17</td>
<td>04 Oct 2023</td>
<td>09:00 AM</td>
<td>North Jersey Section Jt. Chapter, AP03/MTT17</td>
<td>E. Hanover, New Jersey</td>
</tr>
<tr>
<td>Synthetic Aperture Radar (SAR) Signal Processing Challenges and Data Sets for Associated Research: North Jersey Section Chapter, SP01</td>
<td>18 Oct 2023</td>
<td>12:00 PM</td>
<td>North Jersey Section Chapter, SP01, CH01177 - North Jersey Section Chapter, C16, CH01178 - PHO36, CH01092 - Jt. Chapter, AP03/MTT17</td>
<td>Virtual View</td>
</tr>
</tbody>
</table>

**Past Month’s Events: The months of August 2023**

<table>
<thead>
<tr>
<th>Event Title</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Speaker/Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT Summer Series - David A. Fisher - Why Software Fails and Why AI cannot Help: Northwest Florida Section Chap C16/COM19</td>
<td>03 Aug 2023</td>
<td>06:30 PM</td>
<td>Northwest Florida Section Chap C16/COM19 Co-Sponsors -North Jersey Section Chapter, COM 19 (with many other co-sponsors)</td>
<td>Virtual View</td>
</tr>
<tr>
<td>Humanitarian Project Activities: Technology and Environment, Climate Change: North Jersey Section Jt. Chapter, AP03/MTT17</td>
<td>04 Aug 2023</td>
<td>05:00 PM</td>
<td>North Jersey Section Jt. Chapter, AP03/MTT17, CH01178 - North Jersey Section Chapter, PHO36</td>
<td>Virtual View</td>
</tr>
<tr>
<td>Event</td>
<td>Date</td>
<td>Time</td>
<td>Location</td>
<td>Details</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Distributed beamforming aided wireless energy transfer:</strong> North Jersey Section Jt. Chapter, AP03/MTT17</td>
<td>07 Aug 2023</td>
<td>06:00 PM</td>
<td>Newark, New Jersey</td>
<td>CH01092 - North Jersey Section Jt. Chapter, AP03/MTT17, CH01184 - Jt. Chapter, CAS04/ED15, VT06, CH01178 - PHO36, SIGHT177 - SIGHT, CH01095 - CS23, SIGHT056-AP-SIGHT</td>
</tr>
<tr>
<td><strong>High Frequency, High-Q Miniature Resonator and Filter Technologies:</strong> North Jersey Section Jt. Chapter, AP03/MTT17</td>
<td>08 Aug 2023</td>
<td>12:00 PM</td>
<td>Virtual</td>
<td>CH01092 - North Jersey Section Jt. Chapter, AP03/MTT17, CH01178 - North Jersey Section Chapter, PHO36</td>
</tr>
<tr>
<td><strong>Wi-Fi 7 is now! What you need to know about global regulatory compliance:</strong> North Jersey Section Jt. Chapter, AP03/MTT17</td>
<td>10 Aug 2023</td>
<td>01:00 PM</td>
<td>Virtual</td>
<td>CH01092 - North Jersey Section Jt. Chapter, AP03/MTT17, CH01178 - PHO36, CH01184 - Jt. Chapter, CAS04/ED15</td>
</tr>
<tr>
<td><strong>CIT Summer Series - Yuhong Liu - Trust and Privacy Vulnerabilities of Today’s Online Social Networks:</strong> North Florida Section Chap, C16/COM19</td>
<td>10 Aug 2023</td>
<td>06:30 PM</td>
<td>Virtual</td>
<td>Host: Northwest Florida Section Chap C16/COM19 Co-Sponsors -North Jersey Section Chapter, COM 19 (with many other co-sponsors)</td>
</tr>
<tr>
<td><strong>CIT Summer Series - David Alan Grier - The Generations of Computing and the Coming Data Age:</strong> Northwest Florida Section Chap, C16/COM19</td>
<td>17 Aug 2023</td>
<td>06:30 PM</td>
<td>Virtual</td>
<td>Host: Northwest Florida Section Chap C16/COM19 Co-Sponsors -North Jersey Section Chapter, COM 19 (with many other co-sponsors)</td>
</tr>
<tr>
<td><strong>IEEE North Jersey Section 2023 Summer Picnic:</strong> North Jersey Section</td>
<td>20 Aug 2023</td>
<td>12:00 PM</td>
<td>Bridgewater, New Jersey</td>
<td>R10327 - North Jersey Section, SIGHT177 - North Jersey Section SIGHT</td>
</tr>
<tr>
<td><strong>Robust Decentralized Secondary Control Scheme for Inverter-based Power Networks:</strong> North Jersey Section Chapter, CS23</td>
<td>25 Aug 2023</td>
<td>11:00 AM</td>
<td>Newark, New Jersey</td>
<td>R10327 - North Jersey Section, CH01095 - North Jersey Section Chapter, CS23, CH01097 - PE31, CH01178 - PHO36, CH01092 - Jt. Chapter, AP03/MTT17,</td>
</tr>
<tr>
<td><strong>Maximizing Learning with Minimal Labels: Innovations in Medical Image Analysis with Sparse Labels:</strong> Long Island Section Chapter, SP01</td>
<td>25 Aug 2023</td>
<td>06:00 PM</td>
<td>Virtual</td>
<td>CH01139 - Long Island Section Chapter, SP01, CH01285 - North Jersey Section Chapter, SIT30</td>
</tr>
<tr>
<td><strong>CIT Summer Series - Jon Peddie - The History of Visual Magic in Computers: How Beautiful Images are Made in CAD, 3D, VR and AR:</strong> Northwest Florida Section Chap, C16/COM19</td>
<td>31 Aug 2023</td>
<td>06:30 PM</td>
<td>Virtual</td>
<td>Host: Northwest Florida Section Chap C16/COM19 Co-Sponsors -North Jersey Section Chapter, COM 19 (with many other co-sponsors)</td>
</tr>
</tbody>
</table>
2023 IEEE North Jersey Section Volunteers

Executive Committee
Chair – Hong Zhao zhao@fdu.edu
First Vice-Chair – Emad Farag enfarag@ieee.org
Second Vice-Chair – Anisha Apte anisha_apte@ieee.org
Secretary – Adriaan J. van Wijngaarden avw@ieee.org
Treasurer – Avimanyou Vatsa avatsa@fdu.edu
Member-at-Large
Naresh Chand - chandnaresh@gmail.com
Har Dayal – dayalhar@gmail.com
Alfredo Tan – tan@fdu.edu
Junior Past Chair – Ajay K. Poddar akpoddar@ieee.org
Senior Past Chair – Yu-Dong Yao yu-dong.yao@stevens.edu

Affinity Groups and Councils Consultants Network
Co-Chairs
Jim Julian consultant@ jimjulian.com
Jay Morreale p-brane@p-brane.com
Young Professionals
Chair – Larry Yang – larry.yang@alcatel-lucent.com
Vice Chair - Patrick Beesley
Women in Engineering
Co-Chairs
Chitra Venkatraman chitrav55@gmail.com
Reena Dahle reena.dahleh@gmail.com
Ratna Raj (ratna.raj@njit.edu)
LIFE Members
Co-Chairs
Ken Oxele - k.oxele@ieee.org
Michael Miller - michaelamiller8@gmail.com
Nanotechnology Council
Chair - Eui-Hyek Yang - ehyang@ieee.org
North Jersey SIGHT Group
Co-Chairs
Anisha Apte - anisha_apte@ieee.org
Dushyant Deshmukh
pranavdush@gmail.com
Committees
Audit Committee
Co-Chairs
Ajay Poddar - akpoddar@ieee.org
Kalyan Mondal - mondal@fdu.edu
Mani Iyer - mani.iyer@ieee.org
Awards & Recognitions
Co-Chairs
Ken Oxele - k.oxele@ieee.org
Adriaan J. van Wijngaarden avw@ieee.org

You do not have to be an IEEE member, but prior registration is encouraged to attend any event. IEEE North Jersey Section Website The Section Executive Committee Roster

VOL.69, NO. 08 SEPTEMBER 2023