Message from the IEEE North Jersey Section Chair Dr. Ajay Poddar

The year 2021 began with a lot of uncertainties due to the ongoing COVID-19 global pandemic. A lot of business, education and other possible activities migrated to the virtual platforms with varied levels of success depending upon the available infrastructure in place and the efficiency in adapting to the changing needs of the time under the given situations. Nevertheless, it became more than obvious the critical role that technology plays in our everyday lives, and the IEEE tagline “advancing technology for humanity” makes us strive forward in this direction.

As the COVID-19 vaccine became available and treatment options became more evolved, the restrictions on travel and gatherings and holding in-person events were becoming minimum and our North Jersey Section and its Membership Development, Students, YP, WiE and all Chapters, after several months of virtual meetings and events, gathered together at the Lewis Morris Park, in Morristown, New Jersey, on Sunday, September 26th 2021.

Fig. 1: Members of the IEEE North Jersey Section at the Outdoor Event

Members enjoyed the outdoors and volunteered to organize food and other arrangements.

On a sad note, David Soll, who has been a long-time friend, past Princeton Central section chair, and a proactive Princeton Central Jersey IEEE Volunteer, passed away a few weeks after we had the wonderful opportunity to meet him and his wife Robin, at our North Jersey Section Picnic event on Sept 26, He will be missed greatly. Figure 2 shows David (wearing blue cap) and his wife, Robin sitting next to him. I personally contacted David extending the invitation to join social events on Sept 26, which he and his wife gladly accepted. May God give strength to bear this loss to his family members, especially his wife Robin and all his lovedones.

As a vibrant section, we continue to move forward with many more events still being held virtually, including the 9th Annual IEEE North Jersey Advanced Communications Symposium (NJACS-2021) held online (Zoom), on Saturday, September 18, 2021. The symposium consisted of several keynote presentations and covers advanced topics in AI, big data, machine learning, deep learning, and applications.

The 35th AP/MTT Joint Chapter Annual Symposium and Mini-Show was successfully held in-person at the Hanover Manor in East Hanover, NJ, on October 4th, 2021. Fig.3 shows a group photo taken at this Mini Symposium.

Fig 3: From Left: George Kannell, Jawad Siddiqui, Anisha Apte, Rashaunda Henderson, Yahia Antar, Har Dayal, Kirit Dixit, Ken Oexle, Naresh Chand, Ajay Poddar, Ulrich Rohde, Richard Snyder, Prasenjit Bhadra

IEEE AP-S President Prof. Yahia Antar, IEEE AP-S SIGHT chair Dr. Jawad Siddiqui, and IEEE MTT-S 2022 President Elect. Prof. Rashaunda Henderson, IEEE SSIT President Dr. Clinton Andrews, were some of the speakers at the event.
Figures 4-6 show in-person talks given by IEEE MTT-S president, Dr. Rashaunda Henderson, IEEE SSIT President, Dr. Clinton Andrews, and IEEE AP-S President Dr. Yahia Antar in New Jersey, encouraging students to engage in STEM activities.

Fig. 4: Talk by IEEE MTT-S president, Dr. Rashaunda Henderson

Fig. 5: Talk by IEEE SSIT-S president, Dr. Clinton Andrews

Fig. 6: Talk by IEEE AP-S president, Dr. Yahia Antar

On November 15th, another event held in person at NJIT (New Jersey Institute of Technology), Newark, New Jersey, organized by North Jersey IEEE AP-S Chapter, was the DL talk by Dr. Levent Sevgi (IEEE AP-S DL). The title of the talk was “From Engineering electromagnetics to electromagnetic engineering: teaching/training next generation”, explained the application of antenna and wireless communication technology for helping the COPE mission. This in-person event, was well attended by students and young professionals, Figure (7) shows the photos of the event.

With the success of these in-person events, our section is pleased to conclude the year with an end-of-the-year dinner meeting, held on November 30th, 2021. The event held at the Hanover Manor in East Hanover, New Jersey, hosted all the section officers, and the invited speaker Prof. Atam Dhawan (NJIT) presented the topic, “Critical Grand Challenges Calling for Technology Innovations”, as seen in Fig. 8 and Fig 9. Figure 10 shows the NJIT Student Branch Chapter and NJ ExCom members attending the Nov. 30th Dinner Meeting Event.

Figs. 11-15 show the NJ ExCom members enjoying dinner at the Nov. 30th Dinner Meeting Event. We know that the current year has been hard on many of you. This was a chance to get together in person to make networks, galvanize, participate in opportunities, and move your career forward. For those who could not join on Nov 30th event in-person, will catch-up with them next year.
Our section has successfully held a total number of 157 events, as per vTools entries.

Several new chapter formations were successful during this year, and have appointed the chapter officers and began activities.

1. Formation of IEEE North Jersey SIGHT (Special Group on Humanitarian Technology), March 16, 2021
2. Formation of IEEE North Jersey SSIT (Society on Social Implications of Technology), June 23, 2021
3. Formation of IEEE North Jersey CIS (Computational Intelligence Society), Sept 01, 2021
4. Formation of IEEE North Jersey Section NC (Nanotechnology Council Chapter), Sept 14, 2021

We wish the new chapter’s success in the forthcoming years.

Other highlights of the year 2021 can be summarized as:

- North Jersey Section Representation at IEEE R1 BOG Meeting, Aug 20, Aug 29
- IEEE NJAC (North Jersey Advanced Communication) Symposium, Virtual, Sep. 18, 2021
- IEEE North Jersey Section Membership Engagement and Picnic, In-Person meeting, Sept 26, 2021
- IEEE AP/MTT Symposium and Mini-Show, In-person, October 07, 2021
- Student Membership Drives: NJIT, FDU and Steven: 100 plus new student Members, Aug-Nov 2021
- Year-End Dinner Event, Nov 30, 2021-held in person

Fig 16 shows the screenshot of AP-S COPE Zoom meeting, held on Aug 30, 2021, AP-S COPE Committee approved $3000 to North Jersey section AP/MTT Chapter for organizing STEM workshops for Girl Scout troops throughout New Jersey, USA. The goal is to introduce or provide a high level of STEM involvement that may result in the Girl Scouts completing requirements for a Badge as well as getting hands on experience in a STEM related field, thus introducing them to science and engineering. Fig. 17 shows the NJIT Solar Car Team, a project co-sponsored by the North Jersey Section, shows the involvement and engagement of NJIT SBC (Student Branch Chapter) in STEM related field. The collaboration of North Jersey Section with AP-S COPE and IEEE SIGHT/HAC helped in addressing DEI (Diversity, Inclusion and Equity). Creating sustainable mindsets is critical for societal prosperity, preservation of nature, future business success and the credibility of the concept of sustainability itself.
We look forward to the year 2022 with a hope to return to normalcy, with more in-person meetings, though organizers may opt for hybrid options going forward.

Our North Jersey Section will support AP-S COPE (Committee on Promoting Equality), ISV (IEEE Smart Village), SIGHT (Special Interest Group on Humanitarian Technology), HAC (Humanitarian Activity Committee), and Try Engineering Project for spreading the Science and Engineering Education to outreach community. During my Section Chairmanship, IEEE North Jersey section has a call to action to its ExCom members and Chapter Officers to cultivate professional and educational agendas promoting and supporting capacity building for engineering and technical professionals in the schools where those resources are negligible.

I wish all the members good health and a productive time ahead

Wishing you a great holiday season and a happy new year 2022!

Ajay Poddar
IEEE North Jersey Section Chair

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IEEE – IMPORTANT EVENTS, ARTICLES, ANNOUNCEMENTS AND REMINDERS:

- This Month's Communications Society News from Around the World
- “The F-150 Ford Truck - Redefining the Utility Industry?” - An article by Harry Roman for the Nov/Dec Newsletter
GRADUATE SCHOOL VIRTUAL OPEN HOUSE!
Wednesday, November 17, 2021, 7 p.m.

Fairleigh Dickinson University’s Gildart Haase School of Computer Sciences & Engineering (GHSCSE)

- A national leader in Cybersecurity, designated as a “Center of Academic Excellence for Cyber Defense Education” by NSA and DHS
- 18 cutting-edge labs, among the best in the North and Mid-Atlantic Regions
- Offers 6 Masters of Science (MS) Programs:
  - Cybersecurity & Information Assurance
  - Computer Science
  - Electrical Engineering
  - Computer Engineering
  - Management Information Systems
  - E-Commerce

Grow your career opportunities!

For Programs information, visit: https://tinyurl.com/GHprogram

GRADUATE SCHOOL VIRTUAL OPEN HOUSE!
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  - Management Information Systems
  - E-Commerce

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For Programs information, visit: https://tinyurl.com/GHprogram
## November and December Events

<table>
<thead>
<tr>
<th>Date and Time</th>
<th>Title</th>
<th>Location</th>
<th>Contact</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>02 Nov 2021 02:00 PM to 03:00 PM</td>
<td>From design to real RF device - connecting EDA simulation and hardware test: AP03/MTT17</td>
<td>Required - Registration link</td>
<td>Ajay Poddar (<a href="mailto:akpoddar@ieee.org">akpoddar@ieee.org</a>), Edip Niver (<a href="mailto:edip.niver@njit.edu">edip.niver@njit.edu</a>), Anisha Apte (<a href="mailto:anisha_apte@ieee.org">anisha_apte@ieee.org</a>)</td>
<td>Markus Loerner of Rohde &amp; Schwarz, Dr. Gent Paparisto of AWR Group, Cadence</td>
</tr>
<tr>
<td>03 Nov 2021 06:30 PM to 08:30 PM</td>
<td>IEEE North Jersey Section - EXCOM - Zoom: North Jersey Section</td>
<td>Required - vTools Registration link</td>
<td>Adriaan van Wijngaarden (<a href="mailto:avw@ieee.org">avw@ieee.org</a>)</td>
<td></td>
</tr>
<tr>
<td>09 Nov 2021 12:00 PM to 01:00 PM</td>
<td>Avoiding RF Isolators - Reflectionless Filtering Components for Emerging Wireless Systems: AP03/MTT17</td>
<td>Required - Registration link</td>
<td>Ajay Poddar (<a href="mailto:akpoddar@ieee.org">akpoddar@ieee.org</a>), Edip Niver (<a href="mailto:edip.niver@njit.edu">edip.niver@njit.edu</a>), Anisha Apte (<a href="mailto:anisha_apte@ieee.org">anisha_apte@ieee.org</a>)</td>
<td>Prof. Roberto Gomez-Garcia of Department of Signal Theory and Communications, University of Alcalá, Alcalá de Henares, Spain.</td>
</tr>
<tr>
<td>10 Nov 2021 12:00 PM to 01:00 PM</td>
<td>1. Interference Hunting in a 5G World: What you Need to Know, 2. Investigate RF power amplifier linearization benefits in EDA - including a comparison to hardware test: AP03/MTT17</td>
<td>Required - Registration link</td>
<td>Ajay Poddar (<a href="mailto:akpoddar@ieee.org">akpoddar@ieee.org</a>), Edip Niver (<a href="mailto:edip.niver@njit.edu">edip.niver@njit.edu</a>), Anisha Apte (<a href="mailto:anisha_apte@ieee.org">anisha_apte@ieee.org</a>)</td>
<td>Peter Busch of Rohde &amp; Schwarz International GmbH, Dr. Florian Ramian of Rohde &amp; Schwarz</td>
</tr>
<tr>
<td>12 Nov 2021 09:00 AM to 11:00 AM</td>
<td>Distribution Voltage Regulation Seminar - Parts 9 &amp; 10: North Jersey Section Chapter, PE31 Affinity Group, LM North Jersey/Prin-Ctr Jersey Jt Sections Chapter, IA34, LM10327</td>
<td>Required - vTools Registration link</td>
<td>Ronald Quade (<a href="mailto:rwquade@ieee.org">rwquade@ieee.org</a>)</td>
<td>Bob McFetridge of Beckwith Electric</td>
</tr>
<tr>
<td>14 Nov 2021 10:00 PM to 11:00 PM</td>
<td>Augmentation of Integral Equations for Low-Frequency Analysis of Electromagnetic Problems: AES10, AP/MTT, ED/CAS, RA/EMBS/ TM</td>
<td>Required - vTools Registration link</td>
<td>Ajay Poddar (<a href="mailto:akpoddar@ieee.org">akpoddar@ieee.org</a>), Edip Niver (<a href="mailto:edip.niver@njit.edu">edip.niver@njit.edu</a>), Anisha Apte (<a href="mailto:anisha_apte@ieee.org">anisha_apte@ieee.org</a>)</td>
<td>Prof. Meisong Tong of Tongji University</td>
</tr>
<tr>
<td>15 Nov 2021 06:00 PM to 08:00 PM</td>
<td>From ENGINEERING ELECTROMAGNETICS to ELECTROMAGNETIC ENGINEERING: Teaching/Training Next Generations: AP03/MTT17, CAS04/ED15</td>
<td>NJIT, Room ECEC 202, 154 Summit Street, Newark, NJ 07102</td>
<td>Dr. Ajay K. Poddar, (<a href="mailto:akpoddar@ieee.org">akpoddar@ieee.org</a>), Edip Niver (<a href="mailto:edip.niver@njit.edu">edip.niver@njit.edu</a>), Prof. Durga Misra (<a href="mailto:dmisra@ieee.org">dmisra@ieee.org</a>), Dr. Anisha M. Apte, (<a href="mailto:anisha_apte@ieee.org">anisha_apte@ieee.org</a>)</td>
<td>Dr. Levent Sevgi of OKAN University, Engineering Faculty, Tuzla – İSTANBUL</td>
</tr>
<tr>
<td>18 Nov 2021 06:30 PM to 09:30 PM</td>
<td>New audio/video/wireless technologies for Home Entertainment - Part 1: North Jersey Section Affinity Group, CN</td>
<td>Required - External Registration link</td>
<td><a href="mailto:cnnnj0@technologyontap.org">cnnnj0@technologyontap.org</a></td>
<td>Aldo Cugnini</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
20 Nov 2021
05:00 PM to
06:00 PM
COPE PROJECTS: Try Engineering, Student Workshop and STEM Program: North Jersey Section Jt Chapter, AP03/MTT17, SIGHT177, YP10327
Location: Required -External Registration link
Contact: Ajay Poddar (akpoddar@ieee.org), Edip Niver (edip.niver@njit.edu), Anisha Apte (anisha_apte@ieee.org)
Speaker: Prof. Felix Vega, Dr. Ajay Poddar

24 Nov 2021
11:00 AM to
12:00 PM
How to ensure Multi Gigabit automotive Ethernet compliance with OPEN Alliance TC15: North Jersey Section Jt Chapter, AP03/MTT17
Location: Required -External Registration link
Contact: Ajay Poddar (akpoddar@ieee.org), Edip Niver (edip.niver@njit.edu), Anisha Apte (anisha_apte@ieee.org)
Speaker: Dimitrakopoulos of Rohde & Schwarz, Jithu Abraham of AWR Group, Cadence

28 Nov 2021
09:00 AM to
11:00 AM
Recent advances in Photonics: North Jersey Section AP03/MTT17, CH01178, PHO36
Location: Required -External Registration link
Contact: Ajay Poddar (akpoddar@ieee.org), Dr. Naresh Chand (chandnaresh@gmail.com),
Speaker: Dr. Naresh Chand

30 Nov 2021
06:00 PM to
09:30 PM
IEEE North Jersey Section End-of-the-Year 2021 Dinner Meeting Event: North Jersey Section
Location: Required -External Registration link
Contact: Ajay Poddar (akpoddar@ieee.org), Adriaan van Wijngaarden (avw@ieee.org)
Speaker: Prof. Atam Dhawan

01 Dec 2021
08:30 AM to
12:30 PM
The Nuts and Bolts (and Qubits) of Quantum Computing: North Jersey Section, AP03/MTT17
Location: Required -External Registration link
Contact: Ajay Poddar (akpoddar@ieee.org), David Gil, Berkeley Nucleonics dgil@berkeleynucleonics.com
Speaker: David A. Brown of Berkeley Nucleonics

01 Dec 2021
02:00 PM to
03:00 PM
Investigate RF power amplifier linearization benefits in EDA - including a comparison to hardware test: North Jersey Section Jt Chapter, AP03/MTT17
Location: Required -External Registration link
Contact: Ajay Poddar (akpoddar@ieee.org), Edip Niver (edip.niver@njit.edu), Anisha Apte (anisha_apte@ieee.org)
Speakers: Dr. Gent Paparisto of RF Solutions Architect, Cadence, Dr. Florian Ramian of Rohde & Schwarz

10 Dec 2021
09:00 AM to
11:00 AM
Enabling Large-Scale Commercial EV Fleet Charging Through A “Grid To Plug” DC Distribution Approach: North Jersey Section Chapter, PE31, IA34, LM10327
Location: Required -External Registration link
Contact: Ronald Quade (rquade@ieee.org)
Speaker: Daniel Simounet of Hitachi Energy

15 Dec 2021
06:00 PM to
07:30 PM
Realizing the promise of smart and connected cities By Carlos E. Jimenez-Gomez, BEng, MSc, MA : North Jersey Section Chapter, SIT30
Location: Required -External Registration link
Contact: Kirit Dixit (kdixit@ieee.org)
Speaker: Carlos E. Jimenez-Gomez

16 Dec 2021
06:30 PM to
08:30 PM
New audio/video/wireless technologies for Home Entertainment - Part 2: North Jersey Section Affinity Group, CN
Location: Required -External Registration link
Contact: cnnj0@technologyontap.org
Speaker: Aldo Cugnini
**SDR: Past, Present, and Future:**

**Date:** 04:45 PM to 06:30 PM, 26 Jan 2022

**Location:** Required - External Registration link

**Contact:** Ajay Poddar (apkoddar@ieee.org), Dr. Durga Misra, (dmisra@ieee.org) Edip Niver (edip.niver@njit.edu), Anisha Apte (anisha_apte@ieee.org)

**Speaker:** Prof. Cherif Chibane of New Jersey

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### Past Month’s Events - October Events

<table>
<thead>
<tr>
<th>Date and Time</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>01 Oct 2021 09:00 AM</strong></td>
<td>Distribution Voltage Regulation Seminar - Parts 3 &amp; 4: North Jersey Section Chapter, PE31 (PES / IAS / LM Joint Meeting)</td>
</tr>
<tr>
<td><strong>05 Oct 2021 10:00 AM</strong></td>
<td>IEEE Northern Jersey Section, SMC Chapter Seminar on Domain Adaptation via Enhanced Subspace Distribution Matching and Generative Adversarial Distribution Matching: North Jersey Section Chapter, SMC28</td>
</tr>
<tr>
<td><strong>05 Oct 2021 06:00 PM to 09:00 PM</strong></td>
<td>C#.NET Programming Seven Tuesdays via Zoom: North Jersey Section Jt Chapter, AP03/MMT17</td>
</tr>
<tr>
<td><strong>06 Oct 2021 06:00 PM to 09:00 PM</strong></td>
<td>Big Data Market Research in Seven Wednesdays via Zoom: North Jersey Section Jt Chapter, AP03/MMT17</td>
</tr>
<tr>
<td><strong>07 Oct 2021 09:00 AM</strong></td>
<td>35th ANNUAL SYMPOSium AND MINI-SHOW: North Jersey Section Jt Chapter, AP03/MMT17</td>
</tr>
<tr>
<td><strong>12 Oct 2021 09:00 PM</strong></td>
<td>Seminar on Advanced Operators for Graph Neural Networks: North Jersey Section Chapter, SMC28</td>
</tr>
<tr>
<td><strong>13 Oct 2021 02:00 PM</strong></td>
<td>Your Career – Don’t Let it Manage You! A few Tips to Manage Professional Development &amp; Career Security: North Jersey Section Chapter, C16, SP01</td>
</tr>
<tr>
<td><strong>15 Oct 2021 09:00 AM</strong></td>
<td>Distribution Voltage Regulation Seminar - Parts 5 &amp; 6: North Jersey Section Chapter, PE31 (PES / IAS / LM Joint Meeting)</td>
</tr>
<tr>
<td><strong>29 Oct 2021 09:00 AM</strong></td>
<td>Distribution Voltage Regulation Seminar - Parts 7 &amp; 8: North Jersey Section Chapter, PE31</td>
</tr>
<tr>
<td><strong>29 Oct 2021 08:00 PM</strong></td>
<td>IEEE Virtual Distinguished Lecturer (VDL) Talk: &quot;Connecting Space Assets to the Internet: Challenges and Solutions&quot;: New York Section Chapter, COM19</td>
</tr>
<tr>
<td><strong>03 Nov 2021 06:30 PM</strong></td>
<td>IEEE North Jersey Section - EXCOM - Zoom: North Jersey Section</td>
</tr>
<tr>
<td><strong>12 Nov 2021 09:00 AM</strong></td>
<td>Distribution Voltage Regulation Seminar - Parts 9 &amp; 10: North Jersey Section Chapter, PE31 (PES / IAS / LM Joint Meeting)</td>
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