

IEEE North Jersey Section

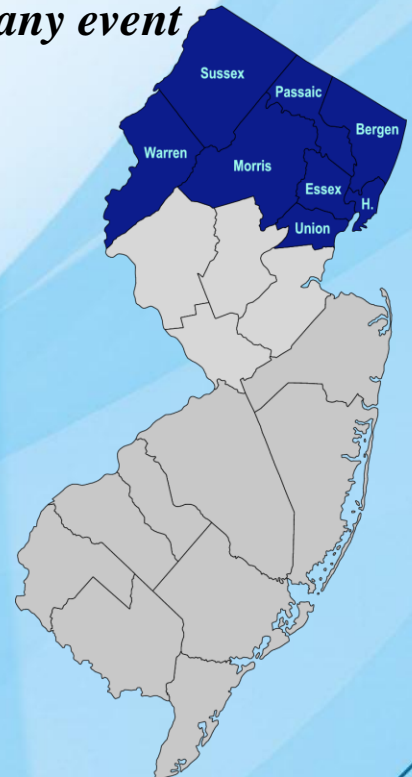
IEEE North Jersey Section

VOL. 71, NO. 03 Issue: March 2025

Prior registration is highly encouraged to attend any event

IEEE North Jersey Section Website

IEEE North Jersey Section - Roster





Chair's Note - A Message from the IEEE North Jersey Section Chair, Dr. Emad Farag

In alignment with the IEEE's mission to foster and promote technological innovation and excellence for the benefit of humanity, several events are being held in our area to support this goal. These events cover cutting-edge topics, ranging from artificial intelligence to the evolution of wireless networks. Many of these events are hosted at local universities to encourage students to get involved and offer them opportunities to interact with young professionals who have recently graduated, providing them with a clearer vision of the career paths that lie ahead.

The IEEE North Jersey Section is also engaging with high school students to raise awareness of STEM-related subjects. This month, the IEEE North Jersey Section is participating in the Science Fair at Kean University, where high school students present projects in various areas of science and engineering. IEEE North Jersey Section members will be evaluating these projects.

With so many events being hosted, please check the newsletter and monitor your email for announcements. We encourage you to come and join us!

Emad Farag,

IEEE North Jersey Section Chair

Schedule for the 2025 ExCom Meetings:

Month	Meeting Date	Venue
January	Wed: 08-Jan-25	Zoom Meeting
February	Wed: 05-Feb-25	Fairleigh Dickinson University, Teaneck + Zoom
March	Wed: 05-Mar-25	NJIT, Newark + Zoom
April	Wed: 02-Apr-25	Montclair State University, Montclair + Zoom
May	TBD	Awards Banquet: Hanover Manor (no Zoom)
June	Wed: 04-Jun-25	Montclair State University, Montclair + Zoom
August	TBD	Picnic: TBD (no Zoom)
September	Wed: 03-Sep-25	Fairleigh Dickinson University, Teaneck + Zoom
October	Wed: 01-Oct-25	NJIT, Newark + Zoom
November	Wed: 05-Nov-25	Nokia Bell Labs, New Providence + Zoom
December	TBD	End of year celebration: TBD (no Zoom)

Coin of the Realm - *An article by Harry Roman*

Knowledge is power.....right? Maybe true years ago, but the same data/information and raw knowledge is, literally available via your cell phone to anyone on planet Earth. The "coin of the realm" now is process.... know-how..... the ability to create and implement in the work-a-day world. Know-how is what transforms data/information/knowledge into new products and services for humanity.

Process/know-how is the strategic punch that allows companies to compete successfully in global markets; and, this is what executives want their employees to possess or be able to learn in double-time. This strategic punch cuts across all industries, hard and soft. Knowledge is fungible, but process/know-how is not. It is unique, invaluable, powerfully-integrative, and defines the competitiveness and survivability of a corporation, perhaps even a nation in the global economy.

In short, know-how resides in:

- Insightful problem identification
- Understanding of markets
- Comprehensive project planning
- Corporate intellectual property
- Key corporate processes and competencies
- Employee creativity, imagination, and invention
- Leadership and interdepartmental team building [incredibly important!]
- Bringing new products to market successfully, i.e. innovation
- Continuous product(s) improvement

This process stuff has a tenuous toehold in American schools and is called technology education, STEM or STEAM -- where students practice mini-dramas of team-based problem solving, creativity, invention, and entrepreneurship. If our country is to maintain its high standards of living, Tech ed/STEM/STEAM must become a mainstream activity in schools, not just an elective or special course. It must become the spinal cord of the academic day, not an offshoot or spur line to the main track of teaching students to function and contribute to a high-tech world. It is the secret sauce that transitions our youth into the major job stream of high-paying jobs and careers-- the yellow brick road to success. It is time to change the academic day. Are you ready for the challenge?

Talk to you again soon...

Harry T. Roman, Life Senior Member

Author & Advisor, Edison Innovation Foundation

(Retired-PSE&G Co.) htroman49@aol.com

IEEE North Jersey Section’s Education Committee Technology Review Series:

- **Article for March 2025**

Exploratory Data Analysis and Visualization Part 2

This article demonstrates exploratory data analysis and visualization for a set of well known datasets. The purpose of the article is to show the reader the different techniques that can be utilized to examine, clean, and prepare the data for consumption by model algorithms. This can include fixing missing values or removing un-needed data.

Fundamental to understanding the data is reducing the many features available to just the relevant ones that can contribute best to training the model. Principal component analysis and data reduction algorithms like k-Means-Clustering help to extract features or synthetically create more impactful ones to use in a model. Visualizing the data can be one very good way to understand the dataset. Scatter, pairwise plots, heatmaps, and descriptive statistics can help present it to others for explanatory data analysis.

<https://ap20.github.io/nnj/NL/edutechrev/EDAandVisPart2.pdf>

Contact: Amit Patel email: a.j.patel@ieee.org

SOME UPDATES FROM IEEE Women in Engineering

2025 IEEE Women in Engineering International Leadership Conference

[Register Now!](#)



ILC 2025
IEEE WOMEN IN ENGINEERING
INTERNATIONAL LEADERSHIP CONFERENCE

**Promoting Women in Engineering And Technology:
Accelerating Leadership In An AI-Powered World**

**15-16
May 2025** | Signia by Hilton
San Jose, California, USA | Chair: Jyotika Athavale
Vice Chair: Vickie Ozburn

<https://ieee-wie-ilc.org/registration/> Don't miss this chance to engage with leaders in engineering and technology. #IEEEWIE #WIEILC2025

IEEE Women in Engineering (WIE) will celebrate the [2025 IEEE WIE Day](#) from 23rd June to 7th



July 2025. The theme of this year's IEEE WIE Day is "**Pioneering Safe Cyberspace: Women Bridging Technology and Light for Security**"

We are inviting you to be the IEEE WIE Day Ambassadors. As an ambassador, you will play a key role in promoting, motivating, and engaging this global event.

Please sign up to be the **IEEE WIE Day ambassador** via this [form](#) by **7th March 2025**. After signing up as a WIE Day Ambassador, please introduce yourselves as Ambassadors in the [IEEE WIE Global Network](#).

2025 IEEE WIE FORUM EAST



The IEEE Women in Engineering (WIE) Forum USA East is dedicated to fostering leadership development for professionals at every career stage. Rotating between IEEE Region 1 and Region 2 in the Northeast USA, our forum offers attendees the chance to gain inspiration and empowerment from renowned leaders. Through dynamic workshops and engaging

panel discussions, participants will explore emerging technologies and innovative STEM outreach initiatives.



FDU
Gildart Haase School
of Computer Sciences
& Engineering

GRADUATE SCHOOL VIRTUAL OPEN HOUSE!

Tuesday, March 18, 2025, 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	*Management Information Systems
*Electrical Engineering	*Computer Engineering
*E-Commerce	*Computer Science (Data Science, Cloud Computing and more)

Scan Zoom Registration



Scan Grad Program Info







FDU
Gildart Haase School
of Computer Sciences
& Engineering

GRADUATE SCHOOL VIRTUAL OPEN HOUSE!

Tuesday, April 15, 2025, 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

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*Electrical Engineering	*Computer Engineering
*E-Commerce	*Computer Science (Data Science, Cloud Computing and more)

Scan Zoom Registration



Scan Grad Program Info





Calendar of Events

Upcoming Events: March 2025 Onwards

Title	Date	Location
IEEE North Jersey Student and YP Social Networking Event: North Jersey Section Affinity Group, YP	02 Mar 2025 01:00 AM	Jersey City, New Jersey
From ENGINEERING ELECTROMAGNETICS to ELECTROMAGNETIC ENGINEERING: Teaching/Training Next Generations: North Jersey Section Jt Chapter, AP03/MTT17	03 Mar 2025 09:45 PM	Newark, New Jersey
Careers in Technology Spring Series 2025 - Elizabeth Alves - 04 March 8 pm EST / 7 pm CST: Northwest Florida Section Chap, C16/COM19	05 Mar 2025 01:00 AM	Virtual
Branch-and-Bound Performance Estimation Programming: A Unified Methodology for Constructing Optimal Optimization Methods: North Jersey Section Chapter, CS23	05 Mar 2025 09:00 PM	Newark, New Jersey
North Jersey March 2025 ExCom Meeting: North Jersey Section	05 Mar 2025 11:30 PM	Newark, New Jersey Hybrid
IEEE SSIT Lecture: Climate Change, from Fundamentals to Smart Solutions: UK and Ireland Section Chapter, SIT30	06 Mar 2025 06:00 PM	Virtual
Leveraging Intent-Driven rApps for Intelligent RAN Automation: Philadelphia Section	06 Mar 2025 11:00 PM	Virtual
Software for Data Acquisition-Oxygen 7.0: North Jersey Section Chapter, IM09	07 Mar 2025 03:00 PM	Virtual

Lessons from My Career by Joseph Lawless: Seton Hall Univ	12 Mar 2025 10:15 PM	South Orange, New Jersey
15th IEEE Integrated STEM Education Conference: Princeton/Central Jersey Section	15 Mar 2025 01:00 PM	Princeton, New Jersey
The Meaning Behind the Signal: How Semantics are Transforming Wireless Communications: Philadelphia Section	20 Mar 2025 12:00 PM	Virtual
Terra North Jersey STEM Fair - IEEE Young Engineer Award 2025: North Jersey Section	23 Mar 2025 01:00 PM	Union, New Jersey
Internet Traffic Modeling and Analysis with Application to Cybersecurity: Automated Anomaly Detection, Low Volume Anomaly Detection, Fault IP Address Identification: North Jersey Section Chapter, SP01	26 Mar 2025 04:00 PM	Virtual
Cybersecurity, AI, and Human Rights: A Societal Perspective - Mr. Sheshananda Reddy Kandula: North Jersey Section Chapter, SIT30	10 Apr 2025 05:00 PM	Virtual
2025 IEEE North Jersey Section Awards Reception: North Jersey Section	04 May 2025 07:00 PM	Whippany, New Jersey
Summer Camp for Female Middle School and High School Students: SHE in ECE: North Jersey Section Jt Chapter, CAS04/ED15	01 Jul 2025 12:00 PM	Newark, New Jersey

[For Past Month's Events – February 2025 - Click Here](#)

2025 IEEE North Jersey Section Volunteers

Executive Committee

Chair:	Emad Farag enfarag@ieee.org
First Vice-Chair:	Anisha Apte anisha_apte@ieee.org
Second Vice-Chair:	Alfredo Tan tan@fdu.edu
Secretary:	Avimanyou Vatsa avatsa@fdu.edu
Treasurer:	Weitian Wang wangw@montclair.edu
Member-at-Large	Michael Miller michaelamiller8@gmail.com Adriaan van Wijngaarden avw@ieee.org Yu-Dong Yao: yyao@stevens.edu
Junior Past Chair:	Hong Zhao zhao@fdu.edu
Senior Past Chair:	Ajay K. Poddar akpoddar@ieee.org

Society Chapters

<i>Aerospace Electronic Systems</i>	AES10	Chair: Cherif Chibane cherif.chibane@gmail.com Vice-Chair: Kirit Dixit kdixit@ieee.org
<i>Antennas and Propagation./ Microwave Theory and Techniques</i>	AP03/MTT17	Co-Chairs: Ajay Poddar akpoddar@ieee.org Edip Niver niver@adm.njit.edu Vice-Chair: Anisha Apte anisha_apte@ieee.org Secretary: Vishal Kumar tovpoddar@gmail.com
<i>Circuits and Systems/ Electron Devices</i>	CAS04/ED15	Chair: Durga Misra dmisra@njit.edu Vice Chair: Shaahin Angizi shaahin.angizi@njit.edu
<i>Communications</i>	COM19	Chair: Amit Patel a.j.patel@ieee.org
<i>Computer</i>	C16	Chair: Hong Zhao zhao@fdu.edu Vice Chair: Tao Han tao.han@njit.edu

*Computational
Intelligence Society*

Co-Chair: Prasenjit Bhadra prasenjit@ieee.org
 Manfred.Minimair Manfred.Minimair@shu.edu
Vice-Chair: Ratna Raj ratna.raj@njit.edu

Control Systems

CS23

Chair: Marcos Netto marcos.netto@njit.edu
Vice-Chair: David Haessig
dahaessig@gmail.com
Secretary: SangWoo Park
sangwoo.park@njit.edu

*Electromagnetic
Compatibility/ Product
Safety Engineering*

EMC27/PSE43

Chair: Russell C. Pepe rcpepe@ieee.org

*Engineering in Medicine
and Biology*

EMB18

Chair: Yu-Dong Yao Yu-Dong.Yao@stevens.edu
Vice-Chair 1: Amrita Poddar
amritapoddar@ieee.org
Vice Chair 2: Elisa Kallioniemi
elisa.kallioniemi@njit.edu

Industrial Applications

IA34 (w. P/CJ)

Chair: Ken Oexle k.oexle@ieee.org

Information Theory

IT12 (w. NY)

Chair: Adriaan J. van
 Wijngaarden avw@ieee.org

*Instrumentation &
Measurement*

IM09

Chair: Russell C. Pepe rcpepe@ieee.org

Photonics

PHO36

Co-Chairs: Naresh Chand
chandnaresh@gmail.com
 Ajay Poddar akpoddar@ieee.org

Power & Energy

PE31

Co-Chairs: Ronald W. Quade
rwquade@ieee.org
 Michael Miller michaelamiller8@gmail.com

Robotics & Automation

RA24

Chair: Mengchu Zhou zhou@njit.edu
Vice Chair: Shilpi Chakraborty shilpi@ieee.org

Signal Processing

SP01

Chair: Alfredo Tan tan@fdu.edu

<i>Social Implications of Technology</i>		Chair: Kirit Dixit kdixit@ieee.org Vice Chair: Anujkumarsinh Donvir anujdonvir@ieee.org
<i>Systems, Man, and Cybernetics</i>	SMC28	Chair: Weitian Wang wangw@montclair.edu
<i>Technology & Engineering Management</i>	TEMS14	Co-Chairs: Kirit Dixit kdixit@ieee.org Rakesh Singh rakeshsingh49@gmail.com
<i>Vehicular Technology</i>	VT06	Chair: Ionel Bajescu nelu108@yahoo.com Vice-Chair: Dr. Muhammad Umer m.umer@fdu.edu

Committees

<i>Audit Committee</i>	<i>Audit Committee</i> Co-Chairs Ajay Poddar akpoddar@ieee.org Kalyan Mondal mondal@fdu.edu Mani Iyer mani.iyer@ieee.org Durga Misra dmisra@njit.edu Yu-Dong Yao yyao@stevens.edu
<i>Awards & Recognitions</i>	Co-chairs: Ken Oexle k.oexle@ieee.org Adriaan J. van Wijngaarden avw@ieee.org Ajay Poddar akpoddar@ieee.org Hong Zhao zhao@fdu.edu Russell C. Pepe rcpepe@ieee.org
<i>Educational Activities</i>	Co-Chairs: Kalyan Mondal mondal@fdu.edu Amit Patel a.j.patel@ieee.org
<i>Employment Network</i>	Chitra Venkatraman chitrav55@gmail.com Naresh Chand chandnaresh@gmail.com
<i>Govt. and Industrial Liaison</i>	Chair: Cherif Chibane cherif.chibane@gmail.com
<i>Group Coordination</i>	Vacant

History Committee

Chair: Howard Leach h.leach@ieee.org

Legal

Chair: Amit Patel a.j.patel@ieee.org

Membership Development

Co-Chairs: Michael Newell msnewell@ieee.org
Ajay Poddar akpoddar@ieee.org

*MTT/AP Trade Show and
Mini- Symposium*

General Chair: Kirit Dixit kdixit@ieee.org
TPC Co-Chairs: George Kannel gkk@ieee.org

Ajay Poddar akpoddar@ieee.org

Event Organizing Committee:

Russell C. Pepe rcpepe@ieee.org

Newsletter

Chair: Anisha Apte anisha_apte@ieee.org

Vice-Chair: Kalyani Matey kalyanirajivshah@gmail.com

*Nominations &
Appointments*

Ajay Poddar akpoddar@ieee.org

Kalyan Mondal mondal@fdu.edu

Durga Misra dmisra@njit.edu

PACE

Chair: Naresh Chand chandnaresh@gmail.com

Pre-University Committee

Co-Chairs: Chitra Venkatraman chitrav55@gmail.com
Craig Polk polk.craig@gmail.com

Program Review Committee

Chair: Alfredo Tan tan@fdu.edu

Members: Anisha Apte anisha_apte@ieee.org

Michael Miller michaelamiller8@gmail.com

Adriaan van Wijngaarden avw@ieee.org

Yu-Dong Yao yyao@stevens.edu

Student Activities Committee

Chair: Melvin Lewis mlewis@fdu.edu

Vice Chair: Rui Li liru@montclair.edu

*Student Representative
Committee*

Co-Chairs: Kalyan Mondal mondal@fdu.edu

Weitian Wang wangw@montclair.edu

Webmaster

Co-Chairs

Adriaan J. van Wijngaarden avw@ieee.org

Avimanyou Vatsa avatsa@fdu.edu

Affinity Groups & Councils

<i>Consultants Network</i>	CN	<p>Co-Chairs: Jim Julian consultant@jimjulian.com Jay Morreale p-brane@p-brane.com</p>
<i>LIFE Members</i>	LM	<p>Chair: Louis Fiore ltfiore@aol.com Treasurer: Stephen WILKOWSKI Stephen_WILKOWSKI@ieee.org Secretary: Michael Miller millerm@ieee.org Member at Large: Kenneth Oexle k.oexle@ieee.org,</p>
<i>Magnetic/UFFC/Sensor Council</i>		<p>Chair: Philip Pong philip.pong@njit.edu</p>
<i>Nanotechnology Council</i>		<p>Chair: Eui-Hyeok Yang ehyang@ieee.org</p>
<i>North Jersey SIGHT Group</i>		<p>Co-Chairs: Ajay Poddar akpoddar@ieee.org Anisha Apte anisha_apte@ieee.org Vice Chair: Vishal Kumar tovpoddar@gmail.com</p>
<i>Systems Council</i>		<p>Chair: Michael Newell msnewell2000@yahoo.com Vice Chair: Avimanyou Vatsa avatsa@fdu.edu</p>
<i>Women in Engineering</i>	WIE	<p>Co-Chairs: Chitra Venkatraman chitrav55@gmail.com Ratna Raj ratna.raj@njit.edu Vice-Chair: Rui Li liru@montclair.edu</p>
<i>Young Professionals</i>	YP	<p>Chair: Larry Yang yangl@ieee.com Vice-Chair Kalyani Matey kalyanirajivshah@gmail.com Vice Chair: Patrick Beesley Patrick.Beasley@se.com</p>

Student Branches

**County College of
Morris (CCM)**

**Fairleigh Dickinson
University (FDU)**

President: Daniel Uzodimma

Vice President: Kevin Fana

Treasurer: Mohammed Sikander

Secretary: Kalash Swami

**Montclair State
University**

Faculty Advisor Weitian Wang wangw@montclair.edu

**New Jersey Institute
of Technology (NJIT)**

Chair: Karina Tay kt53@njit.edu

Vice Chair 1: Timothy Knowles - tgk5@njit.edu

Vice Chair 2: Syed Haady Tariq-Shuiab - smt58@njit.edu

Treasurer: Rudra Mehta - rm279@njit.edu

Secretary: Mohammad Raza - mr43@njit.edu

Seton Hall University

Faculty Advisor: Manfred.Minimair Manfred.Minimair@shu.edu

Chair: Aalayah Cunningham aalayah.cunningham@student.shu.edu

Vice-Chair: Hansika Chawla hansika.chawla@student.shu.edu

Treasurer: Ashley Mathew ashley.mathew@student.shu.edu

Secretary: Jennifer Lawson jennifer.lawless@student.shu.edu

**Stevens Institute of
Technology**

**Union community
college**
