

IEEE North Jersey Section

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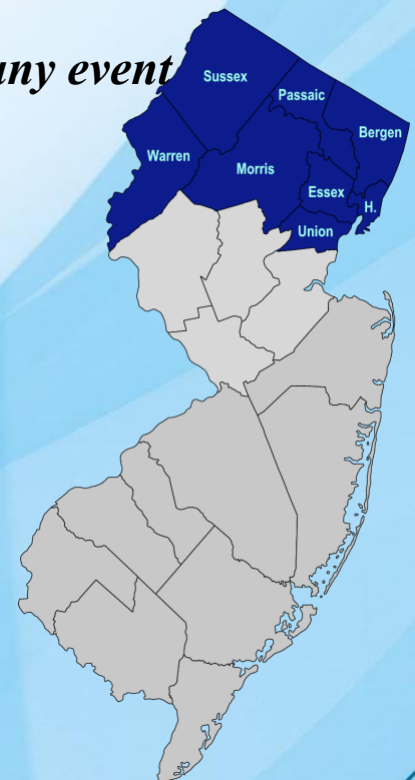
VOL. 72, NO. 01

Issue: January 2026

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

As we begin a New Year, I hope you all enjoyed a restful, joyful, and well-deserved Christmas holiday season and are feeling energized and inspired for the year ahead.

Looking back at 2025, our Section achieved remarkable progress together. We grew our membership, inaugurated new student branches, celebrated seven IEEE Milestones, and organized numerous technical talks, educational programs, student outreach activities, and events for Young Professionals. These accomplishments reflect the strength, dedication, and enthusiasm of our community. Let us carry this momentum forward into the New Year.

As we move into the New Year, I encourage us all to continue strengthening the Section as a force for positive change. Together, we can build a vibrant technical forum that brings together industry, academia, and government to advance technology and innovation in our community. We will continue our flagship events, such as AP/MTT mini-show, awards banquet, and NJACS, and introduce new initiatives throughout the year—stay tuned for more details. My goal is to ensure that IEEE membership remains rewarding and impactful, supporting our members' professional growth while providing tangible value to local industry and academia. Ultimately, we strive to foster technological excellence and innovation for the benefit of humanity and our local community.

Engineering and technological progress are built across generations, with each generation standing on the achievements of those before it. For this reason, engaging and inspiring the next generation of engineers is a top priority. We will continue to support undergraduate and graduate students through targeted events and professional development opportunities, while also expanding STEM outreach for pre-university students to spark early interest in engineering and science. By doing so, we aim not only to grow student membership, but also to retain students as active members as they transition into their professional careers.

Our region has played a pivotal role in shaping technological advancement, thanks to its outstanding academic and industrial institutions. Preserving this legacy is essential. We will continue to identify, document, and establish new historical milestones that honor major innovations originating in our Section, ensuring that the achievements of previous generations are recognized and remembered.

Finally, I am deeply honored and privileged to work alongside such a talented, dedicated, and passionate group of volunteers. Their commitment, teamwork, and spirit of service have made a meaningful impact on our members and our community. I sincerely appreciate their contributions and look forward to another successful year of collaboration, service, and technical excellence.

As we begin this New Year, I wish you all a happy, healthy, successful, and prosperous year ahead. I look forward to working together to make it a truly impactful one.

Emad Farag

IEEE North Jersey Section Chair

Schedule for the 2026 ExCom Meetings:

Month	Meeting Date	Venue
January	Wed: 14-Jan-26	Zoom Meeting
February	Wed: 04-Feb-26	NJIT, Newark + Zoom
March	Wed: 04-Mar-26	Montclair State University, Montclair + Zoom
April	Wed: 01-Apr-26	Fairleigh Dickinson University, Teaneck + Zoom
May	Sun: 03-May-26	Awards Banquet: Hanover Manor (no Zoom)
June	Wed: 03-Jun-26	Zoom Meeting
July	Wed: 01-July-26	No Meeting
August	Sat: ??-Aug-26	Picnic: To be decided (no Zoom)
September	Wed: 02-Sep-26	Fairleigh Dickinson University, Teaneck + Zoom
October	Wed: 07-Oct-26	NJIT, Newark + Zoom
November	Wed: 04-Nov-26	Nokia Bell Labs, New Providence + Zoom
December	Tue: ??-Dec-26	End of the year: Hanover Manor, East Hanover (no Zoom)

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

- [Article for January 2026](#)

Speech-Based Automatic Pain Rating with Machine Learning

- ML models achieve 67-71% accuracy in detecting pain from speech but rely on experimental context (stimulus type, duration). We evaluated whether speech-only acoustic features support speaker-independent pain assessment using the TAME dataset (1,294 utterances, 51 speakers, cold pressor pain). MRMR feature selection identified top acoustic predictors: pitch, harmonics, jitter, and loudness. Results show substantial protocol dependence: removing experimental metadata dropped balanced accuracy from 63% to 41%, with severe pain recall falling to 6% (unweighted) or 33% (weighted). Continuous 0-10 pain prediction achieved only $R^2=0.075$ (MAE 1.99 units).
- Top features included mean F0, harmonic structure, and voice irregularity. Current protocols produce speech with limited speaker-independent pain discrimination. Clinical deployment requires redesigned protocols eliciting robust speech patterns generalizable across speakers and

pain conditions, without requiring experimental context for emergency, telemedicine, or bedside applications.

[Full Article](#) - Contact: Negar Namdar email: nn388@njit.edu

https://ap20.github.io/nnj/NL/edutechrev/QuantifyPainOnSpeechFeatures_nnamdar.html

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

Calendar of Events

Upcoming Events: January 2026 Onwards

Title	Date	Location
IEEE North Jersey Section January ExCom Meeting: North Jersey Section	14 Jan 2026 06:30 PM EST	Virtual
NEOL: Multiscale Adaptation of Large Language Models for Network Energy Optimization: Philadelphia Section	15 Jan 2026 07:00 AM EST	Virtual
Manalapan HackFree -- A Careers in Technology STEM Event: New Jersey Coast Section Jt. Chapter, IM09/C16	17 Jan 2026 10:00 AM EST	Manalapan, New Jersey
Inverters (TO BE RESCHEDULED): North Jersey Section Chapter, PE31	22 Jan 2026 09:00 AM EST	South Plainfield, New Jersey
International Day of Education power of youth co-creating education: Careers in Technology: New Jersey Coast Section Jt. Chapter, IM09/C16	24 Jan 2026 11:00 AM EST	Virtual
On the way to AI-native Networks: Networks that Self-Operate: Philadelphia Section	05 Feb 2026 06:00 PM EST	Virtual
SAFE-AGENT-L Framework: Engineering Legal-Safe, Explainable GenAI for Large-Scale Autonomous Systems: Philadelphia Section	19 Feb 2026 07:00 AM EST	Virtual
150th Anniversary Telephone Patent Lewis Latimer Patent Draftsman: Careers in Technology: New Jersey Coast Section Jt. Chapter, IM09/C16	19 Feb 2026 08:30 AM EST	Middletown, New Jersey

Power Under Siege: Cybersecurity Strategies for Critical Infrastructure: North Jersey Section Chapter, PE31	19 Feb 2026 09:00 AM EST	South Plainfield, New Jersey
Infrastructure as an Emergent Behavior-Shaping System in Networked Physical AI: Philadelphia Section	05 Mar 2026 06:00 PM EST	Virtual
Underground Asset Strategies: North Jersey Section Chapter, PE31	19 Mar 2026 09:00 AM EDT	South Plainfield, New Jersey
Power Quality & Testing: North Jersey Section Chapter, PE31	23 Apr 2026 09:00 AM EDT	South Plainfield, New Jersey

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

[Click Here: For a List of the 2026 IEEE North Jersey Section Volunteers](#)