PUBLICATION OF THE NORTH JERSEY SECTION OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS



IEEE North Jersey Section Newsletter

VOL. 70, NO. 09 Issue: OCTOBER 2024

Prior registration is highly encouraged to attend any event.

IEEE North Jersey Section Website

IEEE North Jersey Section - Roster



Passaic



Chair's Note - A Message from the IEEE North Jersey Section Chair, Prof. Hong Zhao

As we enter October, I'm excited to share two key events happening this month. On October 9th, the AP/MTT 38th Annual Symposium and Mini Show will once again spotlight the latest advancements in instrumentation,

components, subsystems, and interconnects. This event brings together manufacturers showcasing cutting-edge products and offers a fantastic opportunity for professionals to connect with the newest trends and tools shaping our industry. The event also features a technical session with approximately 12 lectures, highlighting speakers from leading companies and focusing on military electronics, wireless technologies, and microwave communications.

In addition to the Mini Show, we are proud to announce the dedication of the IEEE Milestone for the Neutrodyne Circuit on October 19th. Invented in 1922 by Professor Louis Alan Hazeltine at the Stevens Institute of Technology, the Neutrodyne Circuit marked a major breakthrough in electronic circuits, particularly radio technology. Its innovative design minimized interference and significantly improved radio receiver performance. This achievement represents a pivotal moment in technological history and continues to inspire us today. As we celebrate this milestone, we are reminded of the importance of developing technology that not only pushes boundaries but also embraces sustainable practices. This milestone not only celebrates a key technological advancement but also underscores the lasting impact of visionary, forward-thinking engineering.

I look forward to seeing many of you at the AP/MTT Mini Show and the IEEE Neutrodyne Circuit Milestone Dedication.

IEEE – IMPORTANT EVENTS, ARTICLES, ANNOUNCEMENTS, AND REMINDERS:

- This Month's Communications Society News from Around the World
- North Jersey Section Call for Nominations
- Power Skills-Keys to Success An article by Harry Roman
- 38th AP/MTT Mini-Symposium: A YouTube link prepared by one of the DL speakers, Prof. Levent Sevgi
- SHE IN ECE 2024 Event Covered in the CAS Newsletter

The Importance of Creativity

The best offsite course I attended many years ago was sponsored by the AMA and entitled "Creativity and Innovation," held in NYC way back in the early 80s. The course rocked my world, changing the way I would see R&D for the remainder of my career. The speaker was a long-time iconoclast from Rockwell Corp. who championed the use of unconventional approaches to problem-solving. Later, I would incorporate many topics from my notes in this course into a graduate evening course I taught about R&D Project Management and also into a 4-book IEEE-USA e-book series entitled Creativity.

A key takeaway for me after three days of intense discussions and activities at AMA was that creativity is fundamentally an act of courage--putting your ideas and you out there for potential criticism. We kind of scare employees and students out of being creative for the high emotional costs they might have to pay for rejection and ridicule. We do not champion creativity, which is a great loss to our economy, even though one can teach and learn creativity techniques.

Schools need to treat creativity with the same importance that they treat the teaching of reading, writing, and arithmetic. Educators should integrate creativity into lesson plans across the curriculum — in a way that values and celebrates its daily application. Teachers need to work to support, and not inhibit, creativity — making sure they make room for failure, encourage brainstorming, and celebrate out-of-the-box thinking. From my 40+ years of experience working with students and teachers in the classroom, welcoming opportunities for creativity engenders some amazing enthusiasm and unusual problem solutions.

In the business world, many corporate leaders are looking beyond grades and academic achievement. These employers are increasingly interested in a recent graduate's ability to solve problems, work in teams, and be a leader, all requiring creativity. Employers of the future will look for someone who doesn't just accumulate knowledge but is able to apply that knowledge in the form of new products and services.

Harry T. Roman, Life Senior Member Author & Advisor, Edison Innovation Foundation (Retired-PSE&G Co.) htroman49@aol.com







IEEE HKN AP/MTT, LM, SIGHT, IM, C JOINT EVENT at BELL LABS N



The IEEE Women in Engineering (WIE) Forum USA 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. Participants will explore emerging technologies and innovative STEM outreach initiatives through dynamic workshops and engaging panel discussions.

FORUM FOCUS AREAS

Inspire: Ignite positive career and personal growth

Empower: Unleash your full potential

Lead: Elevate your leadership skills and career trajectory

Workshops: Develop and enhance essential skills

Career Fairs: Connect with leading organizations





In Memorium



Dr. Donald K Hsu

April 17, 1947 ~ October 4, 2024

Born in: Shanghai, China Resided in: Fort Lee, New Jersey

Donald K Hsu – Frank A. Patti Funeral Directors (frankpatti.com)

Dr. Donald K. Hsu, age 77, of Fort Lee, passed peacefully at home on Friday, October 4th, 2024.

He worked as a tenured associate professor at Dominican University. As a devoted educator, he held various positions at

different educational institutions. He has contributed over 45 years of his life to the academic arena, teaching and guiding thousands of students worldwide. He also conducted international conferences in various academic fields; he has been in 80-plus countries in the span of 18 years. His love for teaching is unprecedented and is equally reciprocated by his students. As he taught, he also learned new concepts from his students. His motto is a saying from Confucius, "Education for all without discrimination."

At his leisure, he enjoyed watching movies and gathering new ideas to merge with his teaching.

He was a loving husband to Salome Hsu, a cherished father to Douglas and Tina Hsu, and an adored grandfather to Rosabel and Stanley Hsu. He was predeceased by his parents, Guo Zhong and Jing Yi Hsu.

The Dr. Donald K. Hsu Scholarship is established in his memory at the Dominican University of New York. Donations can be made using the following link. <u>https://tinyurl.com/4vk8z2yy</u>

Dr. Hsu has been the Chair of the Education Committee, North Jersey Section, since Jul 2008. He has been a Life Member of IEEE since 2015.

Since 1993, the IEEE North Jersey Section Education Committee has run programming, management, and marketing courses to re-train electrical engineers. With the guidance and support of Prof. Hsu, about 375 members and non-members successfully completed courses in Big Data Market Research, C Programming, C++ Programming, Java Programming, Advanced Java Programming, C# .NET Programming, and Project Risk Management. Results/Benefits: Engineers and professionals could change fields and get better jobs at Amazon, Apple, AT&T, Facebook, Google, IBM, JPMChase, Microsoft, Oracle, Prudential, UPS, Verizon, etc. Many passed the PMI exam and became PMP-certified professionals.

He will be greatly missed.

IEEE

A summary of the IEEE AP/MTT North Jersey Section Chapter's

38th ANNUAL SYMPOSIUM AND MINI-SHOW

On October 9, 2024, the IEEE North Jersey Section APS/MTTS chapter conducted its 38th Annual Symposium and Mini show. The symposium typically consists of about ten talks, each 40 minutes long. Attendance for this event has always been free, along with breakfast, lunch, and afternoon tea/coffee and desserts. The cost of the event is borne with the support of the business community involved in the industry, which pays to exhibit its products. The IEEE AP-S (Antennas and Propagation) and MTT-S (Microwave Theory and Technology) societies have provided funds for some of the DL (Distinguished Lecturer) speakers.

This year's event featured speakers from the international AP/MTT community in India, Turkey, Canada, Colorado, California, and the United Nations. We also had distinguished local speakers, including the IEEE Region-1 Director Bala Prassana, who lauded and recognized the durability of this event over the years. Its modest beginnings with two bookend talks and 6-8 exhibitors have grown to a full day with ten talks and about 40 exhibitors. The attendance for 2024 was around 220.

As the General Chair of the event, I, Kirit Dixit, would like to take this opportunity to thank my team members: George Kannell – Technical Program Chair; Ken Oexle, Chief Event Co-Ordinator; Mike Newell, Har Dayal, Russell Pepe, and Howard Leach (in absentia) who have been together for a very long time with me. I also want to thank our members of the ExCom team, along with Dr. Hong Zhao, who have been very supportive. This event has become a shining light for our section over the years.

Dr. Ajay Poddar, Chair, and Dr. Anisha Apte, co-chair of the Chapter, offered invaluable assistance in securing the impressive roster of speakers and persuading the society to cover the expenses.

Below are some photographs capturing the event, along with our esteemed speakers, who shared their presentations with us, the industry showcase, attendees, and students enjoying the technical sessions and the lunch, refreshments, and desserts. A **YouTube link** prepared by one of the DL speakers, Prof. Levent Sevgi, is also shared here for a livelier event capture. For more photos of the event, **Please Click Here**.





Address by IEEE R1 Director Bala Prasanna (Top left)



Speakers and Organizers at the Technical Presentations





Speakers and Organizers at the Technical Presentations





Attendees at the Technical Presentations

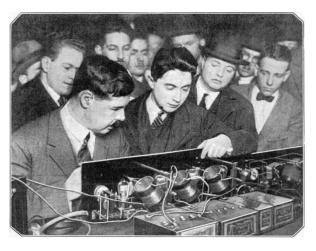


The Industry Showcase



IEEE Neutrodyne Circuit Milestone Dedication Ceremony

The IEEE North Jersey Section is extremely proud to dedicate the new IEEE Neutrodyne Circuit Milestone. The Neutrodyne Circuit represents a critical development in the history of electronic circuits, known for its innovative design that minimized interference and improved the performance of radio receivers. It was invented in 1922 by Professor Louis Alan Hazeltine on the Stevens Institute of Technology campus. This milestone underscores the importance of technology that is both forwardthinking and grounded in sustainable practices.



The event was held on 19 October 2024, from 12:00 to 2:00 PM at the Corcoran Room, The Gateway Academic Center (North), Stevens Institute of Technology, Hoboken, New Jersey.

Below are a few pictures taken during the dedication ceremony:





Calendar of Events

Upcoming Events: October 2024 Onwards

Title	Date	Hosts	Location
Generative AI: From Concept to Deployment: New York Section	01 Oct 2024 06:00 PM	CH01075, CH01080, CH01177, CH01246, CH02170, R10325, SBC10451A, STB03892	Virtual
Next generation of wireless power transfer network of Unmanned Aircraft Systems (UAS: North Jersey Section Chapter, AES10	01 Oct 2024 07:00 PM	CH01043, CH01081, CH01092, CH01178, CH01215, CH01253, CH02067, SIGHT177	Virtual
Careers in Technology Fall Series 2024 - Paul Berger, PhD 01 October 8 PM EST / 7 pm CST: Northwest Florida Section Chap, C16/COM19	01 Oct 2024 08:00 PM	C-FN772, CH01027, CH01070, CH01092, CH02069, CH02127, CH02170, CH03081, CH03197, CH03254, CH04040, CH05005, CH05056, CH05079, CH05227, CH06198, CH06254, CH06291, CH07198, CN40035, HKN217, LM10345, LM30557, R10327, R20013, R20035, R30171, R30557, R40021, R50043, SIGHT119, STB07591, STB63891, STB96971	Virtual
Towards the 100% Clean Energy by 2035: North Jersey Section Chapter, MAG33/UFFC20/SEN39	02 Oct 2024 10:30 AM	CH01290	Newark, New Jersey



Title	Date	Hosts	Location
IEEE North Jersey Section EXCOM - Meeting 6:30 PM: North Jersey Section	02 Oct 2024 06:30 PM	R10327	Montclair, New Jersey
Enhancing Zero Trust networks with AI: North Jersey Section Chapter, CIS11	03 Oct 2024 06:30 PM	CH01287, STB2503293	South Orange, New Jersey
AI Past, Present, and Future: North Jersey Section Chapter, AES10	08 Oct 2024 12:00 PM	CH01081, CH01092, CH01178, CH01215, CH01253, CH01285, CH02067, SIGHT177, WE10327	Virtual
Careers in Technology Fall Series 2024- Florence Hudson and William Harding, PhD 08 October 8 PM EST / 7 pm CST: Northwest Florida Section Chap, C16/COM19	08 Oct 2024 08:00 PM	C-FN772, CH01027, CH01070, CH01092, CH02069, CH02127, CH02170, CH03081, CH03197, CH03254, CH04040, CH04055, CH05005, CH05056, CH05079, CH05227, CH06198, CH06254, CH06291, CH07198, HKN217, LM10345, LM30557, R10327, R20013, R20035, R30171, R30557, R40021, R50043, SIGHT119, STB07591, STB63891, STB96971	Virtual
38th Annual Symposium and Mini-Show - Exhibitor Registration Site: North Jersey Section Jt. Chapter, AP03/MTT17	09 Oct 2024 08:00 AM	CH01092	East Hanover, New Jersey



Title	Date	Hosts	Location
38th ANNUAL SYMPOSIUM AND MINI- SHOW - Attendee: North Jersey Section Jt. Chapter, AP03/MTT17	09 Oct 2024 08:50 AM	CH01092	East Hanover, New Jersey
Antenna Science and Engineering: Given the 75th Anniversary of IEEE AP Society: North Jersey Section Jt. Chapter, AP03/MTT17	14 Oct 2024 06:30 PM	CH01092, CH01178, CH01184, SIGHT177, WE10327	Newark, New Jersey
EDS Distinguished Lecture: Compacting Models: The Art of Compact Modeling (Unification of Compact Models with the Unified Regional Modeling Approach): North Jersey Section Jt. Chapter, CAS04/ED15	16 Oct 2024 04:45 PM	CH01092, CH01184	Newark, New Jersey
IEEE Neutrodyne Circuit Milestone Dedication: North Jersey Section	19 Oct 2024 12:00 PM	C-FN772, CH01091, CH01092, CH01177, CH01178, R10327, SIGHT177	Hoboken, New Jersey
Computational Intelligence in Cybersecurity: North Jersey Section Chapter, CIS11	21 Oct 2024 06:30 PM	CH01287, STB2503293	Virtual



Title	Date	Hosts	Location
Careers in Technology Fall Series 2024 - Albert Shpuntoff 22 October 8 PM EST / 7 pm CST: Northwest Florida Section Chap, C16/COM19	22 Oct 2024 08:00 PM	C-FN772, CH01027, CH01070, CH01092, CH02069, CH02127, CH02170, CH03081, CH03197, CH03254, CH04040, CH04055, CH05005, CH05056, CH05079, CH05227, CH06198, CH06254, CH06291, CH07198, HKN217, LM10345, LM30557, R10327, R20013, R20035, R30171, R30557, R40021, R50043, SIGHT119, STB07591, STB14028, STB63891, STB96971	Virtual
Advanced Conductors as a Reconductoring and New Line Solution (Free In-Person Seminar): North Jersey Section Affinity Group, LM	24 Oct 2024 09:00 AM	CH01098, LM10327	South Plainfield, New Jersey
Careers in Technology Fall Series 2024 - Khandakar Nusrat Islam, PhD 29 October 8 PM EST / 7 pm CST: Northwest Florida Section Chap, C16/COM19	29 Oct 2024 08:00 PM	C-FN772, CH01027, CH01070, CH02069, CH02127, CH02170, CH03081, CH03197, CH03254, CH04040, CH04055, CH05005, CH05056, CH05079, CH05227, CH06198, CH06254, CH06291, CH07198, HKN217, LM10345, LM30557, R10327, R20013, R20035, R30171, R30557, R40021, R50043, SIGHT119, STB07591, STB14028, STB63891, STB96971	Virtual



Title	Date	Hosts	Location
Worldwide standardization activities of AI: North Jersey Section Chapter, AES10	05 Nov 2024 12:00 PM	CH01092, CH01178, CH01215, CH01253, CH02067, SIGHT177, WE10327, YP10327	Virtual
Distinguished Lecture (Virtual) - Civilized Collaboration: Ethical architectures for enforcing legal requirements and mediating social norms in Human-robot Interaction: New York Section Chapter, C16	08 Nov 2024 06:00 PM	CH01070, CH01080, CH01177, CH01246, CH02170, R10325, SBC10451A, STB03892	Virtual
Life Member Luncheon - Artificial Intelligence: North Jersey Section Affinity Group, LM	15 Nov 2024 12:00 PM	LM10327	Denville, New Jersey

For Past Month's Events – SEPTEMBER 2024 - Click Here



2024 IEEE North Jersey Section Volunteers

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Chair - Hong Zhao zhao@fdu.edu

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Signal Processing

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Social Implications of Technology

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Ratna Raj (ratna.raj@njit.edu)

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Nanotechnology Council

Chair - Eui-Hyeok Yang - <u>chyang@ieee.org</u>

North Jersey SIGHT Group

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Audit Committee

Co-Chairs Ajay Poddar akpoddar@ieee.org



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Legal Activities

Chair - Vacant

Membership Development

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