IEEE

February 2021
Volume 25, Issue 1
https://r1.ieee.org/maine/

The Beacon
IEEE Maine Section Newsletter

In This Issue

This Newsletter created using 100% recycled electrons

Announcements

Welcome to the new Beacon! Blue text and most graphics are hyperlinked.

Upcoming Events

2021 Maine Engineering Week Virtual Expo

Saturday, February 27, 9:00 AM – 2:00 PM, Free Online (Reg Req'd)

This year's Keynote Speaker is Paige Brown, cofounder and CEO of WindBorne Systems, which provides high-resolution weather data. Hosted by the Maine Engineering Promotional Council. Visit http://www.engineeringme.com/expo for more info.

Maine Center for Research in STEM Education Colloquium

Monday, March 1, 3:00 PM to 4:00 PM, Free via Zoom

Topic and speaker to be announced. Visit https://umaine.edu/risecenter/upcoming-events/ for more info.

IEEE Maine Section Executive Committee (EXCOM) Meeting

Monday, March 1, 5:00 PM to 6:30 PM, via Zoom

Remote ID for Drones: The Challenges and Opportunities for GIS and Surveying in the FAA's Coming Flight Rules

Tuesday, March 9, 12:00 PM to 1:00 PM, Free Online (RSVP Req'd)

Sam Knight, Director of Product Management for Blue Marble Geographics, will discuss new FAA regulations known as "Remote ID" in plain language, and their implications for legal Unmanned Aerial Systems operation in the U.S. once in effect. Hosted by the Maine GIS User Group. Visit https://www.megug.org/event-4121912 for more info.

WIE Seminar: Conquering the Imposter Phenomenon

Monday, March 8, 6:30 PM to 8:00 PM, Free via Zoom (Reg Req'd)

Join us for a discussion about imposter phenomenon, which is the idea that you've only succeeded due to luck, and not because of your talent or qualifications. This is a common occurrence among high achievers, both male and female, though more prevalent among professional women. Hosted by the IEEE Winnipeg WIE Section Affinity Group. Register by March 8 at 5:00 PM. Visit https://events.vtools.ieee.org/m/259475 for more info.

Section Officers

Executive Committee:

Chair: Betina Tagle

Vice Chair: Alisha Chaney (she/her)

Treasurer: Shengen Chen

Secretary: Ashanthi Maxworth

Standing Committee Chairs:

Membership Development Chair: Rich Hilliard

Newsletter Editor: David Klein

Webmaster: Doug Sprague

Public Relations Committee: Ron Brown

Professional Activities Committee: Dick Wilkins

Educational Activities Committee: Matt Ring

Student Activities Committee: Lauren Mayhew

Audit Committee: Ron Brown & Ali Abedi

Member at Large: Daniel Spacek

IEEE Student Chapter faculty advisors: Jude Pearse (UM) & Mustafa Guvench (USM)

HKN Student Chapter faculty advisor: Ali Abedi

Technical Chapter and Affinity Groups (AG) Chairs:

YP AG Chair: Matt Dube

WIE AG Chair: Sonia Naderi

EDS/SSCS Chapter: Jifa Hao

COM/CS Chapter: *Election Pending*

PES/IAS Chapter: Jesse Shank

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Upcoming Events [*continued from p. 1*]

2021 UMaine Student Symposium Abstract Submission Deadline

Wednesday, March 10

Visit https://umaine.edu/umss/presenters-umss21/ for more info.

2021 Maine State Science Fair

Saturday, April 3, 7:30 AM, Free Online

Sign up to be a judge! An exciting opportunity for Maine high school students to pursue their interest in science and engineering, and to present the results of their projects to fellow students and expert STEM professionals. See Page 12 below or visit https://www.jax.org/mssf for more info.

2021 UMaine Student Symposium

Judging: *Monday, March 29 to Monday, April 12, Online*

Symposium: *Friday, April 16, 9:00 AM, Free Online*

Sign up to be a judge! The annual Student Symposium provides an opportunity for the public to interact one-on-one with UMaine students as they present their research and creative work. Projects are showcased through virtual presentations. Visit https://umaine.edu/umss/ for more info.

IEEE Maine Section Executive Committee (EXCOM) Meeting

Monday, April 12, 5:00 PM to 6:30 PM, via Zoom

Lightning Interaction with Transmission and Distribution Power Systems

Wednesday, April 21, 4:00 PM to 5:00 PM, Free via Zoom

The major mechanisms by which lightning over-voltages are produced in power transmission and systems will be discussed. The over-voltages' general characteristics will be evaluated, along with their dependence upon the network configuration. The presenter will be Prof. Dr. Alexandre Piantini, University of São Paulo, Brazil. Hosted by the IEEE EMC Society Boston Chapter. Visit http://ieeeboston.org/event/lightning-interaction-with-transmission-and-distribution-power-systems/ for more info.

See the IEEE Region 1 Calendar for additional regional and online events: https://r1.ieee.org/calendar/

Election Results

The Section's members elected new officers in January:

Chair: Dr. Betina Tagle Bio on page 6	*Vice-Chair*: Alisha Chaney, PE (she/her) Bio on page 6
Treasurer: Dr. Shengen Chen Bio on page 6	*Secretary:* Dr. Ashanthi Maxworth Bio on page 6

Chair's Corner

By Dr. Betina Tagle

Welcome to the Beacon! This is the IEEE R1 (Maine) Section newsletter. We have started off 2021 with a new Section leadership team that is already working hard for the members of Maine. Take a moment to read about each one in the Beacon. We have dedicated this newsletter to the student members, as they are the future that will support the mission of IEEE. Currently students can receive 50% off IEEE membership, for more information go to the IEEE R1 (Maine) Section website > https://r1.ieee.org/maine/

I want to especially thank David Klein, Newsletter Editor, and Douglas Sprague, our Webmaster, who are working to provide us quality communication channels!

R/IEEE R1 (Maine) Section Chair

IEEE Future50 Student Discount

New and renewing IEEE students and graduate students can now save 50% on their membership dues. Students wishing to take advantage of the 50% discount can do so by using the promotion code FUTURE50 during the online check-out process for joining or renewing their IEEE membership. Students who recently renewed or joined at full price can reach out to the IEEE Contact Center at: contactcenter@ieee.org and request a credit on future membership dues.

2020 Recap

By David Klein

2020 started out normal enough. A communications technology event in Bangor in February. A WIE intro to the UMaine students over coffee in March, followed by a joint IEEE and WIE table at the MEPC Engineering Week Expo the following day (see photo). And then the wheel came off.

After a few months, the Section adapted like everyone else, shifting meetings online. Among 2020's successes were a series of online discussions exploring artificial intelligence and its many applications.

Hopefully, 2021 will bring better circumstances all around. The experience has improved the Section's ability to provide remote presentations. With members geographically dispersed across Maine, this may turn out to be a silver lining.

Executive Committee Strategy Session

Editor's synopsis based in-part on draft minutes

On February 1, the IEEE Maine Section Executive Committee held a strategy session on Zoom.

A plan was approved to adopt the IEEE Membership and Geographical Activities (MGA) policies and procedures to replace the existing bylaws. The MGA will provide the Section with improved flexibility, and has been similarly adopted by other Sections. Due to the learning curve associated with some of the Officers' roles, the possibility of extending the terms of some officers such as Treasurer was discussed, and a committee was appointed to review the MGA to determine what modifications might be needed to meet the Section's needs.

Treasurer Shengen Chen reports that the Section enters 2021 in good financial shape. A committee was formed to prepare an audit report of the Section's finances.

The meeting moved on to discussing previous methods of proposing activities, the offering of scholarships, and the Section matching the funds raised by student committees. In furtherance of supporting student activities, a committee was formed to evaluate the Section's procedures that student groups use to request support for their activities, and to discuss the possibility of having an endowment fund.

As it has in past years, the Executive Committee voted to sponsor Maine Engineering week toward the end of February. (**Editor's Note**: It turned out that the support level approved was no longer being offered; subsequently, by e-mail, consensus was reached to approve a higher-tier sponsorship).

Document sharing among the Executive Committee has previously been handled by e-mail. The Committee discussed the possibility of improving document sharing through the creation of collectively-accessible IEEE cloud storage. This would help avoid issues related to ownership of the files. (**Editor's Note**: After the meeting, a shared space was created for the IEEE Maine Section on Google Drive).

The final topic of the evening was the Section's year-end event, how it was hosted in the past in collaboration with IEEE Power and Energy Society, and how future year-end events might be structured. Various past practices regarding ticket prices were brought up, along with the possibility of seeking corporate sponsorship for the event.

IEEE History: Ongoing Project Summary

By Dr. Ron Brown

As IEEE Region 1 historian, I am working to create an IEEE History Milestone of the First Trans-Atlantic Commercial Radio Broadcast. The Maine Section is heading up an effort to memorialize the First Trans-Atlantic Commercial Radio Broadcast, which took place on March 14, 1925. Highlights of this important event are:

- After earlier unsuccessful attempts, the broadcast of a dance band playing American jazz (including the tune Alabamy Bound) at the Savoy Hotel was carried by wire to BBC station 2LO in London on March 14, 1925.

- The specific program broadcast at 10:30 (local time) was a regular BBC program. The band playing was the Savoy Orpheans.

- It was then carried by landline to station 5XX Chelmsford UK for broadcast by long wave, at a wavelength of 1600 meters, with an aggregate power of 25,000 watts.

- The transmitter antenna at Chelmsford was supported by two 450-foot steel masts. The master oscillator circuit provided by Marconi had four large valves (vacuum tubes to us Yanks) and operated at a potential of 9,000 volts.

- RCA's receiver facility in Belfast, Maine used a 10-mile-long Beverage antenna that was highly directive. The Beverage antenna was developed by Harold Beverage, a UMaine EE grad.

- The Belfast receiver was the standard receiver used by RCA at its transoceanic receiving locations. The receiver comprised a wave trap, in front of a two-stage audio frequency amplifier.

- From 1XAO Belfast, the broadcast was transmitted by short wave, at a wavelength of 120 meters, to an experimental station set up in Van Cortlandt Park, New York. This facility was also RCA's radio test lab.

- Then the broadcast was sent from Van Cortlandt Park over Western Union landlines to US stations WJZ in New York and WRC in Washington, DC for broadcast to their listeners on wavelengths of 455 and 467 meters respectively.

- Among the listeners was RCA's David Sarnoff at his home in Mount Vernon, NY who said, "Progress in joining continents by radio in this manner has come more rapidly than we had dared to expect. Listening-in at a country home to concerts in London is an experience which will live in the memory of thousands and marks a milestone in radio progress. The people of the United States have received a new gift from radio."

- The Belfast transmission was also received by General Electric's WGY Schenectady from which it was rebroadcast to WGY's listeners.

This broadcast was the result of significant engineering planning on the part of the part of the RCA, BBC, and Marconi engineers, and was highly advanced for its time. Unlike so many other early radio broadcast firsts, this one was fully planned. It was the forerunner of us watching live TV from around the world today, and can be thought of as the Facebook of its time. Likewise, David Sarnoff, who pushed the program from the USA side, was the Steve Jobs and Mark Zuckerberg of his day.

We are working with the IEEE United Kingdom and Ireland Section so that this becomes a joint memorialization project. Many others have provided support including other Maine Section Members and the City of Belfast.

The U.K. and Ireland Section would like to have the memorialization ceremony in 2022, which is the 100th anniversary of the BBC. We are not sure the logistics can be completed by then. Another date is 2025 which is the 100th anniversary of the broadcast.

Editor's Note: A recording of the broadcast was one of the 25 recordings added to the Library of Congress' National Recording Registry in 2007. A short portion of the recording is included in a 2008 Newswise article announcing the recording's selection. The icon to the right links directly to the audio in the Newswise article.

Meet the 2021 Maine Section Officers

Since we cannot yet meet in person, below is an introduction to several members of the IEEE Maine Section leadership team:

Executive Committee Chair
Dr. Betina Tagle

Betina is an Assistant Professor of Cybersecurity and CIS at University of Maine at Augusta (UMA). Previously, she was in cybersecurity in the public- and private-sector, working for the DoD, USDA, and QTS. She is a veteran of the U.S. Navy as an Information Systems Technician (IT), and was a September 11th watch-stander at the Naval Submarine base in New London, CT. She holds a doctorate in Computer Science and has been a member of IEEE since 2013. She is involved in many activities that promote women and girls in cyber. When she has free time, she enjoys online gaming.

Executive Committee Vice-Chair
Alisha Chaney (she/her)

Alisha is a licensed Professional Engineer in the state of Vermont. She started with Burns & McDonnell in June 2011 in their Wallingford, CT office, and in July 2014, she transferred to their Portland, ME location. Previously, Alisha interned for Public Service of New Hampshire (now Eversource Energy) while she was in college. She focuses primarily on protection & control design but does some physical design including illumination and battery calculations. In her free time, Alisha runs and volunteers with Maine Track Club and Girls on the Run Maine.
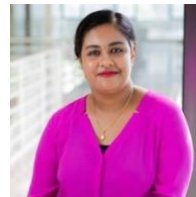
Executive Committee Treasurer
Dr. Shengen Chen

Shengen is a power system engineer at RLC Engineering LLC, Falmouth, ME, involving distribution and transmission planning, mostly renewable energy interconnection. He previously served as the member-at-large and secretary of IEEE Maine Section. Shengen is a member of IEEE, PES, and CIGRE, and he is an active member of CIGRE technical working groups. He received his M.S. and Ph.D. degree in Electrical and Computer Engineering from the University of Maine in 2013 and 2017. His research interests include data analytics, software development, relay protection, and power system transient stability.

Executive Committee Secretary
Dr. Ashanthi Maxworth

Ashanthi is currently an assistant professor at the University of Southern Maine. Her research work is electromagnetic wave propagation in near-Earth space. Ashanthi is originally from Sri Lanka where she obtained her bachelor's degree in electronic and telecommunication engineering. In 2013 she moved to Colorado to get her masters and doctorate at the University of Colorado Denver. Later, she moved to Canada for a postdoctoral fellowship. Since August 2020, she is with the University of Southern Maine. So far, she has lived in three countries, and four IEEE regions.

Membership Development Chair
Rich Hilliard

Rich Hilliard is a software system architect, consultant and researcher, living in Bar Harbor. He has been an active IEEE volunteer with the Computer Society and the Standards Association since 1995. He was editor of ISO/IEC/IEEE 42010:2011, Systems and software engineering — Architecture description. He is a part of the IEEE

liaison to ISO JTC 1/SC 7 (Systems and software engineering); chair of IEEE S2ESC (Software & Systems Engineering Standards Committee) Architecture Working Group; chair of the Enterprise IT committee of the Computer Society's Professional and Educational Activities Board; member of the SWEBoK (Software Engineering Body of Knowledge) Steering Group; and on the EXCOM of Computer Society's Special Technical Communities. His current hobby is applying category theory and formal methods to system modeling. Rich is a member of the Free Software Foundation.

Newsletter Editor
David Klein

David is riding out the pandemic in Augusta, ME, after a career as a patent attorney with law firms in Washington DC, Silicon Valley, and Boston. Originally from Florida, he moved to Augusta after meeting a Maine girl through a friend. David has an M.S. in Electrical Engineering and a J.D. in Law. Aside from dabbling in consulting work, he spends his time improving his cooking, woodworking, and sewing skills, hiking, and volunteering with Bridging the Gap in Augusta. As Editor, David finds himself missing the simplicity of early 1990's PageMaker.

Webmaster
Doug Sprague

Doug is a Software Engineer at Intel working remotely from his home in Ellsworth in SOC (System-On-Chip) Design Automation. He joined the Intel team in December of 2020. Prior to that Doug worked on ASIC Design Automation for Marvell Semiconductor after Marvell acquired their ASIC (Application-Specific Integrated Circuit) group from GlobalFoundries in 2019. Doug had worked for IBM since 1982 up until GlobalFoundries acquired fabs

and their ASIC group in 2015. He started his education with a certificate as an Automotive Mechanic from WCVTI (Washington County Vocational Technical Institute, now Washington County Community College) in Calais and then graduated with honors with an Associate's Degree in Electronics Technology in 1982 from EMVTI (Eastern Maine Vocational Technical Institute, now Eastern Maine Community College) in Bangor where he was promptly hired as a technician by IBM. Doug has a Bachelors in Computer Science and a Master's in Software Engineering. Doug has been involved in DFT & Test (Design For Testing & Test) and has presented posters at IEEE Test Conferences and been involved in driving IEEE 1450 STIL (Standard Test Interface Language) standard-related efforts. Doug enjoys hunting, fishing, and hiking in his leisure time when he's not hanging out with his grandsons.

Public Relations and Audit Committees
Dr. Ron Brown

Dr. Ronald O. Brown has been President of Ronald O. Brown Consulting for over 30 years. Before that he was with RCA, Bell Labs, Bell Northern Research, GTE, and Coopers Lybrand where he was National Director of Network Consulting.

He conceived, designed, developed, and implemented the world's first CLEC (Competitive Local Exchange Carrier) and first corporate-wide integrated desktop systems. He also conceived, developed, and directed Northeastern University's widely recognized State-of-the-Art Program in telecommunications and networking. More recently his consulting practice emphasized expert work in intellectual property, contracts, TCPA (Telephone Consumer Protection Act), and antitrust matters.

He is active in STEM education work, working in K-12 to make instructors and students more aware and understanding of STEM opportunities. He also created and directs the MTUG (Maine Technology Users Group) IT Scholarship program which awards university scholarships to graduates of Maine high schools. Last year this program awarded $15,900 to twelve students and he was honored for creating the program nine years ago.

Professional Activities Committee
Dr. Dick Wilkins

Richard "Dick" Wilkins is Principal Technology Liaison for Phoenix Technologies Ltd., an independent platform firmware (BIOS) development company. He is also an Associate Professor of Computer Science at Thomas College in central Maine. Dr. Wilkins sits on the board of the Unified Extensible Firmware Interface forum (UEFI) and is active in several other international standards bodies (TCG, PCI-SIG, DMTF, ACPI, and others). He has been a Section level leader in the IEEE in Seattle and Maine. He many years computer industry experience in roles from software engineer to director of engineering at companies like Hewlett-Packard, Digital Equipment Corp., Microsoft, Amazon.com and several smaller firms. Prof. Wilkins holds a M.S. and Ph.D. in Computer Science.
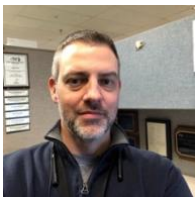
Educational Activities Committee
Dr. Matt Ring

Matthew Ring earned his Bachelor's degree in Chem. Eng. in 2000 from the University of Maine. In 2004, Matt received his Ph.D. in Electrical and Computer Engineering from Iowa State University. Matt then worked for Intel Corp. in the Portland Technology Development group through 2007 when he joined Fairchild Semi's process development team. He has worked on multiple projects in various development capacities in that organization, including plasma metal etch, wet etch, silicon etch, and WLCSP (Wafer Level Chip Scale Packaging) process integration. In 2015, Matt joined Fairchild's intrinsic reliability organization. He has increased his technical scope throughout his tenure in that position, and is currently the site intrinsic reliability lab manager. Matt has authored multiple publications and two U.S. patents, has served on the IIRW (International Integrated Reliability Workshop) management committee in various capacities, including General Chair for 2021 and Technical Program Chair in 2020.
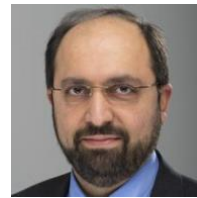
Audit Committee and HKN Student Chapter Faculty Advisor
Dr. Ali Abedi

Ali Abedi graduated from National Organization for Development of Exceptional Talents (NODET) in 1992 with diploma in Mathematics and Physics. He has received his B.Sc and M.Sc degrees in Electrical Engineering from Sharif University of Technology and his PhD in Electrical and Computer Engineering, from University of Waterloo in 1996, 1998, and 2004, respectively, all with focus on Communication Systems. From 1998 to 2000 he was with the department of Electrical Engineering at the Air-Force University as lecturer and director of undergraduate research center. He worked as lecturer at the University of Waterloo and adjunct professor at Queen's University in 2004 and 2005 teaching graduate and undergraduate courses, and conducting research funded by NSERC (National Sciences and Engineering Research Council).

Dr. Abedi joined the University of Maine, Orono in 2005, where he is currently Professor of Electrical and Computer Engineering and Cooperating Professor of Computing and Information Sciences.

He is also serving as Associate Vice President for Research and Director of Center for Undergraduate Research (CUGR) at UMaine. He was visiting Associate Professor at the University of Maryland, College Park, MD and Guest Researcher at NIST in 2012 and Faculty Fellow at NASA in 2016. Dr. Abedi is founding Director of WiSe-Net Lab where he directs research programs wireless communications and sensor networks for structural monitoring, space explorations and bio-medical applications. His research on wireless sensing of lunar habitats was featured on NSF Science360 in 2012. He is co-Founder of two startup companies (Activas-Diagnostics and Nawindor). Dr. Abedi has received a number of awards and recognitions from Natural Sciences and Engineering Research Council of Canada (NSERC), Japan Society for the Promotion of Science (JSPS), Canadian Space Agency (CSA), National Aeronautics and Space Administration (NASA), and Institute of Electrical and Electronics Engineers (IEEE). He is a *senior member* of IEEE and has served on several IEEE Boards and Committees at local, regional, national, and international levels. Dr. Abedi is Co-founder of IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE) and currently serves as IEEE Region-1 Northeastern Area chair, Associate Editor for IEEE Journal of RFID, IEEE/KICS Journal of Communications and Networks (JCN), and previously served as Associate Editor for IET Wireless Sensor Systems (WSS) Journal. Dr. Abedi serves as program evaluator (PEV) for ABET (Accreditation Board of Engineering and Technology) since 2016 and as Extra class accredited Volunteer Examiner (VE) for ARRL, the national association for Amateur Radio since 2012.

Member at Large
Daniel Spacek

Daniel Wayne Spacek is semi-retired and has been an Electrical and Software Engineer since 1973. He worked in software development for medical and insurance document processing, telephone fax servers, Speech Recognition Systems, telephone interactive voice response systems, business telephone switching systems, fiber-optic video/voice/data transport systems, and avionics systems. He has been an Avionics Systems Engineer for Sikorsky Aircraft Company, Embedded Computer/Software Engineer at TIE/Communications, Software/Hardware Group Leader at American Lightwave Systems, Director of Engineering at CTL Inc., Software Engineer at RezZiliant LLC, CompuWeigh Corp, and Data Dimensions LLC. He has a B.E. degree from Stevens Institute of Technology and a M.S.E.E. degree from the University of Bridgeport.
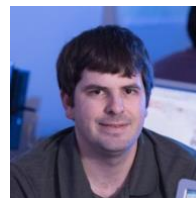
IEEE Young Professionals Affinity Group Chair
Dr. Matt Dube

Matt is Assistant Professor of Computer Information Systems and Data Science at the University of Maine at Augusta (UMA) and a cooperating faculty member with the University of Maine and the University of Maine at Machias. He started at UMA in August 2016 and in 2019 started the first Data Science academic curriculum in the University of Maine System and was awarded the 2019 Distinguished Scholar Award for the university. His research focuses on electoral geography and spatio-temporal reasoning. He is the treasurer for the new Maine Geospatial Institute and serves as the Education and Training Chair for both the Maine GeoLibrary Board and the Maine GIS Users' Group. In his free time, Matt advises collegiate service experiences and Sigma Phi Epsilon Fraternity, teaches and mentors first generation and low-income high school students, and umpires baseball at all levels across the state.

IEEE Women in Engineering (WIE) Affinity Group Chair
Sonia Naderi

Sonia Naderi received her Bachelor's and Master's degrees in Electrical Engineering. She is currently a PhD Candidate in Electrical Engineering working as research assistant in Wireless Sensor Networks (Wi-SeNet) lab at the University of Maine. Sonia's research is focused in the areas of Wireless Networks, Resource Optimizations, and Machine Learning. She has authored multiple publications in Wireless Communications and has served as IEEE Maine Section WIE Chair for 2021 and Treasurer in 2020.

Electron Devices Society/Solid State Circuits Society (EDS/SSCS) Joint Chapter Chair
Dr. Jifa Hao

Jifa Hao (SM'01) received his Ph.D. in Physics from Stony Brook University (State University of New York at Stony Brook). Currently he works for ON Semiconductor as a senior member of technical staff, and is responsible for process, device and new technology reliability, including SiC and GaN devices. He has worked in the semiconductor industry for over 25 years in reliability R&D, technology development, and process development with Fairchild, Allegro Microsystems, Intersil and Harris Semiconductor. His research interests include semiconductor devices physics, power devices, reliability physics and characterization, and many-body quantum theory. He has authored or coauthored over 50 journal and conference papers and has presented many invited talks at IEEE conferences, Electrochemical Society conferences, and Universities. He holds 11 US patents and a trade secret. He is a technical committee member for IEEE conferences IRPS (International Reliability Physics Symposium), EDTM (Electron Devices Technology and Manufacturing), and ESREF (European Symposium on Reliability of Electron Devices, Failure Physics and Analysis). He is president of the Maine local chapter of IEEE EDS/SSCS, had been a member of the IEEE EDS Device Reliability Physics committee from 2017-2019, and chairs, vice chairs of the Reliability Testing for IRPS from 2019-2020. He is an adjunct professor at Penn State University.

Power & Energy Society/Industrial Applications Society (PES/IAS) Joint Chapter Chair
Jesse Shank

Jesse is an electrical engineer from Maine. He holds a BSEET degree from the University of Maine and is employed with POWER Engineers, Inc., in Freeport, Maine. Jesse's primary focus is protection and controls engineering but he is also involved in other design and engineering aspects of substations. In addition to his role for the Maine PES/IAS Chapter, he is also a participant in IEEE PES Substations committees. He is currently an active member in three working groups developing standards for physical security of substations, lightning protection for substations, and design of low-voltage auxiliary systems for substations.

More introductory bios coming in the next issue…

Member Accolades

Congratulations to the IEEE Maine Section members who received U.S. Patents or were published by IEEE so far in 2021:

On January 5, 2021, the United States Patent and Trademark Office issued U.S. Patent 10,883,948 B2, entitled "Moisture Monitoring System." Maine Section member **John Eastman** of Scarborough is listed as a co-inventor.
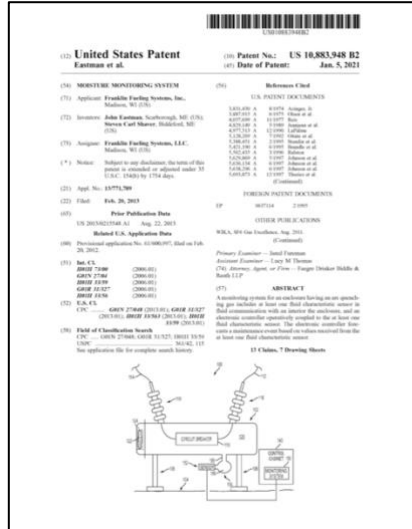
On January 26, 2021, the United States Patent and Trademark Office issued U.S. Patent 10,898,732 B2, entitled "Multi-Color Charged Particle Detector Apparatus and Method of Use Thereof." Maine Section member **W. Davis Lee** of Rockport is listed as a co-inventor.
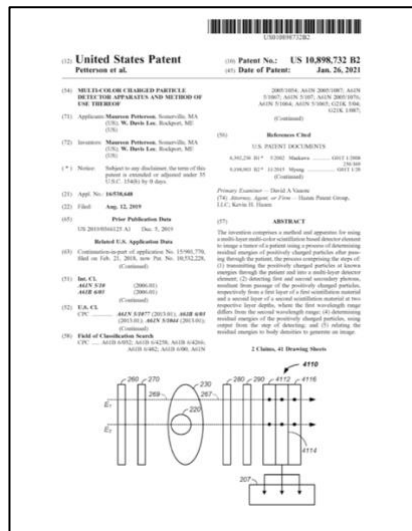
On February 3, 2021, from the January 4-9 *2021 United States National Committee of URSI National Radio Science Meeting*, IEEE Published "Bandwidth Enhanced Folded Unipole Antenna for VLF Measurements." Maine Section members **Ashanthi Maxworth** and **Patrick Deibler** are listed as co-authors.
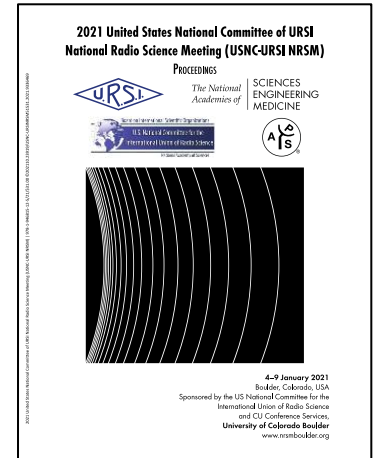
On February 3, 2021, from the January 4-9 *2021 United States National Committee of URSI National Radio Science Meeting*, IEEE Published "A Study of the Correlation between Enhanced LHR, VLF Turbulences and Earthquakes." Maine Section member **Ashanthi Maxworth** is listed as one of the three co-authors.

On February 3, 2021, *IEEE Sensors Letter* published "Janus: A Combined Radar and Vibration Sensor for Beehive Monitoring." Maine Section members **Herbert M. Aumann** and **Nuri W. Emanetoglu** are listed as two of the three authors.

Maine Section Members: Please let The Beacon know if you are presenting a paper at a conference, have recently been published in a peer-reviewed journal, or have recently received a U.S. Patent.

Contact us by e-mail at: IEEEMaineBeacon@gmail.com.

Maine State Science Fair -- Call for Judges

MAINE STATE SCIENCE FAIR
Celebrating 75 years

Call for Judges

April 3, 2021
8:00 a.m. - 12:00 p.m.
Virtual

A collaboration of

MMSA
Maine Mathematics
and Science Alliance

The Jackson
Laboratory
Leading the search
for tomorrow's cures

We're seeking judges in the following areas:
- Behavioral & Social Sciences
- Computer Sciences
- Earth & Environmental Sciences
- Engineering
- Life Sciences
- Mathematics
- Physical Sciences

MSSF

REGISTER NOW!
jax.org/judge

This year's fair will be held online.

Category judges will work on panels to select the top three projects in each category. Students will present their projects live via video in our new RocketJudge platform.

Special Awards judges will assess projects asynchronously during a period of time before the event to review students' project materials.

New this year: All judges will have access to the students' abstracts, posters, and short project videos prior to the fair!

Questions? Contact Stefany Burrell, sburrell@mmsa.org.

The 2021 Maine State Science Fair will use a new platform called RocketJudge, allowing judges to see students' posters, abstracts, and lab notebooks in one place. This platform will also host all interviews between judges and students, and handle scoring. Students will provide short videos describing their projects which can be viewed prior to the Fair.

Special Award judges will be given a week or so before the event to review their projects. Category and Scholarship judges will still be doing live interviews on the morning of April 3. Register at https://www.jax.org/judge. When registering, you can select which type of judge you would prefer to be, if you have a preference.

Northeastern IEEE Region 1 Calls for Papers

2021 IEEE International Symposium on Local and Metropolitan Area Networks

IEEE LANMAN has an established tradition as a forum for presenting and discussing the latest technical advances in local and metropolitan area networking. Cutting-edge papers spanning both theory and experimentation are solicited in all areas of networking. In keeping with the heritage of the symposium, there will be a central theme, and in 2021 the theme is "**Networking in the New Normal.**"

Abstract Registration Deadline: Monday, February 21, 2021

Paper Submission Deadline: March 1, 2021

Visit https://lanman2021.ieee-lanman.org/authors/call-for-papers/ for more info.

2021 IEEE High Performance Extreme Computing Virtual Conference

HPEC is the largest computing conference in New England and is the premier conference in the world on the convergence of High Performance and Embedded Computing. We are passionate about performance. Our community is interested in computing hardware, software, systems and applications where performance matters. We welcome experts and people who are new to the field.

Submission Deadline: Friday, July 9, 2021

Visit http://ieee-hpec.org/cfp.htm for more info.
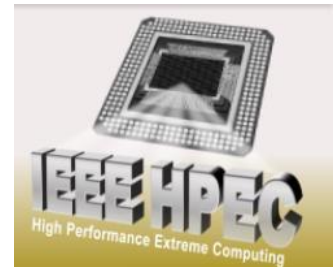
Call for Articles and Events

The Beacon is always looking for content. In particular, we are looking for:

Events: Upcoming live engineering, science, and professional development events in Maine. Please let us know about the event at least five weeks beforehand, although we will try to accommodate shorter notice when practical. With your submission, please provide: (1) what organization is presenting the event, (2) the date and time of the event, (3) how/where the event will be presented (e.g., interactive online video, physical in-person location, etc.), (4) whether advanced registration is required (and the deadline to register, if applicable), (5) whether there is any cost to attend, and (6) a URL and/or contact e-mail address where interested parties can obtain more information.

Articles: We are interested in original technical, professional development, and Maine-interest articles, as well as opinion pieces about issues relevant to the engineering community. Original graphics and photographs are encouraged. Length is flexible.
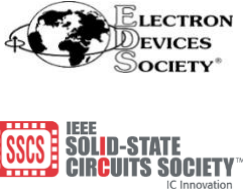
Newsworthy Stories: Do you know about something that might be of interest to IEEE Maine Section members that might have otherwise escaped their attention? If it is something that you've seen in media or in a press release, please provide a link to the source so that we may provide proper attribution (and if the source has a paywall, a pdf of the story would be appreciated).

All submissions are subject to editorial review. Please refrain from submitting content that is intended to promote a commercial product or service.

Submit content via e-mail to: IEEEMaineBeacon@gmail.com.

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