Jan 2018–Dec 2018

ECHOES

Web site address: https://www.ieee.org/go/mohawkvalley

Message from the Section Chair

Welcome to our First Edition…

in roughly 20 years!

The section is proud to revive ECHOES, our IEEE Mohawk Valley Section newsletter.

The purpose of this newsletter is to keep the members of the section up to date on activities both within the section and from IEEE headquarters.

The March 1998 issue of ECHOES is included in the appendix for a trip down memory lane.

Enjoy!

Section Officers

- Chair – Lauren Huie
- Vice Chair – Peter Mozloom
- Treasurer – Lee Seversky
- Secretary – John Matyjas
- Pace Chair – Jerry Genello

Chapter Chairs

- Aerospace Electronics Systems (AES-10)– John Matyjas
- Communications (COM 19):
- Greg Hadynski – Chapter Chair
- Brian Spink – Chapter Vice-Chair
- Computer (C-16) – Lee Seversky
- IEEE Systems Council Chapter Robert Riley
- Signal Processing (SP) - Lauren Huie

Inside This Issue

IEEE Recruitment and Retention

For the first time in ten years, higher grade recruitment in the US was positive!

15 of 22 Sections within Region 1(68.2%) reached their 2018 recruitment goals; the second highest percentage worldwide, just behind Region 2 (70%)! 12 of 22 Sections with R1 reached their 2018 retention goals.

Region 1 had a recruitment goal of 3,481 individuals to its overall membership. We recruited 3,687 individuals this year – 105.9% of our goal! In addition, we were also very close in attaining our overall retention goal (99.7%).

Congratulations to the 8 Sections that achieved BOTH of their recruitment and retention goals and earned the gold medal of recognition!

- Green Mountain Section
- Syracuse Section
- Schenectady Section
- Buffalo Section
- Mohawk Valley Section
- Providence Section
- Boston Section

Congratulations to these Sections for achieving their 2018 recruitment goal!

- Springfield Section
- New Hampshire Section
- Princeton/Central Jersey Section
- New Jersey Coast Section
- Binghamton Section
- Long Island Section
- Rochester Section

Congratulations to these Sections for achieving their 2018 retention goal!

- Maine Section
- Connecticut Section
- Ithaca Section

Overall Region 1 Membership statistics

Region 1	2018	2017	Change	
Higher-Grade w/o GSM	25,277	25,952	(675)	-2.6%
Graduate Students	1,365	1,332	33	2.5%
Undergraduate Students	1,476	1,351	125	9.3%
Totals	28,118	28,635	(517)	-1.8%

STROM Awards

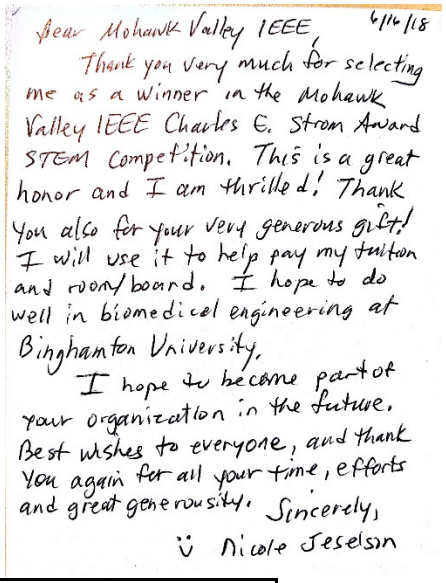
PROJECT LEADS: JERRY GENELLO & JERRY CAPRARO

This is the 19th year of STROM awards, totaling $38,600 in grants!

The Mohawk Valley Section of the Institute of Electrical and Electronics Engineers (IEEE) has selected 4 area high school students from the Mohawk Valley and St Lawrence region to receive the IEEE Charles Strom Engineering Scholarship awards of $400. The awards are presented to students who excel in science, technology, engineering and math (STEM) and will pursue a college degree in the field of engineering.

This Engineering award is named in honor of Charles A. Strom, a highly respected electrical engineer known throughout the world for his pioneering efforts and contributions to the art, science and practice of communications. This award is given out annually to high school seniors who demonstrate outstanding talent in engineering related math and sciences and will enroll in the field of engineering.

- An announcement was made in their local newspaper
- MVECC will publish an awards brochure in lieu of the awards banquet this year.



Dear Mohawk Valley IEEE, 6/16/18

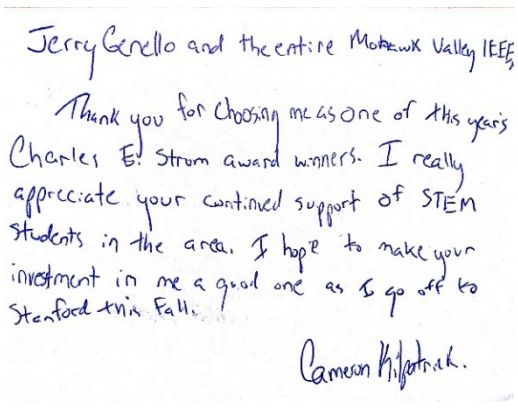
Thank you very much for selecting me as a winner in the Mohawk Valley IEEE Charles E. Strom Award STEM competition. This is a great honor and I am thrilled! Thank you also for your very generous gift! I will use it to help pay my tuition and room/board. I hope to do well in biomedical engineering at Binghamton University.

I hope to become part of your organization in the future. Best wishes to everyone, and thank you again for all your time, efforts and great generousity. Sincerely,

Nicole Jeselson

2018 Winners

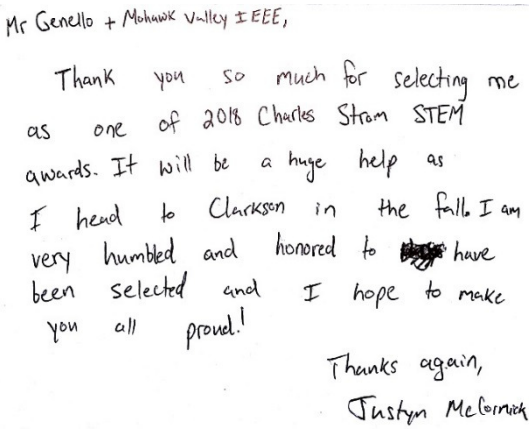
Name	Major	College	High School
Cameron Kilpatrick	EE/CS	Stanford	RFA
Justyn McCormick	EE or Chem	Clarkson	Odgensburg Free Academy
Nicole Jeselson	BioMed Eng	SUNY Binghamton	RFA
Tristan Turner	Chem Eng	RIT	Schuylerville



Jerry Genello and the entire Mohawk Valley IEEE,

Thank you for choosing me as one of this years Charles E. Strom award winners. I really appreciate your continued support of STEM students in the area. I hope to make your investment in me a good one as I go off to Stanford this Fall.

Cameron Kilpatrick.



Mr Genello + Mohawk Valley IEEE,

Thank you so much for selecting me as one of 2018 Charles Strom STEM awards. It will be a huge help as I head to Clarkson in the fall. I am very humbled and honored to [redacted] have been selected and I hope to make you all proud!

Thanks again,

Justyn McCormick

MVECC Math Counts, Feb 2018
Project Leads: Mike Joseph & Jim Maier

The Mohawk Valley Section of the IEEE has sponsored Math Counts in the amount of $250.

The local Math Counts competition was held at Mohawk Valley Community College 3 Feb 2018. Five schools participated in the event. Clinton Central, New Hartford, Holland Patent, Sauquoit, and Holy Cross Academy.

- Twenty-five students participated and twenty awards were given to the winners.
- Clinton Central was the overall winner and went on to Albany for further competition.

The event consisted of an individual sprint round, an individual target round, a team round, and an individual countdown round for all of the winners.

Judges and scorers were Dr. Dave Perkins Hamilton College, Dr. Paul Antonik, Dr. Warren Debany, and Fran Rose, Air Force Research Laboratory

MVECC Project sites, Mar 2018
Project Leads: Mike Joseph & Jim Maier

The Mohawk Valley Section of the IEEE has sponsored Project Sites in the amount of $250.

Project SITES was started 45 years ago by a group of MVEEC members from GE Aerospace, Remington Arms, Rome Air Development Center and the NYS Department of Transportation. It matched honored high school students with a host company that worked in the student's field of interest. The criteria for nomination and selection of participants was the potential to study and apply the math- and science-based subjects required to successfully pursue college studies and a professional, engineering, science and technology career. Project SITES hosts 7 th -11 th grade students from local school districts, where they attend a lunch and presentations that describe local technical and scientific careers. Each student then shadows their host for an afternoon.

To date, over 4,280 7th -to-11 th -grade students from over 40 of the High- and Middle-Schools in the 6 county Mohawk Valley area have participated in Project SITES, and the MVEEC has been involved with over 70 local hosts in 30 unique technical careers or industries.

Drone Activities, 2018
Project Lead: Jerry Genello

Over the past several years the Mohawk Valley Section was awarded two grants from Region 1 PACE to co-sponsor an educational outreach STEM initiative for middle and high school students using drones and 3D printing. Drone familiarization and hands-on approach provides an enhancement to current robotic activities with challenging projects and applications in engineering, math and technology. 3D printing capability was also offered to help students learn 3D design and fabricate components for their robotics projects.

Drone presentations and instructional materials were provided to various local schools and STEM groups. In addition, three areas, (conservation, criminal Justice, and emerging technologies & cyber security) were explored to provide local Oneida-Herkimer-Madison BOCES with resources and curriculum inputs for high school students. Ralph Kohler spearheaded activities on drone applications in mapping technology for inspections, conservation/forestry, construction, architecture and surveying with class presentations and demos to BOCES students.

A DJI Phantom 3 was acquired with the grant funds to support these activities and demonstrations. It is available on request to members interested in providing students with STEM/drone interest. A Robo 3D printer, software and printable drone package are also available for members to design and fabricate components for STEM activities.

Opportunities

Young Professionals (YP) chair

The YP chair has essentially the same duties of a chapter chair: organize two young professionals events per year. However, YP events are typically social events. YP social events count as Chapter Talks since it is an affinity group, versus a technical society. The YP chair will be mentored and supported by the Region 1 YP director who will help with setting up meetings, coming up with ideas, speakers and activities. The Region 1 YP Director was recently appointed with the hope of energizing the YP community.

Region 1 YP Director: Lorenzo Lo Monte, PhD
If interested, please contact Lauren Huie at lhuie@ieee.org

EPICS in IEEE

Funding opportunity: Awards range from $1,000 to $10,000

EPICS in IEEE empowers IEEE volunteers and students to work with local service organizations to apply technical knowledge to implement solutions for a community's unique challenges.

The project must involve a non-profit organization partner, and must provide a technical solution in IEEE fields of interests to problems in one or more of the EPICS in IEEE categories. Collaboration with a local high school is also encouraged. Applications are accepted throughout the year.

For more information please visit: https://epics.ieee.org/

Technical Talks

- A RECONFIGURABLE PLASMONIC ANTENNA ARRAY ARCHITECTURE FOR TERAHERTZ COMMUNICATIONS, Dr. Ngwe Thawdar
- COHERENT DISTRIBUTED ARRAYS: ENABLING TECH & NEW DIMENSIONS, Dr. Jeffrey Nanzer
- STEADY-STATE POLICY SYNTHESIS FOR VERIFIABLE CONTROL, Dr. Alvaro Velasquez
- PROJECT FIBONACCI SMART CITY OF STEAM CHALLENGE, Robert Bojanek
- HOW TO QUERY, QUALIFY AND QUANTIFY THE QUALITIES QUAGMIRE, Dr. Barry Boehm
- BUILDING A SEAMLESS COMMUNICATIONS FABRIC ACROSS THE C2ISR ENTERPRISE
- MASTERING COMPLEXITY FOR MULTI-DOMAIN COMMAND & CONTROL
- NETWORK SCIENCE-BASED METRICS FOR QUANTIFICATION OF LINK STABILITY FOR MOBILE SENSOR NETWORKS, Dr. Natarajan Meghanathan

Recognition

Largest Chapter Chair Rebate in Many Years!

Congratulations to the following chapters and chairs for their technical leadership in 2017!

- IEEE Systems Council Chapter - Robert Riley
- Computer (C-16) – Lee Seversky
- Signal Processing (SP) - John Matyjas
- Aerospace Electronics Systems (AES-10)– Lauren Huie

Each of these chapters met their target goal for technical meetings for 2017, which resulted in the highest Mohawk Valley Section rebate in at least 5 years.

EPICS Projects

- PROJECT FIBONACCI SMART CITY OF STEAM CHALLENGE, $10,000
  Awarded Oct 2018, Andrew Drozd, Robert Bojanek

- RECYCLING AS A VIABLE INDUSTRY FOR SUPPORTED EMPLOYMENT OF THOSE WITH DISABILITIES II, $5,750
  Oct 2017- June 2018, Dr. Charles Robinson

Mohawk Valley Engineer elevated to Fellow!

Congratulations to Dr. Bruce Suter for his contributions to data acquisition for aerospace sensory information systems!

Dr. Bruce W. Suter received the B.S. and M.S. degrees in electrical engineering in 1972, and the Ph.D. degree in computer science in 1988 from the University of South Florida, Tampa, U.S.A.

In 1998, he joined the technical staff at the U.S. Air Force Research Laboratory, Rome, New York, where he was the founding Director of the Center for Integrated Transmission and Exploitation (CITE). He has held visiting appointments at Harvard University and the Massachusetts Institute of Technology. His current research interests are focused on compressive sensing, and their applications to signal and image processing. His previous positions include academia at the U. S. Air Force Institute of Technology and the University of Alabama at Birmingham, together with industrial positions at Honeywell Inc. and Litton Industries. He is a former associate editor of IEEE Transactions on Signal Processing and the author of a widely accepted monograph Multi-rate and Wavelet Signal Processing (Academic Press: 1998).

Dr. Suter has made very important contributions to the development of aerospace systems through his work on the theory and practice of the wavelet transform, as well as other time-frequency tools. He was among the first, and in several cases the very first, to realize the importance of a number of generalizations of wavelets that are now widely studied and used. These include multirate signal processing, vector wavelets, pre-filtering for multiwavelets, extremely fast Fourier transform (FFT) devices, the use of non-separable wavelet filters for video processing, and time-frequency distributions that exhibit particularly useful and elegant parallelisms between the continuous and discrete representations. Aerospace applications of wavelet theory include paradigms for the computer-aided design of filter banks and for parallel algorithm development, as well as patents for a enhanced performance for network cache and for network coding.

Dr. Suter is a member of Tau Beta Pi and Eta Kappa Nu. He has received a number of awards for his engineering and research contributions. These include the Air Force Research Laboratory (AFRL) Fellow, an AFRL-wide award for his accomplishments in the theory, application, and implementation of signal processing algorithms, the Arthur S. Flemming Award, a government-wide award for his pioneering Hankel transform research, the General Ronald W. Yates Award for Excellence in Technology Transfer for his patented Fourier transform processor, and the Fred I. Diamond Award for best laboratory research publication. He is author of over a hundred technical publications.

MOHAWK VALLEY SECTION
ST. LAWRENCE INTERNATIONAL SUBSECTION

ECHOES

MOHAWK VALLEY SECTION
IEEE

VOL. 7 MARCH 1998 NUMBER 1

MESSAGE FROM THE SECTION CHAIR
The State of the Section

As Section Chair for 1998, I'd like to extend warm greetings to all Section members and wish each of you the best for the coming year. It's been a while since the last issue of *Echoes*, so I hope you'll bear with me for a little longer than usual.

Meet the Executive Committee

I'll start off by introducing the newly elected officers for 1998. The Section Vice-Chair is Mr. Glen Bahr, your Treasurer is Mr. Robert Kaminski and your Secretary is Mr. William Baldygo. Mr. Gregory Hadynski will again serve as our Past Chair, due to the departure of Mr. Richard Lockridge, the 1996-1997 Chair. Thanks to everyone who took the time to vote – we had an excellent response rate. Please note that the full roster of officers, committee chairs, and Chapter chairs is included elsewhere in this issue. I encourage you to look this roster over carefully and thank these dedicated volunteers who are striving to enhance your professional engineering experience.

Conference Activities

The past year has been a busy and successful one for the Mohawk Valley. We sponsored or co-sponsored two major technical conferences, the Annual Dual-Use Technologies and Applications Conference, and the National RADAR Conference, both held in May in Syracuse. Both conferences were financial and technical successes, with the RADAR conference generating a large amount of revenue for the Section. This year, the Annual Dual-Use Conference is being overhauled and will reappear as the Information Technology Conference to be held September 1-3, 1998 in Syracuse. The Radar Conference will move to Dallas for 1998, but it is our hope that we can bring this prestigious event back to the Mohawk Valley within the next five years. A big *"Thank You"* goes out to the committees responsible for organizing these two major events and making them both a success.

Chapter Activities

Thanks to a great group of Chapter Chairs, chapter technical activities in the Mohawk Valley are at an all-time high. There have already in 1998 been several technical meetings sponsored by our chapters. Please support the local technical activities by attending these meetings. They provide an excellent opportunity for expanding your technical knowledge as well as networking and interacting with your peers. Contrary to popular belief, you *do not* need to be a member of the sponsoring Society to attend the chapter meetings. Also, now is your opportunity to get involved in an exciting and rare event – the chartering of two new technical chapters within the Mohawk Valley! We'll soon have a joint Electron Devices/Circuits and Systems Chapter, as well as a joint Antennas and Propagation/Microwave Theory and Techniques Chapter. Both of these chapters are being formed because of a recent analysis of membership data done by our Membership Development Committee that showed a definite need for chapters covering these technical areas. I encourage you to get involved in these new chapters by becoming a charter member and/or offering to be an inaugural speaker. Please contact one of the Section officers if you're interested.

Awards and Recognition

Mohawk Valley members continue to be recognized for their accomplishments. We have two new IEEE Fellows this year – Michael Wicks, for contributions to adaptive airborne signal processing, and Joe Bruder for research and development in the measurement and calibration concepts and techniques in polarimetric radars. Also, Andy Drozd and Mike Seifert received awards from IEEE Region 1. Congratulations to all! We're planning on honoring these and other Mohawk Valley members' achievements at an upcoming awards banquet on **April 30th at the Franklin Hotel**. Mark your calendar and stay tuned for more information!

We're looking forward to next year being even bigger in terms of awards and recognition for our members. Bob McMillan, our Fellows Nomination Committee Chair, is leading an unprecedented effort to nominate a large group of about a dozen Mohawk Valley members to the grade of Fellow. Also, the nomination period for Region 1 awards is open until June. I can provide you with a nomination package if you have someone in mind.

Continued on page 6 . . .

CHARLES A. STROM
Life Fellow, IEEE

The Mohawk Valley Section of the Institute of Electrical and Electronics Engineers. IEEE) has lost one of its most ardent and prolific members. Mr. Charles A. Strom, more affectionately known as "Charlie" for the last 47 years throughout the Central New York and the Mohawk Valley, recently passed away at his home in Rome.

Mr. Strom was widely known and highly respected throughout the world for his many pioneering efforts and outstanding design contributions in developing the art, science, and practice of electronic communication systems engineering. He held the distinguished grade of Life Fellow of the IEEE, it highest grade, and was a founding member of many of its national level, technical societies. He also helped found many technical groups of its predecessor, the Institute of Radio Engineers (IRE).

In 1950, Charles A. Strom came to Rome, NY from the Watson Laboratories in Red Bank, New Jersey with the original cadre of select (expert) engineers to organize and establish the Rome Air Development Center (RADC) for the U.S. Air Force at Griffiss Air Force Base. At RADC he rapidly rose from Senior Engineer and Lead Systems Engineer to became the Technical Director of the Communications Directorate.

In this capacity, Mr. Strom was singularly responsible for research, development, test, and deployment efforts for ground-based, Air Force Command and Control Systems throughout the 1960-1985 era. During these crucial years of the cold war, he helped design and field vital command and control systems for the USAF such as WHITE ALICE, PINE TREE LINE, DEWLINE, BERLIN AIRLIFT, and others. These systems pioneered the state-of-the-art (and beyond) command and control communications technology for defense of North America and Europe. Mr. Strom was the author of numerous technical reports and papers, many of which were presented and acclaimed at national and international technical conferences. He retired from RADC in 1985.

In his retirement years, Mr. Strom continued to be active and contribute much to communications and related radio electrotechnologies. He will be especially remembered as a popular Adjunct Professor of Communications at the SUNY Institute of Technology. Many of his former students (and even some associate faculty) will recall benefiting from his wide and diverse background of solid, practical experience as well as his keen, theoretical insights. His dry sense of humor often made classes seem a little less tedious. Mr. Strom was very articulate and knowledgeable in all things related to electronic communications.

In addition to his world renown technical expertise, Mr. Strom will also be long remembered as a strong proponent and practitioner of ethical professionalism in his daily life. Indeed. it may be said that he was from the "old school". where personal manners and courtesy and ethics still counted for something, and easily marked someone as a "gentleman". He contributed his talents in countless hours to establishing. supporting, and expanding many civic, religious, and professional organizations, locally and elsewhere, even up to the time of his death.

He was a member and trustee of Rome Academy of Sciences, a member of Erie Canal Chapter of the Armed Forces Communications and Electronics Association. and a member of the Rome Radio Club; he was an active, licensed Radio Amateur Operator until his death. Mr. Strom was a devout member of St. John's Lutheran Church in Rome, and a very active supporter of all of its activities. Many other local. regional and national organizations will greatly miss his loyal support and contagious enthusiasm.

The Mohawk Valley Section of IEEE extends its sincere condolences to the family of our departed friend and faithful member. Charles A. Strom was an electronics engineer "par excellence"; an engineer's engineer; a man for all seasons and for all times. Most important, was a gentleman and a scholar. So, rest well good friend till we all meet once more beyond the radio "ether" you understood and engineered so wisely and so effectively to the benefit of humanity.

Harold J. Crowley, Friend

FROM THE DESK OF YOUR EDITOR...

I recently came across a simple minded (the one's I like best) tutorial on the "Year 2000 Compatibility" problem with a new (for me, at least) acronym for this problem called Y2K, or "Year 2000".

Note, the term "compatibility". I for one am glad there are still important issues of "compatibility" that have not been entirely abandoned. But, that's another story.

Going back to my tutorial on Y2K compatibility, I won't bore you with the details... I' m sure most of you computer guys and others are already into it in varying degrees.

But this tutorial had a neat way to check your own PC machine for Y2K compatibility. Even though your PC isn't the most significant cog (or any cog at all) in the Y2K wheel, you may as well test it yourself to determine its compatibility. At least, testing it can give you a sense of belonging, a sense of doing something for the Y2K problem, something to impress your social, nontechnical friends... like, wow them with Y2K small talk over cocktails, etc.

You can download all sorts of neat utilities from the internet that will test your PC for compliance: try **www.rightime.com**, **www.sbhs.com/Y2K/index/htm**, or **www.rigel.co.nz**. These sites have the utilities that will test your operating system, your BIOS and most important, your applications programs. Obviously, those with time-dependent data, or any kind of time computations, or time sequencing will be of most interest.

You can test your own BIOS without the above utilities. The experts recommend you do it in DOS rather than in Windows, and boot your PC from a floppy disk to ensure that no time-dependent, Windows

applications programs will be effected by the Y2K tests: just in case, it's not compatible. If your machine passes the BIOS tests, you still may not be out of the woods. There are still the applications programs.

The first test is to set your system time and date to 23:59:59 on December 31, 1999. After setting this time and date, wait; then at the command line prompt, type "date"... you should get 01-01-2000; if not, you have a problem. To test your PC on restart, set the time just a few minutes before 23:57:00 on 12- 31-1999. Then shut down; wait a few minutes and reboot; you should get 01-01-2000 if your machine is Y2K compliant.

These are the simple BIOS tests. I'm sure some of you out there have more robust ones. If you fail this BIOS test and come up with some screwed up, in-error date, you should probably fix it. You can talk to your manufacturer, et al: or, as I recommend - talk to a guru in the Computer Chapter... maybe, Jon Valente? ♣

NEW SECTION FELLOWS FOR 1998

Daniel J. Kenneally, Editor

Dr. Bob McMillan, Chair for Fellows Nominations Committee tells me the Mohawk Valley Section was very successful in last year's round of Fellow grades elections. Through his efforts and the efforts of our candidates, IEEE elected two of our own to this prestigious grade. The Section Excom and the membership extend its sincerest congratulations to our well deserving awardees. I reproduce here the messages he sent me in the following press releases:

Dr. Michael C. Wicks of AFRL/SNRT has been elected a Fellow of the Institute of Electrical and Electronics Engineers. His Fellow Citation Reads *"For contributions to adaptive airborne signal processing"*. Mike has made outstanding contributions to the science of radar, specifically in the development of new and innovative radar signal processing techniques. He is recognized as the leading Air Force technologist in the areas of space-time adaptive processing (STAP) and wideband and impulse radar. His interests are the development of STAP algorithms, ultra wideband antennas and devices, signal processing, and clutter suppression techniques. Mike has worked at the Air Force Research Laboratory for over 17 years and has over 100 publications and 10 patents. Election to Fellow Grade is a significant recognition of engineering accomplishments; only about one percent of the IEEE's 320,000 members worldwide have attained this member grade.

Mr. Joseph A. Bruder of AFRL/SNRD has been elected a Fellow of the Institute of Electrical and Electronics Engineers. His Fellow citation reads: *"For research and development in the measurement and calibration concepts and techniques in polarimetric radars"*. Joe is the inventor of a novel geometrical shape called a "Bruderhedral", which is a finite cylindrical segment of a "top hat", radar reflector that retains the ease of orientation of the top hat. This radar target is widely used to calibrate polarimetric radars. Joe is currently employed at AFRL/Rome as an Intergovernmental Personnel Act (IPA) appointee, on loan from the Georgia Institute of Technology. Election to Fellow Grade is a significant recognition of engineering accomplishments; only about one percent of the IEEE's 320,000 worldwide members hold this member grade.

ANOTHER ESD "STRIKE"

Dan Kenneally

The German automaker Audi recently announced recall of more than 835,000 vehicles to correct a potentially dangerous EMI problem caused by electro static discharge (ESD). Seems that the ABS (air bag system) in certain Audi models built since 1995 until now are not properly grounded. Gee, guys... haven't we got that problem down yet. Didn't Gerry Caparro say most EMI problems are caused by poor grounds, lousy shields, and cheap connectors? Or, was it Don Pflug?

Anyway, the scenarios reported in over a dozen cases involve the driver's air bag unintentionally deploying due to static impulses generated by the driver simply entering (or exiting) the vehicle and touching the steering wheel. Sounds like a classical case of triboelectric charging from the seat fabrics. While no injuries were reported in these cases, the situation is poor EMC design and is unacceptable to Audi and its vehicle owners. Hope the ESD guys at IITRI are on to this one. There seems to be no end to ESD horror stories. I guess we really haven't got grounding technology down like we think we have

The recall includes 1995 Audi 90's, 1995-1996 Audi Cabriolets, 1996-1997 Audi A4's, 1995-1996 Audi A6's, and early 1997 A8's. Owners have been instructed to return their vehicles to an authorized Audi dealer where a simple ground wire to the ABS will be installed at no cost. This fix will effectively ground the ABS and prevent ESD impulses from firing the ABS.

PACEMAKERS SUSCEPTIBLE TO RETAIL STORE ANTI-THEFT SENSORS

D. J. Kenneally, Editor

Recently, the U.S. Food and Drug Administration (FDA) issued a warning notice that certain cardiac pacemakers may be susceptible to dangerous interference emissions from anti-theft sensors installed at doors of retail stores.

According to Microwave News, Mike McIvor of the Heart Institute in St. Petersburg, FL reported that signals from acoustic-magnetic sensors installed to deter shop lifters can unexpectedly upset and even shut off cardiac pacemakers. The possible consequences of this kind of interference is dangerous, to say the least, and can even be fatal.

The interference problem stems from an emitter signal at 58 KHz from a leaky, anti-theft sensor which, unfortunately, a susceptible pacemaker reads as a legitimate (heart beat) signal from the host heart it is supposed to be controlling.

The response of the cardiac pacemaker is to either tweak the heart beat rate or to shut itself off entirely. The response of the wearer is unexpected, uncontrolled heart "flutter" that typically causes unsteady posture and fainting-like wooziness, the kind of cardiac dynamics a pacemaker is supposed to control.

Like many other kinds of interference, this problem goes away when the victim pacemaker device is simply removed from the offending fields emitted by the anti-theft sensor; assuming, of course, that the pacemaker wearer is still (!) able to move. So, wearers of pacemakers are cautioned not to linger in the area of retail store, anti-theft gates.

Although, the problem appears to be only associated with this one particular sensor technology, there are over 90,000 of these acoustic-magnetic sensors already in retail use, and there are more on the way. While the FDA notice did not indicate the fix, shielding or spectral diversity would seem indicated among some other possibilities.

Medically related EMC and subsequent interference effects which may accrue when there is little or poor EMC design has been of interest to some of us for some time. This latest interference "oops" story adds another caveat to the industry imperative for responsile caution, care, and real concern when designing products for the consumer public. Our EMC Chapter, chaired by Andy Drozd, is admirably in the middle of it all.

An Age of Cooperation

We're working hard to cooperate with other area professional organizations such as the Erie Canal Chapter of the Armed Forces Communications and Electronics Association (AFCEA), the Utica/Rome Chapter of the Association of Computing Machinery (ACM), the Mohawk Valley Engineer's Executive Council (MVEEC), and the Rome Academy of Sciences (RAS). We've had several joint technical meetings with AFCEA, ACM, and MVEEC recently, and we've continued our financial support of MVEEC's Project SITES and MATHCOUNTS programs. Also this year for the first time, we've teamed up with RAS in support of the Rome Science Congress, the annual science fair. Look for more joint ventures like these to come.

The Information Age

The Mohawk Valley Section has always been a leader in using electronic communications. In 1987, we introduced you to the world of electronic mail and bulletin boards with our "AKCS" system. We were one of the first Sections to create and maintain a home page on the World Wide Web (WWW), and we've provided you with free e-mail accounts on our Linux system, currently hosted by Borg Internet Services, since 1994. We're planning on continuing our strong emphasis in this area by building upon our Web site to make it an effective communications tool. We've recently re-hosted our home page at IEEE headquarters using their new Entity Web Hosting (EWH) service. The URL is now http://www.ewh.ieee.org/r1/mohawk_valley/ (links to the old URL will still work for a limited time). Please contribute your suggestions regarding our site and how it might best be used to serve your needs. Of course, we are always in need of willing and able volunteers to help out with the Web site. If you're a frustrated Webmaster looking for a place to express yourself, *please* contact me!

In the last Echoes, I wrote to you about our new e-mail subscription lists, mv-news and mv-talk. I indicated that we were using e-mail addresses supplied on the IEEE renewal forms to create an initial mailing list that would be used to announce technical activities and distribute Section information to you. Well, we've been having some technical difficulties with reading the addresses and I'm afraid we're a little behind schedule. If the problems can be solved, we'll have this service up and running in the next couple of months. I'll keep you posted!

The Passing of Friends and Colleagues

In October, a loss of great magnitude occurred in the Mohawk Valley with the passing of Mr. Charles Strom on October 1st and Dr. Irving Gabelman on October 3rd. These two professionals were world-renowned for their achievements in the field of electrical engineering. Both were Fellows of the IEEE and each was an inspired leader in the organization right up until the time of their parting. Charlie was our Section's Vice-Chairman and long-time editor of our newsletter, Echoes. Irv served as the Section's Government Action Coordinator as well as our representative to the Accreditation Board for Engineering and Technology (ABET). Together, these two extraordinary individuals contributed well over 100 years of priceless service to the engineering profession and IEEE. Thanks to the dedication of Charlie and Irv, the Mohawk Valley Section owns a proud heritage. We'll miss them both.

In Closing...

I hope that I have provided you with an accurate snapshot of recent goings on in the Mohawk Valley Section. As always, the Executive Committee and I welcome your feedback and suggestions on how we may improve and better serve your professional and technical needs. Please feel free to contact any of the officers listed, or send us e-mail at sec.mohawkvalley@ieee.org. Finally, if you're not already involved in the Section's activities, I hope you consider volunteering – it's a great way to get the most out of your IEEE membership!

Sincerely,

Paul Ratazzi

Paul Ratazzi
Section Chair

MARK YOUR CALENDAR!

Mohawk Valley Section Awards Dinner

Thursday, April 30, 1998
Franklin Hotel
301 South James Street
Rome, NY

WATCH YOUR MAIL FOR DETAILS!

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