

Vol. 59, No. 7

AUGUST 2012

Calendar of Events:

- August 01, 6:00PM-8:45PM IEEE North Jersey Section EXCOM Meeting Murray Hill Read More... Location: Bell Laboratories, Alcatel-Lucent, Room: 6A-106: 600 Mountain Ave Murray Hill, NJ 07974 Getting to Bell Laboratories Contact: Naresh Chand (908 723 7001); (nchand@ieee.org), Adriaan van Wijngaarden (avw@ieee.org)
- August 06, 4:30PM-6:30PM Enabling More Moore and More than Moore by Leveraging ALD and Related Processes -Robert Clark of TEL Technology Center America. Read More...
 Location: NJIT; ECE Building, Room 202: 161 Warren Street, Newark, NJ 07102, Getting to NJIT & Parking Information
 Contact: Dr. Durga Misra (973 596 5739) (dmisra@njit.edu); Dr. Edip Niver (973 596 3542)
- August 08, 6:30PM-8:45PM Engineers Meet (PACE:) Monthly PACE Meeting scheduled for Wednesday has been canceled. Contact: PACE Chair Richard Tax (rtax@verizon.net) for further information
- September 05, 6:00PM-8:45PM IEEE North Jersey Section EXCOM meeting Clifton, Read more... Location: Clifton Public Library, Allwood Branch Activity Room, 44 Lyall Road, Clifton, NJ 07012 Getting to Clifton Library Contact: Naresh Chand (908 723 7001); (nchand@ieee.org), Adriaan van Wijngaarden (avw@ieee.org)
- North Jersey Section Nomination Committee Invites Nominations
- How to subscribe to this newsletter if you are not a North Jersey IEEE Member?
- Welcome New Members of IEEE North Jersey Section!
- The IRE, IEEE...and me! By: Dr. Richard Snyder
- IEEE Celebrates 50th Year
- October 04, 9:00AM-4:30PM IEEE North Jersey Section, MTT-Society and AP-Society Joint Chapter Presents: 27th ANNUAL SYMPOSIUM AND MINI-SHOW Location: Hanover Manor, 16 Eagle Rock Ave., E. Hanover, NJ 07936. Contact: (973-992-7425); Please click <u>here</u> for more contacts:

Prior registration is encouraged and appreciated. You do not have to be an IEEE member to attend any event. For up to date information, visit our website: IEE North Jersey Section







August 01, 2012

IEEE North Jersey Section EXCOM Meeting – Murray Hill

Agenda: This executive committee (EXCOM) meeting of the IEEE North Jersey Section will be held at Bell Laboratories, Alcatel-Lucent, in Murray Hill, NJ. The meeting will take place in Room 6A-106, which is located near the main entrance behind the Bell Labs Showcase exhibition area.

It is not necessary to sign in to access this area. There will be a get-together with a buffet starting at 6 pm.

The meeting starts at 7 pm EST and typically ends at 8:45 pm.

The meeting is meant to discuss and coordinate the section's activities and new initiatives. Everyone is welcome to attend this meeting. Please register in advance for this meeting using vTools to provide the meeting organizers an accurate head count. You can change/cancel the registration if vour plans change. Location: Bell Laboratories. Alcatel-Lucent. Room: 6A-106: 600 Mountain Ave Murray Hill, NJ 07974 Getting to Bell Laboratories

Time: 6:00 PM – 8:45 PM

Contact: Naresh Chand (908 723 7001); (nchand@ieee.org), Adriaan van Wijngaarden (avw@ieee.org) For Updates and Registration: Click Here Back to Calendar of Events:

August 06, 2012

Circuits and Systems Society /

Electron Devices Society present:

Enabling More Moore and More than Moore by Leveraging ALD and Related Processes

Speaker: Robert Clark of TEL Technology Center America

Abstract: The semiconductor industry has embraced the use of Atomic Layer Deposition

Vol. 59, No. 7



(ALD), a process for film deposition utilizing sequential repeating cycles of self-limited depositions, as the technology of choice for manufacturing High K gate dielectrics for leading edge transistors. The recent introduction of 22nm tri-gate transistors by Intel emphasizes the need for additional ALD-like processes, including for metal gates, spacers for sidewall image transfer and for etch stop layers. The majority of leading edge logic manufacturing is expected to follow a similar path and introduce FinFETs for production at 14nm technology nodes. Advanced memory production is also reliant on ALD/Molecular Layer Deposition (MLD) high K dielectrics for use as the DRAM capacitor dielectric. However, the potential of atomic level control, exemplified by ALD, is far from being fully realized. The use of anneals and other treatments interspersed during the ALD process has recently been shown to provide several optimization. opportunities for film With appropriate material choices we are able to reduce impurities and defects in the resulting films as well as create texturing and select the crystal phase of the film using interspersed treatments or anneals. Forming nano-laminates, controlled compositional gradients, and designed superlattices can also be enabled by ALD-like processes. New applications for ALD and related processes are currently under investigation including the use of ALD for doping in addition to a related process known as monolayer doping. The use of ALD layers for regulating the Schottky barrier height at metal/semiconductor interfaces was recently demonstrated as well. Related to ALD in principal, self-limited etching and oxidation processes provide the potential for feature thinning, as well as more tightly controlling interface layers between films- leading to designed interfaces. As scaling continues, the so-called "explosion of ALD" and related processes will continue to escalate in order to provide new materials, tighter control in 3 dimensions, and ultimately better performance. Beyond traditional CMOS and DRAM scaling as new devices are incorporated and scaled in future nano-systems, ALD and related processes will become dominant process technologies enabling the continuing

AUGUST 2012

growth of functionality, and thus continuing to enable the next node, the next device, and the next system even beyond the foreseeable roadmap. The above examples of technologies currently in use or under investigation will be described and discussed to illustrate the potential for ALD and related processes in the future. Finally, the potential of ALD-like processes to enable future devices and structures leads to the conclusion that there is still plenty of room at the bottom.

Biography: Robert D. Clark holds B.S. and M.S. degrees in chemistry from Virginia Polytechnic Institute and State University, earned in 1993 and 1995 respectively. In 2000 he completed his Ph.D. in Chemistry at the University of California, Irvine under the direction of Professor William J. Evans. Following his education he began his career working for the Schumacher unit of Air Products and Chemicals where he served as the technical lead for High K and metal gate precursor development. During his time at Schumacher/Air Products he successfully developed the first precursor used in high volume manufacturing for ALD High K gate dielectric deposition, and was co-inventor of the patented solid source container used for its vapor delivery. In 2006 he joined Tokyo Electron (TEL) at the TEL Technology Center, America LLC located in Albany, NY where he worked on new process development, primarily for ALD High K dielectrics and Vt adjustment layers. In 2010 he was elected Member of the Technical Staff for TEL U.S. and relocated to the Silicon Valley, where he currently works and resides. His current research focus is on unit process development incorporating ALD dielectric and metal layers for use in advanced logic and memory devices. He is a member of the Wafer and Environmental Contamination Control committee of the ITRS where he provides expertise related to FEOL precursors for ALD and CVD. He is also an active liaison and participant in SRC Device Sciences where he serves on the Technical Advisory Boards for Digital CMOS and Memory Technologies, as well as serving as the Vice Chair of the Device Sciences Science Area Coordinating Committee. He currently holds 23 issued U.S. Patents and has authored/co-authored more than 60 publications and conference presentations.

161 Warren Street Newark, NJ 07102
Getting to NJIT & Parking Information
Time: 4:30 PM to 6:30 PM
Contact: Dr. Durga Misra (973 596 5739) (dmisra@njit.edu)
Dr. Edip Niver (973 596 3542)
For Updates and Registration: Click Here
Back to Calendar of Events:

September 05, 2012

IEEE North Jersey Section EXCOM meeting - Clifton, NJ

Agenda: This executive committee (EXCOM) meeting of the IEEE North Jersey Section will be held in the Activity Room of the Clifton Public Library (Allwood Branch, 44 Lyall Road, Clifton, NJ 07012, T: (973) 471 0555).

There will be a get-together with a buffet starting at 6 pm.

The meeting starts at 7 pm EST and typically ends at 8:45 pm, when the library closes. The meeting is meant to discuss and coordinate the section's activities and new initiatives.

Everyone is welcome to attend this meeting.

Please register in advance for this meeting using VTOOLS to provide the meeting organizers an accurate head count. You can change/cancel the registration if your plans change.

Location: Clifton Public Library –

Allwood Branch Activity Room

44 Lyall Road, Clifton, NJ 07012

Getting to Clifton Library

Time: 06:00PM to 08:45PM

Contact: Section Chair (Naresh Chand, nchand@ieee.org) and/or the Section Secretary (Adriaan van Wijngaarden, avw@ieee.org).

For Updates and Registration: Click Here

Back to Calendar of Events:

Location: NJIT; ECE Building, Room 202:

Vol. 59, No. 7



North Jersey Section Nomination Committee Invites Nominations

The North Section is seeking new volunteers to help conduct business for the benefit of its membership. There are a variety of volunteer positions open and available. They range from technical to nontechnical, leadership or just participatory.

North Jersey Section Nomination Committee invites nominations for the election of section officers for 2013 for the following positions:

Chair,

Vice Chair 1,

Vice Chair 2,

Secretary,

Treasurer,

Member-at-Large (3 positions)

In addition, Various Societies will hold election of their respective officers (Chair, Vice Chair etc.). The members are encouraged to nominate for these positions if interested. One requirement for Society position is that the member should be a member of the society for which he or she should be a member of that society for which the nominations are sent.

The Society Chairs will conduct these elections. A list of Societies is published herewith.

Also, there are a number of volunteer opportunities available in all capacity at various committees. The members are encouraged to apply for any of these positions.

Please contact Kirit Dixit (kdixit@ieee.org), or Amit Patel (a.j.patel@ieee.org) and send in your nominations with your Name, Address, Membership Number, E-mail and position for which the nomination is desired.

How to subscribe to this newsletter if you are not a North Jersey IEEE Member?

To subscribe, send an email to: listserv@listserv.ieee.org, with the body containing "subscribe northjerseypublic"

To unsubscribe, send an email to: listserv@listserv.ieee.org, with the body containing "signoff northjerseypublic"

Additionally, you can join the IEEE North Jersey Section Facebook Fan Page at: www.facebook.com/pages/IEEE-North-Jersey-Section

Follow us on Twitter at: twitter.com/ieeenorthjersey Or join the LinkedIn IEEE North Jersey Section Group at: Linkedin Group Invitation

Back to Calendar of Events

Welcome New Members of IEEE North Jersey Section!

Barrett Crespo Dao	Debora Andres Elias Khoa Dang	Associate Member Graduate Student Member Student Member
Katehakis	Michael	Member
Lin	Guoyen	Graduate Student Member
Mehra	Akash	Graduate Student Member
Narayan	Arvind	Member
Nunna	Madhusudhan	Associate Member
Pennewell	John	Member
Pessima	Sarh	Graduate Student Member
Puthenpura	Sarat	Member
Ramos	Emmanuel	Student Member
Rojas	Michael	Student Member
Sukharenko	Vitaly	Graduate Student Member



The IRE, IEEE...and me! 1959 to now+

By Richard V. Snyder, Life Fellow, RS Microwave, Butler, NJ

The beginning:

As a late 1950's underclassman at Loyola-Marymount University in Los Angeles, I was made aware that it would be a good idea to join what I thought to be a club, the IRE chapter at our school. When I attended my first meeting, I found that many of the other people were also ham radio operators, and were interested in designing and building radio equipment. As I worked summers as an electronic technician, in factories, radio/TV stores, wherever...I was better at the actual building and soldering aspects than most of the other students. I remember asking one professor "where are these guys going to learn how to solder", and his answer was, "not here, for sure". I was learning that the IRE was about design professionalism and resource management. Well, as a 3rd year student, I received my IRE Student Member pin, and can remember the feeling of pride (even though my colleagues could not solder worth a darn). In 1962, the IRE and AIEE merged, to form the IEEE, and I received my first IEEE member pin (I still have it).

This photo is our Loyola Marymount University IRE group in 1960



Row 1: Frank, unidentified, Dolan, Gaughan, Koenn, Meenan. Row 2: unidentified, Snyder, Morrill, McNeil, Georges, Olenicz. Row 3: Dennis, unidentified, Pereyra, Buberl, Yorba, Horgan, Gene Kessler (moderator).

Institute of Radio Engineers

Vol. 59, No. 7





The Wet-Behind-The Ears Years:

In 1963, I was a 2nd year graduate student (in electromagnetics and circuits) at the University of Southern California, and as it turned out, my professor, Prof. Zorab Kaprelian, told me that it would be a good idea to attend the upcoming International Symposium of what was then called the "Professional Group on Microwave Theory and Techniques), an event to be held at the Miramar Hotel, in Santa Monica, California, my home town. Prof. Kaprelian knew many of the people, and in particular was friendly with Prof. Henry Riblet, the founder of the Microwave Development Labs, in Massachussets. Dr. Riblet was very famous from WWII RadLab days, and was the inventor of the short-slot quadrature hybrid, widely used in the microwave plumbing of radar and communications systems at the time. I managed to find a spot near Dr. Riblet and, observing his performance, learned something about how to present papers and respond to criticism of a presentation. I met so many people at that event that were the Gods of the microwave industry, and learned that not only were they academic stars and producers of great work, but also they liked to have fun, and some liked to have fun squared! I knew then where my professional future was to be! What could be better than mingling and working with these folks? Many of the people I met at that time became my mentors, both technically and in the ways of the IEEE and its technical societies. Some of that had to wait, because I was a 2nd Lieutenant, courtesy of the AFROTC, had been allowed to finish my MSEE, but now it was time to go to war. I had spent the 6 months after graduation with my BSEE learning to be a navigator on B-52 aircraft, and now had to take additional training and use it on what we called "practical application", i.e. missions.

Professional Development Years:

Upon returning from Vietnam and other places, I went to work for ITT Gilfillan, in Los Angeles, continuing at USC on a part-time basis. My involvement in IEEE continued, with lots of participation in local Chapter activity, various International Symposia and committees. In 1969, I was offered a very good position in New Jersey, and an opportunity to complete my PhD studies at Brooklyn Poly. I remember my first North Jersey Section Awards banquet in (I believe) 1972. It was at the Governor Morris Inn, in Morristown, and I noted that "everyone was old" and didn't like my music! Nothing has changed...(no comment). I was very active in the Chapter, with famous members such as George Zysman and Chapter Chairman Jerry DiPiazza, who supported by Reed Fisher and George Smith, pioneered the cellular telephone concept and systems, resulting in the addiction most of us have today to our cellular toys (thanks, guys).

In 1976, the Microwave Symposium was to be held in Cherry Hill, NJ. I volunteered to be Secretary of the Steering Committee. One of the people I had met back in 1963 was Kiyo Tomiyasu, one of the most famous people (today) in the IEEE (he is personally responsible for the IEEE Foundation and the Kiyo Tomiyasu IEEE award). Kiyo was TPC Chair for the 1976 IMS. There were many more familiar names involved at the 1976 event, such as Ray Camisa and Barry Perlman. The banquet speaker was NASA astronaut Dr. William Lenoir, who discussed "Powersat", which was to bring us solar power from space in a few years. I guess it is like the flying cars we expected at the beginning of the 21st century...promises, promises. However, the fact that Dr. Lenoir flew to the meeting in his personal T-33 jet was pretty impressive! Coincidentally, Dr. Riblet received the Microwave Career award at the 1976 event. I fought against the increasing level of commercial exhibition at the 1976 event, and argued vehemently with Burt Aaron that this was going to "ruin the IMS". (5 years later I apologized to Burt, and that involvement has truly helped build the MTT Society into the powerhouse it is today.) Well, you can't be right all the time! The die was cast, and I was caught up in the joy and energy of these events. I was just learning, but Kiyo took me under his wing, and showed me a thing or two or three about how IEEE works, how to organize events, and in general, whetted my taste for more involvement. Of course I was also involved with starting a company (RS Microwave in 1981) and finishing my doctoral work, but IEEE was (and is) ever present in my life and priority list.



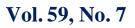
More Recent Years:

Let's fast forward to 1992, when I was given the opportunity to be Section Chair, following in the footsteps of Dick Tax and many predecessors. I had observed the one unifying characteristic of these leaders: concern for the IEEE, its technical future and the welfare of its members. I vowed to be as concerned, both as Section Chair and in all of the other volunteer positions and activities in which I have been fortunate enough to participate over the years since 1992. IEEE involvement at many levels (Chair of several Chapters), North Jersey Section Chair, started the North Jersey Minishow/minisymposium with Willi Schmidt, MTT Society (many positions and opportunities over the last 20 to 30 years), Transactions Associate editor, General Chair of IMS2003 in Philadelphia, awarded my Fellow pin by none other than Ted Saad, another famous person from that very formative 1963 Santa Monica Symposium, culminating in a recent high point for me, the chance to provide leadership as the 2011 MTT-S President. One good and bad aspect of that job was the over 300,000 flying miles I logged last year! Let's just say I have had to put many extra pages in my passport.



The "Now" times:

Our MTT Society has a brand-new initiative in China: a new Symposium that could rival the IMS itself in size. The new event, to be held for the first time next year in Beijing (April 13-18) is called the International Wireless Symposium, and will feature about 1000 attendees and 200 exhibition booths in 2013. It will be in Xi'an in 2014, and will rotate between cities in China, with the intent of increasing IEEE membership in China. We have competition, as China has its own electrical engineering professional society, and our job is to convince them to merge efforts, not diverge and compete. For me, the IEEE future holds more research, more papers submitted (and hopefully published), continuing involvement in Society and IEEE activities. I will be working in IEEE-TAB Strategic Planning next year, as well as an otherwise busy schedule with not only lectures and reports, but continuing to make a living with my microwave filter company, RS Microwave (we have survived 31 years so far and that is not too bad). IEEE has competition, and is getting so large that management issues are serious issues. When you have been around in an organization as long as I have in the IEEE, it is a responsibility (in my opinion anyway) to help solve problems, not just complain. It's a voluntary effort, and the primary net return to you as a participant, is the networking, the opportunity to work with and learn from brilliant and energetic people, from all over the world. Truthfully, it is an experience not to be missed, if you are an electrical engineering professional. I keep my feet in all three aspects of our profession: the administrative and professional (through leadership and volunteer activities), academia (adjunct or visiting professor at several US and non-US universities), and industrial (develop products, write and deliver papers).My debt will always be to those that introduced me to IRE, nurtured me through lots of growing pains in IEEE, and (sometimes) listen to what I have to say and write. I guess IEEE, its issues and its members, will be in my focus until they put a rope around my legs and drag me away!



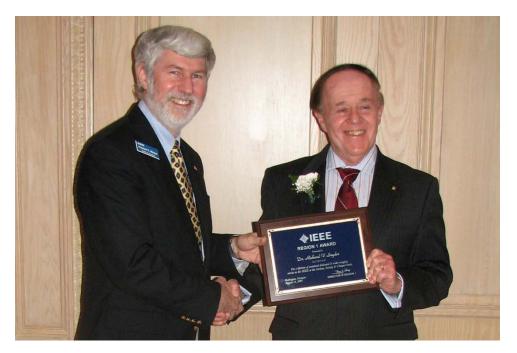






At IMS2012 in Montreal, June 2012

Memories sent by Howard Leach:



We congratulate Dr. Richard V. Snyder on his 50th IEEE membership anniversary and thank him for his many volunteer contributions to the IEEE. Within the North Jersey Section, he served as Chair of the AP/MTT and CAS/ED Chapters for many years, Section Chairman in 1992, and as founder and chair of the MTT/AP Mini - Show for many years which has and continues to provide surplus funding to the Section. Above the Section he served as President of the MTT-S Society in 2011. He has also served as a Distinguished Lecturer and on many other committees. For his many contributions to the MTT field, he was made an IEEE Fellow. For his many years of service to the Section he was recognized with the Region 1 William Terry Distinguished Lifetime Service Award in 2008, above, presented by Region 1 Director Howard Michel.







IEEE Celebrates 50th Year

Gordon Day, our 50th IEEE President, recently sent a memo to all Sections and Councils about three things that the IEEE was doing to commemorate this year as the 50th of the IEEE. The IEEE was founded on January 1, 1963, 50 years ago, through the merger of the AIEE (founded in 1884 with Alexander Graham Bell and Thomas Edison among the founding vice presidents) and the IRE (founded in 1912).

First, the IEEE has recognized those members who have been members continuously since the beginning, about 9400, by sending them a letter and a "Member 1st 50 Years" pin. Of these, 208 are North Jersey Section members. See the attached table.



The letter requested that these members contribute their memories to the IEEE Global History Network under a special heading: First-Hand: 50 Year Member First Hand Histories.

See:<u>http://www.ieeeghn.org/wiki/index.php/First-</u> Hand:50_Year_Member_First_Hand_Histories

One of these members, Max J. Schindler, past Section Chairman 1974-75, left his memories on 'Work at RCA on Traveling Wave Tubes.' Another is Richard V. Snyder, past Section Chair in 1992 and a whole lot more. Read about his IRE and IEEE experiences entitled: 'The IRE, IEEE...and me!' in this Newsletter.

Secondly, the editorial team of The Proceedings of the IEEE has produced a special 13th issue in this year's Volume 100 to commemorate IEEE's 50th year. This 13th issue contains papers that should be of interest to most members. They are available free of charge through IEEEXplore. The Proceedings started as the Proceeding of the IRE in 1912 and became the Proceedings of the IEEE with the merger in 1963 while the volume numbering was continued.

Finally, President Gordan Day would like to highlight what the IEEE has been doing in the international policy arena. In January, the IEEE endorsed the United Nations' declaration of 2012 as the International Year of Sustainable Energy for All. About 45 organizations, with a combined membership of over 2 million members, joined this supporting statement. You find statement have in can the at: http://www.ieee.org/about/news/2012/sefa_18june .

Vol. 59, No. 7



Please see the table below for names of the original Section Members of the IEEE North Jersey Section

Aiken, Richard Antonacos, J Argintar, H Babcock, W Bachmann, Richard Baum. M Bausmith, J Beloff, Amado Berg, S Blackwell, Richard Blum, Maurice Bobeck. Andrew Bock, Martin Breier, Fred Brodie, P Brolin, Stephen Browne, Thomas Bumiller. G Burruano, Samuel Bustin, W Butler, Warren Calkin, Edwin Cha Fong, Maurice Cheo. B Clerihew, A Cohen, Harvey Cooper, Sidney Crawford, J Dasaro, Lucian Decker. H Degazon, Donald Dewland, Joseph Di Domenico. M Dill, A Domanico, P Dorros, I Downes, P Dranetz, A Dugal, P Dymek,V Edmunds, J Ehrlich, Nathan

Elam, Edward Elbert, C Erenburg, Steven Ewin, James C Faulkner, L Feller, M Ficken, William Flanagan, J Fletcher, Irving Fockler, William Franco, Albert Franz. K Friedland, B Gardner, Richard George, W Glassman, C Golick, George Goodfriend, Lewis Gordon, E Gramlich, E Green, Leonard Greenbaum, Myron Greenfeder, Jack Greenfield, George Groudan, A Guttenberg, W Hall, W.G. Haller, Charles Harac, Sigmund Harbinsky, K Hendrix, K Hershkowitz, Harvey Hillman. Leon Hinman, Walter Hjelmar, Roy Hodowanec, G Hoffman, K Hollinger, W Homentowski, E Horing, S Horzepa, Joseph Hurwitz, J

Johnson, R Josenhans, J Kadin, Joseph Kaszerman, Philip Katz, Mordecai Kelly, Wm Kishpaugh, Allan Klaussen, H Kmetz, A Knapp, George Kratt, E Kronfeld, Arnold Kuhl, F Labianca, Frank Lafferty, Raymond Lager, Bruce Lerman, H Lerner, A Leventer, W Levey, L Levidow, W Levine, Donald Licata, Michael Lieberman, Herman Lipinski, M Lobosco, V Luber, David Ludwig, Martin Luxford, Edward Magerkurth, W Major, P Manz, August Mayo, Harry Mc Bride, Thomas Meisel, Herbert Meyer, Andrew Mills, H Moy, Robert Mueller, E Musil, R Naumann, F Nehra, C

Neu, E Nordlander, Frank Norian. Robert Northrop, David Norton, J Ott. H Parowski, G Peitzer, Herbert Perry, David Perugini, M Petrie, H Pettai, Raul Pincus, R Place, H Platt, Judith Ouast, Walter Rabinowitz, Martin Rand, Henry Regan, P Reich, S Reinish, Gloria Richman, Jay Roberts, Henry Robertson, J Roethe, Harry Rogers, David Rosen, S Rosenberg, A Rosenhein, E Samkoff, J Schachter, Harry Scheideler, L Schell. Frank Schindler, M Schmidt, C Schreiber, Otmar Schwartz, E Seadler, Stephan Sessler, L Shaw, D Silverberg, Michael Sinclair, R

Slump, W Smith, R Snyder, Richard Solomon, K Spitz, Theodore Stein, Morris Sterling, R Stiefel, K Stolar, G Strashinsky, Alex Strauch, George Strole.J Sulzberger, C Sulzberger, V Talmadge, William Tanenbaum, Morris Thornton, Peter Tomas. Michael Tongue, Ben Torrione, Peter Wadsack, Ronald Walker, H Wasserman, Arnold Waxman, Robert Weber, J Wehof, Hubert Weinmann, Ronald Weiss, Max M West, Irwin Whalen, A White, Alan Williams, J Williams, Neal Willis, Robert Winters, Heinz Yaworsky, Y Young, C Zlydak, V Zweibon, E Zysman, George













THE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS, INC.

IEEE NORTH JERSEY SECTION MTT-Society and AP-Society Joint Chapter PRESENTS:

27th ANNUAL SYMPOSIUM AND MINI-SHOW

FOCUS:

SELECTED TOPICS IN RF AND MICROWAVE TECHNOLOGIES FOR COMMERCIAL AND MILITARY APPLICATIONS

DATE: THURSDAY OCTOBER 4, 2012

PLACE: Hanover Manor, 16 Eagle Rock Ave., E. Hanover, NJ 07936. Ph# (973)-992-7425

SCHEDULE OF EVENTS

9:00 AM TO 4:30 PM TECHNICAL SESSIONS

10 –12 LECTURES FEATURING SPEAKERS FROM LEADING COMPANIES, WITH EMPHASIS ON MILITARY ELECTRONICS, WIRELESS TECHNOLOGIES AND MICROWAVE COMMUNICATIONS

MINI SHOW FEATURING LATEST PRODUCTS (APPX. 30-40 EXHIBITORS)

(COMPLIMENTARY LUNCH SERVED)

Details of the schedule and speakers and the topics will be posted by September 2011, on the IEEE North Jersey Section Home page at: IEE North Jersey Section

For further information contact:

CHAIR-EXHIBITION: KIRIT DIXIT (201-669-7599), kdixit@ieee.org PUBLICITY: ARTHUR GREENBERG (gardner1@optonline.net) EVENT/ LOCATION CO-ORDINATOR: KEN OEXLE (973-386-1156) k.oexle@verizon.net CO-CHAIR- TECHNICAL PROGRAMS: HAR DAYAL, (dayalhar@gmail.com) CO-CHAIR - TECHNICAL PROGRAM: GEORGE KANNELL (973-437-9990), (gkk@lgsinnovations.com) CHAPTER CHAIR: Dr. AJAY KUMAR PODDAR (201-560-3806), (akpoddar@synergymwave.com) CHAPTER CO-CHAIR: Dr. EDIP NIVER (niver@adm.njit.edu)

THERE IS NO CHARGE TO ATTEND THE SYMPOSIUM OR SHOW.

Vol. 59, No. 7





2012 IEEE North Jersey Section Volunteers

Executive Committee Chair - Naresh Chand chandnaresh@gmail.com Vice Chairman 1 - Russell Pepe rcpepe@ieee.org Vice Chairman 2 - Har Dayal dayalhar@gmail.com Secretary - Adriaan van Wijngaarden avw@ieee.org Treasurer - Kalyan Mondal mondal@fdu.edu Members at Large 1. Chris Peckham cdp@ieee.org 2. Mengchu Zhou zhou@njit.edu 3. Goran Djuknic gd@ieee.org Junior Past Chair - Amit Patel a.j.patel@ieee.org Senior Past Chair - Kirit Dixit kdixit@ieee.org

Society Chapters **Aerospace Electronic Systems** Society Chair - Naresh Chand chandnaresh@gmail.com Antennas and Propagation Society/ **Microwave Theory and Techniques** Society Chair - Ajay Poddar akpoddar@synergymwave.com Vice-Chair – Edip Niver niver@adm.njit.edu Circuits and Systems Society / **Electron Devices Society** Chair - Durga Misra dmisra@njit.edu **Communications Society** Chair - Nirwan Ansari nirwan.ansari@njit.edu **Computer Society** Chair - Hanna (Hong) Zhao zhao@fdu.edu **Controls Society** Chair - David Haessig davidhaessig@ieee.org **Engineering in Medicine and Biology Society** Chair - Raquel Perez-Castillejos raquelpc@njit.edu

Industrial Applications Society Chair - Ken Oexle k.oexle@ieee.org **Instrumentation Measurement** Society Chair - Russel Pepe rcpepe@ieee.org Vice-Chair – Peter J. Pupalaikis peterp@lecroy.com **Photonics Society** Chair - Naresh Chand chandnaresh@gmail.com **Power & Energy Society** Chair - Ron Quade rwquade@ieee.org **Signal Processing Society** Chair - Yun O. Shi shi@njit.edu Systems, Man, and Cybernetics Society Chair - Mike Liechenstein itsmikesju@aol.com Vehicular Technology Society Chair - Yu-Dong Yao yyao@stevens.edu

Technical Councils **Technology Management Council** Chair - Tony Almeida almeida@synergymwave.com

Affinity Groups **Consultants Network** Chair - Peter Schutz schutze@compuserve.com GOLD Chair - Dandan Wang wangdan79@hotmail.com Women in Engineering Chair - Zhiwei Mao zmao@fdu.edu LIFE Members Chair - Art Greenberg a.h.greenberg@ieee.org

Committees Awards/Recognition Chair - Ken Oexle k.oexle@ieee.org **Audit Committee** Chair - Fred Chichester fdchichester@gmail.com Education Co-Chair 1 - Donald Hsu yanyou@hotmail.com

Co-Chair 2- Kalyan Mondal mondal@fdu.edu Co-Chair 3 - Mengchu Zhou zhou@njit.edu Group coordinator / History Chair - Howard Leach h.leach@ieee.org **Membership Development** Chair - Mani Iyer miyer108@gmail.com Vice-Chair - Ajay Poddar akpoddar@synergymwave.com **MTT/AP** Trade Show and Symposium Chair - Kirit Dixit kdixit@ieee.org Vice-Chair – Har Dayal dayalhar@gmail.com TPC Co-Chair - George Kennall gkk@lgsinnovations.com **TPC Co-Chair** – Ajay Poddar akpoddar@synergymwave.com Newsletter Chair - Anisha Apte anisha_apte@ieee.org Nominations Chair - Kirit Dixit kdixit@ieee.org PACE Chair - Richard Tax rtax@verizon.net Vice-Chair – Paul E Ward peward@ieee.org **Pre-College Activities** Chair - Har Dayal dayalhar@gmail.com Vice-Chair – Hitaish Sharma hitaish@gmail.com **Student Activities** Chair - John C Taylor john.taylor86@live.com Webmaster Chair – Adriaan van Wijngaarden avw@ieee.org **Industrial Liaison** Chair-Kirit Dixit kdixit@ieee.org **Intersection activities** Chair- Amit Patel a.j.patel@ieee.org Legal Activities Joel Miller jm@joelmillerlaw.com

AUGUST 2012



