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

THE IEEE NORTH JERSEY SECTION NEWSLETTER

Vol. 61, No. 3   MARCH 2014

A Note from the Chair

When I became Chair of the North Jersey Section in January 2013, one of my primary goals was to focus on employment for our Membership. As you are all well aware, technical jobs in Northern NJ have rapidly diminished over the past ten years. I decided that the North Jersey Section of the IEEE needed to do something about this. With the excellent leadership of our Industry and Government Liaison, Art Greenberg, we worked on a campaign targeted to the political leaders prevailing over our state. Our plan is a multipronged approach, starting with a letter addressed to the Federal and State Government Officials. Art and I plan to mail this letter to the Governor's office, the State Legislators, and the US Congress Members representing NJ. We next plan to contact local officials involved in employment initiatives. We will subsequently set up meetings with these government officials with the intent of initiating a plan of action. High paying technical jobs are moving out of NJ. We plan to fight to get those jobs back. Engineers should be able to excel in the land cultivated by such prominent giants as Thomas Edison, Edward Weston, Willis Haviland Carrier and Carl Jansky, to name just a few.

After numerous revisions, we have agreed upon the letter presented below. Art Greenberg and I will dispense this letter as officials of the IEEE North Jersey Section. We solicit our membership to follow suit. Use our letter in its entirety or revise it to suit your individual discrimination. Send it to your government officials by mail and/or e-mail. You can easily locate the address and e-mail address for your officials on the web. Feel free to contact me if you have any questions.

Dear ___

We are writing this letter as the Chair of the North Jersey Section of the Institute of Electrical and Electronic Engineers (IEEE) and Chair of the section's Government and Industry Liaison Committee. The IEEE is the world's largest technical professional society, with 400,000 members worldwide, and is dedicated to advancing innovation and technological excellence in electronics and affiliated disciplines. Its purpose is to serve professionals involved in all aspects of the electrical, electronic and computing fields and related areas of science and technology that underlie modern civilization. There are currently 10,000 active members in New Jersey and 4,000 in the North Jersey section.

We want to make you aware of a situation that has the members of the North Jersey Section of the IEEE very concerned. New Jersey is currently experiencing a severe outward migration of high tech operations with the subsequent loss of permanent high paying jobs. Some of the more recent examples of this migration are CommScope, Fort Monmouth and Hoffman-La Roche. In addition, several companies are moving major parts of their operations out of New Jersey to other states. Obviously, this loss is not confined to the electronics industry. This loss of permanent jobs affects the economy of local businesses and is a loss of revenue to the state through income taxes and property taxes. It also reflects negatively on the character of New Jersey's reputation as a state of intellect and technological excellence.

The IEEE North Jersey Section, with its 4000 members, is offering to work with New Jersey's government officials to counter and to reverse this loss.

Several possible areas of effort would be:

1. A public relations campaign promoting the great potential and density of technical expertise, announcing new developments and breakthroughs, and recognizing entrepreneurs in the state. This could be done by news releases to technical publications and newspaper articles announcing new companies or contract awards.
2. An effort to establish "technology zones" in which groups of high tech companies could work in proximity efficiently (an example would be a systems company with subsystem, component, and software companies) which would also encourage potential employees to move to the state.
3. Encouraging liaison between high tech companies and our congressional delegation to impart technical information

about new developments in technology which could bring study contracts to industries and universities.

4. Assisting and encouraging technical societies to hold conferences in New Jersey. This would allow us to showcase our technological expertise and would provide an informal exchange between attendees that could produce contracts. It would also be a source of income for our tourist industry.

This letter, while being written by the IEEE, does not restrict itself to the field of electricity alone. Among the state's areas of technical expertise are chemicals, communications, defense electronics, information technology, medical research, optical and laser technology, pharmaceuticals, power generation and distribution, radio frequency (RF) and microwave technology, space technology, Civil Defense/disaster recovery and anti-terrorism.

New Jersey is the home of world renowned technical research organizations which include Bell Laboratories, and Sarnoff Laboratories. Colleges and universities that provide degree courses and conduct research in technology include The College of New Jersey, DeVry University, Fairleigh Dickinson University, New Jersey Institute of Technology, Princeton University, Rutgers University, and Stevens Institute of Technology. Federal government technical research and development facilities in our state include the F.A.A. William J. Hughes Technical Center, in Atlantic City, which houses Transportation Security and Homeland Security offices, Joint base McGuire-Dix-Lakehurst and Picatinny Arsenal. There are also many technical companies with expertise in these areas that compete effectively in the marketplace. Their growth would benefit the employment picture and economy in the state.

The IEEE world headquarters is in Piscataway and has resources to assist in this effort. There are many other technical societies with chapters in New Jersey and we will encourage them to join in this effort

As a first step, we would like to set up a meeting with the responsible personnel in your department to start a dialog. We want to reverse the migration from New Jersey now. Please contact us at your earliest convenience.

Respectfully,

Russell C. Pepe   Arthur Greenberg

Chair, IEEE North Jersey Section, rcpepe@ieee.org, 201-960-6796

Chair, Government and Industry Liaison, a.h.greenberg@ieee.org, 973-942-0048

Sincerely,

Russell C. Pepe,

Chair, IEEE North Jersey Section,

201-960-6796, rcpepe@ieee.org or atm_pepe@yahoo.com

The 2014 EXCOM meetings are now in vTools - the schedule is as follows -

Wed	Mar 5	Clifton Library
Wed	Apr 2	Bell Labs, Murray Hills
Sun	May 4	Birchwood Manor
Wed	Jun 4	Clifton Library
Wed	Aug 6	Bell Labs, Murray Hills
Wed	Sep 3	Clifton Library
Wed	Oct 1	NJIT, Newark
Wed	Nov 5	Clifton Library

Important information – Buyer's Edge Shopping

IEEE - North Jersey Group # 1431

The IEEE North Jersey Section is now a Member of the Buyer's Edge Shopping Service. The Buyer's Edge is a buying service that guarantees the lowest prices on major purchases for its 4 million members in the tri-state area of NY, NJ, CT and greater Philadelphia. They offer a Buy-By-Phone, Buy-Online and, in certain benefit categories and areas, Buy-In-Person. Many member benefits are available nationally, like Cars, Furniture and Kitchens; whereas, some benefits, like Appliances, are for the tri-state area only.

It is easy to use the services of the Buyer's Club. Visit the Web Site at: http://www.buyersedgeinc.com

Then, enter the following login information:

Username: 1431,   Password: member1

Happy shopping!

About Senior Membership

Do you know an outstanding IEEE member who is not yet an IEEE Senior Member? Do you feel that you are qualified for such recognition? If you are interested in becoming a Senior Member or nominating a fellow IEEE member please see http://www.ieee.org/membership_services/membership/senior for an application and for qualification requirements.

Assistance with references is found on the Senior Member Web page and within the application form. You can also contact any of the North Jersey Section Executive Committee members including Membership Development Chair or Society Chapter Chairs at the local level or attend an IEEE North Jersey Section meeting or upcoming Senior Member Drives, where qualified attendees will be happy to actively support you in the nomination process.

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

Calendar of Events

- **March 4, 5:30 PM to 9:00 PM** - **IEEE SAC - 2014, IEEE Student Paper Competition**
  Location: Muscarelle, Room 105, Teaneck, NJ 07666, Getting to FDU
  Contact: John C Taylor john.taylor1204@gmail.com   Read More…

- **March 5, 12:00 PM to 1:00 PM: IEEE CS/History: LINCS Canvas Browser: Interactive Web App to Query, Browse and Interrogate L1000 Gene Expression Signatures -** Dr. Avi Ma'ayan, Associate Professor, Icahn School of Medicine, NYC
  Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT
  Contact: Hong Zhao (201)-692-2350, zhao@fdu.edu; Howard Leach h.leach@ieee.org, Read More…

- **March 5, 4:45PM to 6:30PM: IEEE AP/MTT, ED/CAS: Timing Closure at Advanced Nodes** - Jayaram Bhasker of eSilicon Corporation
  Location: ECEC 202, 141Warren St, Newark, NJ 07102 Getting to NJIT
  Contact: Dr. Ajay Kumar Poddar, Phone: (201) 560-3806, (akpoddar@ieee.org) Durga Misra (973-596-5739), Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu) Read More...

- **March 5, 6:30 PM to 8:45 PM: IEEE North Jersey Section EXCOM Meeting – Clifton NJ**
  Location: Clifton Public Library (Allwood Branch, 44 Lyall Road, Clifton, NJ 07012 Getting to Clifton Public Library
  Contact: Russell Pepe (rcpepe@ieee.org), Chris Peckham (cdp@ieee.org) &/or Adriaan van Wijngaarden (avw@ieee.org). Read More…

- **March 12, 4:45PM to 6:30PM: IEEE PACE: Engineers Meet for a Spring Social**
  Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 Getting to Clifton Library
  Contact: Paul Ward, pward1130@aol.com, (973 790-1625)

- **March 20, 5:45 PM to 7:30 PM: IEEE MTT/AP-S, ED/CAS-S: – Noise in Deep-submicron CMOS Transistors -** Prof. Madhu Gupta, San Diego State University
  Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT
  Contact: Dr. Ajay Kumar Poddar, Phone: (201) 560-3806, (akpoddar@ieee.org) Durga Misra (973-596-5739),
  Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu)   Read More…

- **March 25, 6:00 PM to 7:15 PM: AP/MTT, ED/CAS: Using Biometric Technologies for Smart Cities and Adaptive Environments –** Prof. (Dr.) Vincenzo Piuri, Università degli Studi di Milano, Italy
  Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT
  Contact: Dr. Ajay Kumar Poddar, Phone: (201) 560-3806, (akpoddar@ieee.org) Durga Misra (973-596-5739),
  Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu)

- **April 2, 6:30 PM to 8:45 PM: IEEE North Jersey Section EXCOM Meeting – Murray Hill, NJ**
  Location: Clifton Public Library (Allwood Branch, 44 Lyall Road, Clifton, NJ 07012 Getting to Clifton Public Library
  Contact: Russell Pepe (rcpepe@ieee.org), Chris Peckham (cdp@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org),
  Read More…

- **April 8, 5:30 PM to 7:00 PM: AP/MTT, ED/CAS: Design of GaN Power Amplifiers –** Dr. Edward Niehenke of Niehenke Consulting
  Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT
  Contact: Dr. Ajay Kumar Poddar, Phone: (201) 560-3806, (akpoddar@ieee.org) Durga Misra (973-596-5739), Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu) Read More…

- **April 15, 5:45 PM to 7:15 PM: AP/MTT, ED/CAS: Evolution of Passive and Active Microwave Filters -** Dr. Richard Snyder, RS Microwave, NJ
  Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT
  Contact Dr. Ajay Kumar Poddar, Phone: (201) 560-3806, (akpoddar@ieee.org) Durga Misra (973-596-5739), Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu)   Read More…

IEEE NORTH JERSEY SECTION – Short Courses

- **IEEE North Jersey Section Course: C# .NET Programming** - Seven weekly classes (March 1, 8, 22, 29, April 5, 12, 19, 2014) New Jersey Institute of Technology, Newark, New Jersey

- **IEEE North Jersey Section Course: Project Management** - Seven weekly classes (March 1, 8, 22, 29, April 5, 12, 19, 2014) New Jersey Institute of Technology, Newark, New Jersey

- **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: IEEE North Jersey Section**
- **Visit: vTools Registration to register for a meeting or event**

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

Meeting Announcements

March 04, 2014

SAC Presents: 2014 IEEE Student Paper Competition

The objective of this meeting is to have students present projects they've been working on, whether it a senior design project or project of interest. The presentations will be judged off a criteria based around clarity, content, eye contact, etc. Students will gain experience presenting ideas and concepts in front of an audience in preparation for the Region 1 Student conference occurring later in March at NJIT.

Location: Muscarelle, Room 105, Teaneck, NJ 07666
Getting to FDU

Time: 05:30PM to 09:00PM

Contact: John C Taylor john.taylor1204@gmail.com

For Updates and Registration: Click Here

March 05, 2014

LINCS Canvas Browser: Interactive Web App to Query, Browse and Interrogate L1000 Gene Expression Signatures

Speaker: Dr. Avi Ma'ayan, Associate Professor in the Department of Pharmacology and Systems Therapeutics at the Icahn School of Medicine at Mount Sinai in New York City.

Abstract: For the NIH project LINCS, gene expression profiles were collected from many human cancer cell-lines responding to thousands of chemical and genetic perturbations for a total of over one million experiments. Visualizing and analyzing such large dataset for biological knowledge extraction is challenging. The LINCS Canvas Browser (LCB) is an interactive HTML5 web-based application that facilitates querying, browsing and interrogating almost all currently available LINCS gene expression data. LCB implements two compacted layered canvases, one to visualize clustered experiments and the other to display enrichment analysis results.

Biography: Dr. Avi Ma'ayan is an Associate Professor in the Department of Pharmacology and Systems Therapeutics at the Icahn School of Medicine at Mount Sinai in New York City. Dr. Ma'ayan is also the Director of the Computational Core of the Systems Biology Center New York (SBCNY). Dr. Ma'ayan earned a BS and MS in Computer Science degrees from Fairleigh Dickinson University, and a PhD in Biological Sciences from Mount Sinai School of Medicine. Since his faculty appointment in 2007 Dr. Ma'ayan published over 80 peer-reviewed articles where several of them are in top-tier journals. Dr. Ma'ayan served on various NIH and NSF review panels, and he is currently serving on the editorial board of several journals. The Ma'ayan Laboratory applies computational and mathematical methods to study the complexity of regulatory networks in mammalian cells using graph-theory algorithms, machine-learning techniques and dynamical modeling. The Ma'ayan Lab also develops software systems to help experimental biologists form novel hypotheses from high-throughput data, and develop theories about the structure and function of regulatory networks in mammalian cellular systems..

Location: Muscarelle, Room 105, Teaneck, NJ 07666

Getting to FDU

Time: 12:00PM to 01:00PM

Contact: Hong Zhao (201)-692-2350, zhao@fdu.edu; Howard Leach h.leach@ieee.org

For Updates and Registration: Click Here

March 05, 2014

IEEE AP/MTT, ED/CAS, NJIT present:

Timing Closure at Advanced Nodes

Speaker: Jayaram Bhasker of eSilicon Corporation

Abstract: This talk describes some of the challenges in timing closure at advanced nodes. The first half of the presentation gives an overview of static timing analysis (STA), what are corners, what are parasitics, and what kind of checks are checked in STA. The presentation also provides a brief explanation of how interconnect delay is computed, and what are late and early paths.

The second half of the talk focuses on some of the issues pertaining to advanced nodes, namely variation, inversion and run time complexity. Variation can be local and global. Inversion can cause non-intuitive corners to have worse times. And run time complexity is getting everyone worried about the cost of doing STA.

Biography: Dr. Bhasker is a distinguished author and expert in the area of hardware description languages and RTL synthesis. He has published a number of papers in journals and conferences, and has authored numerous books on VHDL, Verilog, SystemVerilog, SystemC and more recently on static timing analysis. Bhasker has served on several conference committees including the Design Automation Conference, Design & Verification Conference (DVCon) and VHDL International Users Forum (VIUF). He has been the chair of two working groups: the IEEE 1076.6 VHDL Synthesis Working Group and the IEEE 1364.1 Verilog Synthesis Working Group and a major contributor to the IEEE Std 1076.3 NUMERIC packages.

Bhasker is currently an Architect at eSilicon Corporation in Allentown, PA, where he guides physical design methodology for all chips that tapeout at eSilicon. He has also been a Senior Architect at Cadence Design Systems, and a Distinguished Member of the Technical Staff at Bell Laboratories. He is the recipient of the Honeywell Excel Pioneer Award (1987) and the IEEE Computer Society Outstanding Contribution Award (2005). Bhasker holds a Ph.D. degree in Computer Science

from the University of Minnesota and an M.Tech and B.Tech. from Indian Institute of Technology, New Delhi.

Email: jbhasker@esilicon.com

Address: 1605 N. Cedar Crest Blvd, Suite 615, Allentown, Pennsylvania, United States, 18103

Location: ECEC 202, 141Warren St, Newark, NJ 07102
Getting to NJIT

Time: 4:45PM to 6:30PM
(4:45 PM Pizza & Soda, 5-6 PM Seminar)
You don't have to be an IEEE member to attend.

Contact: Durga Misra (973-596-5739), Edip Niver (973-596-3542)

For updates and Registration: Click Here

March 05, 2014
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.

For more information, please contact Russell Pepe (rcpepe@ieee.org), Chris Peckham, and/or Adriaan van Wijngaarden (avw@ieee.org).

Location: Clifton Public Library - Allwood Branch, Activity Room, 44 Lyall Road, Clifton, NJ 07012

Getting to Clifton Public Library

Time: 06:00PM to 08:45PM

Contact: Adriaan J. van Wijngaarden, (avw@ieee.org)

For Updates and Registration: Click Here

March 12, 2014
IEEE PACE presents: Engineers meet for a Spring Social

NJ Section MEMBERS, PACE, GOLD, WIE, SWE and students are invited.

Speaker: Everyone will have an opportunity to express their views about the profession, jobs and opportunities. We begin our meeting with introductions by all.

Abstract: This meeting is about getting all IEEE members together for a light evening of discussion and hospitality. We

can also hold a brainstorming session to discuss future meetings and activities. All are invited. We shall encourage North Jersey Section Ex-Com officers to attend. When they do, our Section membership will have an opportunity to meet with them on a first name basis.

Bring your associates, friends and spouses.

Welcome: Members and students from other professional societies and engineering disciplines are always welcome. We now include members from IEEE, ASME and AEA.

For more information about these groups see:
www.ieeeusa.org

http://web.njit.edu/~ieeenj

www.asme.org/sections/northjersey

www.aea.org

We encourage them to support the Jersey Section

Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011
Getting to Clifton Memorial Library

Time: 6:30PM to 8:45PM
Contact: Paul Ward, PWard1130@aol.com, (973 790-1625)

For updates and Registration: Click Here

March 20, 2014
IEEE MTT/AP-S, ED/CAS-S present: Noise in Deep-submicron CMOS Transistors

Speaker: Prof. Madhu Gupta of San Diego State University

Abstract: During the early decades of their existence, MOS transistors were considered unsuitable for RF and low-noise applications due to their lower cutoff frequencies and higher noise, as compared to bipolar devices. With shrinking gate lengths, and cutoff frequencies in the upper millimeter wave frequency range, that perception began to change in the 1990s, with CMOS devices now becoming the workhorse for all but the most demanding of low-noise applications. A critical element in their widespread use in low-noise RF designs is the availability of CMOS device noise models. While the widespread use of CAD tools, some of them including noise models, gives the impression that things are well understood and under control, numerous difficulties exist. So-called "noise models" of CMOS devices often tend to be little more than empirical curve-fitting exercises; lack of robust parameter extraction methods prevents parametric studies based on experimental data; predictions of noise for devices with new (not merely scaled) designs is fraught with problems; and the impact of deep-submicron geometries on the high-frequency noise is still a subject of debate. This talk will trace the development of understanding in this area, and report the progress made on several fronts in CMOS noise investigation, including 1/f noise in the devices.

Biography: Madhu S. Gupta is presently the RF Communications Systems Industry Chair Professor in Electrical Engineering at San Diego State University, where

he also serves as the Director of the Communication Systems and Signal Processing Institute. Dr. Gupta has served as the Editor-in-Chief of IEEE Microwave and Guided Wave Letters and IEEE Microwave Magazine. Dr. Gupta has published over 100 writings, including journal articles, conference and invited papers, patents, book chapters, and reviews. He is the editor of Electrical Noise: Fundamentals and Sources (IEEE Press, 1977), Teaching Engineering: A Beginner's Guide (IEEE Press, 1987), and Noise in Circuits and Systems (IEEE Press, 1988), and is a Fellow of the IEEE. He was the President of IEEE Microwave Theory & Techniques Society during 2013.

Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 Getting to NJIT

Time: 05:45PM to 7:30PM

Contact: Dr. Ajay Kumar Poddar, Phone: (201) 560-3806 (Email:akpoddar@ieee.org)

For Updates and Registration: Click Here

March 25, 2014

IEEE AP/MTT, ED/CAS present:

Using Biometric Technologies for Smart Cities and Adaptive Environments

Speaker: Prof. Dr. Vincenzo Piuri, Università degli Studi di Milano, Italy

Abstract: Adaptability and advanced services in smart cities and adaptive environments require intelligent technological support for knowing the needs and the desires of citizens in the interactions with the environment during their daily activities. To this purpose in some cases we can discover these characteristics by observing the human behavior, while in others we can retrieve stored information associated to the person. In both cases, the use of biometrics can be extremely useful both to understand the human behavior and to identify the person or the class of persons with similar characteristics so as to derive their needs and desires.

Biometric technologies allow in fact for analyzing human traits (e.g., face, fingerprint, palm) for identity management without requiring individuals to carry tokens or remembering information. These technologies allow also for classifying the persons by observing soft-biometric traits (e.g., gait, height, weight, emotions), thus associating the needs typical of the detected class. Besides, some soft-biometric traits (e.g., gestures) allow for specifying actions desired by the person.

This talk will analyze the opportunities offered by biometric technologies and applications to support the realization of adaptable operations and intelligent services in smart cities and adaptive environments. Attention will be also given to a comprehensive system design methodology to take into account all application requirements, including the need for privacy protection.

Biography: Dr. Vincenzo Piuri is IEEE Vice President-Elect for Technical Activities (2014), IEEE Systems Journal Editor-in-Chief (2013-15), Universita' degli Studi di Milano,

Department of Computer Science via Bramante 65, 26013 Crema (CR), Italy;

Prof. Piuri has received his Ph.D. in computer engineering at Politecnico di Milano, Italy (1989). He has been Associate Professor at Politecnico di Milano, Italy and Visiting Professor at the University of Texas at Austin and at George Mason University, USA. He is Full Professor in computer engineering (since 2000) and has been Director of the Department of Information Technology at the Università degli Studi di Milano, Italy. His main research interests are: biometrics, pattern analysis and recognition, signal and image processing, machine learning, theory and industrial applications of neural networks, intelligent measurement systems, industrial applications, fault tolerance, digital processing architectures, embedded systems, and arithmetic architectures. Original results have been published in more than 350 papers in international journals, proceedings of international conferences, books, and book chapters.

Prof. Piuri is a Fellow of the IEEE, Distinguished Scientist of ACM, and Senior Member of INNS. He is Editor-in-Chief of the IEEE Systems Journal (2013-15), and has been Associate Editor of the IEEE Transactions on Neural Networks and the IEEE Transactions on Instrumentation and Measurement. He is IEEE Vice President-Elect for Technical Activities (2014), and has been IEEE Director and IEEE Delegate for Division X, President of the IEEE Computational Intelligence Society, Vice President for Publications of the IEEE Instrumentation and Measurement Society and the IEEE Systems Council, Vice President for Membership of the IEEE Computational Intelligence Society, and Vice President for Education of the IEEE Biometrics Council.

Prof. Piuri received the IEEE Instrumentation and Measurement Society Technical Award (2002) for the contributions to the advancement of theory and practice of computational intelligence in measurement systems and industrial applications, the IEEE Instrumentation and Measurement Society Distinguished Service Award (2008), and the IEEE Computational Intelligence Society Meritorious Service Award (2009).

Email: vincenzo.piuri@unimi.it
Address: Milano, Italy, Italy

Location: ECEC 202, 141Warren St, Newark, NJ 07102
Getting to NJIT

Time: 6:00PM to 7:15PM
(6:00 PM Refreshments/Dinner,
6:15PM - 7:15 PM Seminar)
You don't have to be an IEEE member to attend.

Contact: Dr.-Ing. Ajay Kumar Poddar, (201)560-3806 (akpoddar@ieee.org)

Durga Misra (973-596-5739), Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu)

For updates and Registration: Click Here

April 02, 2014
IEEE North Jersey Section EXCOM meeting – Murray Hill, NJ

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 your plans change.

For more information, please contact Russell Pepe (rcpepe@ieee.org), Chris Peckham (cdp@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

Location Bell Laboratories, Alcatel-Lucent, Main Building, Room Number: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974, Getting to Bell Labs

Time: 06:00PM to 08:45PM

Contact: Adriaan J. van Wijngaarden, (avw@ieee.org)

For Updates and Registration: Click Here

8 April, 2014
IEEE AP/MTT, ED/CAS present:
Design of GaN Power Amplifiers

Speaker: Dr. Edward Niehenke of Niehenke Consulting

Abstract: This lecture introduces attendees to the GaN-transistor, its properties, various structures, including the latest GaN power amplifier (PA) design techniques. The properties of GaN will be presented showing the advantage of these devices over GaAs and Si. GaN HEMT transistors will be shown delineating the various geometries, semiconductor processes and structures with associated performance. Guidelines for reliable operation will be presented considering device junction temperature including thermal management techniques. The nonlinear models of GaN HEMT devices necessary for the CAD of PAs will be presented. Design considerations for both constant amplitude envelope signals as well as the non-constant amplitude envelope signals will be presented. Step-by-step design procedures will be shown for various GaN PA examples including different classes of operation as well as the popular Doherty PA.

Biography: Edward C. Niehenke was born in Abington, PA, in 1937. He received his BS (1961), MS (1965), and PhD (1997) degrees in electrical engineering from Drexel University, Philadelphia, PA.

From 1961 to 1963 he was with Martin Marietta where he developed microwave transitions for superconducting delay lines and investigated behavior of semiconductor devices at 770K. From 1963 to 1997 he was with Westinghouse/Northrop Grumman in Baltimore, MD, where he was responsible for the development of state of the art RF/microwave/millimeter wave circuits, miniature integrated assemblies, and subsystems. He retired from Northrop Grumman in 1997 as a senior advisory engineer and is now a consultant and lectures on nonlinear circuits and transceiver design.

Dr. Niehenke has pioneered the development of innovative RF/microwave/millimeter wave circuits including: super low-noise amplifiers, PIN and Schottky barrier limiters, efficient linear power amplifiers, voltage tunable high Q VCO resonators, electrostatic switch and phase shifters, high power bipolar amplifier with internal matching and subharmonic suppression, silicon carbide wideband frequency multipliers, active PHEMT multiplies, receiver protectors with multi-level STC attenuator, low-noise microstrip voltage controlled and dielectric resonator stabilized oscillators, subharmonic image rejection and image enhanced mixers, planar millimeter wave two axis monopulse transceiver with switchable polarization, and low-phase noise millimeter wave fiber optical links . He recently led the development of state-of-the-art 94 GHz solid-state transmitter and transceiver miniature modules reducing the cost of millimeter wave systems and making them practical. Niehenke's innovations can be found in over 15 operational production systems.

Dr. Niehenke holds nine patents, three Westinghouse Trade Secret Awards, one Westinghouse Value Engineering Merit Award, and one George Westinghouse Innovation Award. He has given over 120 presentations at symposia, workshops, IEEE chapter/section meetings, and keynote addresses at conferences. He has authored over 30 papers on RF/microwave/millimeter wave circuits. He was on the faculty of the Johns Hopkins University, teaching electricity and magnetism for three years. As the IEEE Microwave Theory and Techniques Society 1986/87 Distinguished Microwave Lecturer, he gave his lecture "Gallium Arsenide–Key to Modern Microwave Technology" to 70 groups throughout the world. Since 1983 he has been actively teaching linear, nonlinear, and transceiver circuit design for wireless communications to over 3000 professionals throughout the world.

Dr. Niehenke is a member of the Microwave and Millimeter Wave Integrated Circuits, Microwave Systems, and Wireless Communications MTT-S Technical Committees. He was the advisor (2010), technical program chairman (1998) and chairman (1986) of the International Microwave Symposia held in Baltimore. He serves as a member of the MTT-S Technical Program Committee since 1983 and is the MTT-S Ombudsman. Niehenke was a member of MTT-S ADCOM for 9 years, was a recipient of the IEEE Centennial and Millennium Medals, is a fellow of the IEEE, and is a registered professional engineer in the State of Maryland.
Email: e.niehenke@ieee.org
Phone: +1 410 796 5866

Address: Baltimore, Maryland, United States

Location: ECEC 202, 141Warren St, Newark, NJ 07102
Getting to NJIT

Time: 5:30PM to 7:00PM
(5:30 PM Refreshments/Dinner,
6:00PM - 7:00 PM Seminar)
You don't have to be an IEEE member to attend.

Contact: Dr.-Ing. Ajay Kumar Poddar, (201)560-3806
(akpoddar@ieee.org)

Durga Misra (973-596-5739), Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu)

For updates and Registration: Click Here

15 April, 2014
IEEE AP/MTT, ED/CAS present:
Evolution of Passive and Active Microwave Filters

Speaker: Dr. Richard Snyder of RS Microwave, NJ

Abstract: "All the World is a Filter" is true today, but was it always so ? The study of passive networks stemmed from the need to understand the performance issues associated with the early power grid at the beginning of the 20th century. Development of radio communication necessitated careful attention to parasitic elements and the limitations of simple representations of inductors, capacitors, etc. The evolution of distributed elements as extensions of lumped descriptions led to significant developments in the area of synthesis, meaning that performance could be tailored to meet needs. Approximation of passive elements by active equivalents is still a work in progress. The danger is ignorance of basic principles and dependence on simulation rather than analytic thinking. This paper will explore history, discuss the present, and try to look into the crystal ball to see what might be just around the corner

Biography: Richard V. Snyder is President of RS Microwave (Butler, NJ, USA), author of 94 papers and three book chapters, and he holds 19 patents. His interests include E-M simulation, network synthesis, dielectric and suspended resonators, high power notch and bandpass filters and active filters. He received his BS, MS and PhD degrees from Loyola-Marymount, USC and Polytechnic Institute of New York (Brooklyn Poly). Dr. Snyder served the IEEE North Jersey Section as Chairman and 14-year Chair of the MTT-AP Chapter. He chaired the IEEE North Jersey EDS and CAS Chapters for 10 years. He twice received the Region 1 Award. In January 1997 he was named a Fellow of the IEEE and is now a Life Fellow. In January 2000, he received the IEEE Millennium Medal. Dr. Snyder served as General Chairman for IMS2003, in Philadelphia. He was elected to ADCOM in 2004. Within the ADCOM, he served as Chair of the TCC and Liaison to the EuMA. He served as an MTT-S Distinguished Lecturer, from 2007-2010, as well as continuing as a member of the Speakers Bureau. He was an Associate Editor for the IEEE Transactions on Microwave Theory and Techniques,

responsible for most of the filter papers submitted. He is a member of the American Physical Society, the AAAS and the New York Academy of Science.

He was the MTT-S President for 2011.

Also a reviewer for IEEE-MTT publications and the MWJ, Dr. Snyder teaches and advises at the New Jersey Institute of Technology He is a Visiting Professor at the University of Leeds, in the U.K. He served 7 years as Chair of MTT-8 and continues in MTT-8/TPC work. He is the organizer of the annual IWS conference in China. He previously was Chief Engineer for Premier Microwave.
Email: r.snyder@ieee.org
Address: President, RS Microwave, Butler, NJ

Location: ECEC 202, 141Warren St, Newark, NJ 07102
Getting to NJIT

Time: 5:45PM to 7:15PM
(5:45PM Refreshments/Dinner,
6:15PM - 7:15PM Seminar)
You don't have to be an IEEE member to attend.

Contact: Dr.-Ing. Ajay Kumar Poddar, (201)560-3806
(akpoddar@ieee.org)

Durga Misra (973-596-5739), Prof. Edip Niver (973)596-3542, (edip.niver@njit.edu)

For updates and Registration: Click Here

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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

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North Jersey Section Employment Network Announcement

Join the North Jersey Employment Network for assistance with your job search. By joining our network, you will have access to our LinkedIn group and to seminars in a variety of emerging technologies such as Hadoop, Big Data, Python, Cloud, Analytics, Java, etc.

Please email the chair, Suzanne McIntosh (SKranjacMcIntosh@yahoo.com) for additional information or to join the LinkedIn group

Back to Calendar of Events

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

IEEE North Jersey Section Seeks Committee Chairs and Section Volunteers

The IEEE North Jersey 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 non-technical, leadership or just participatory. A list of IEEE North Jersey Societies, Chapters, Groups and Committees are published at the end of the newsletter for those interested in participating. If you would like to become involved with volunteering in some of these efforts or positions or just become more informed about what is happening at the North Jersey Section, please contact Nominations Committee chair, Amit Patel at a.j.patel@ieee.org. You are welcome to attend the Section's executive committee meeting held the first Wednesday of every month to learn more about volunteer activities that require some help. Please check out the website below for published meeting times and locations. Some committees needing volunteers include the following. Please contact the person indicated for additional information.

Young Professionals (formerly Graduates of the Last Decade) Affinity Group Volunteers and Committee members needed

Contact: Sean Kennedy (sean.kennedy@alcatel-lucent.com)

WIE (Women in Engineering) Affinity Group Volunteers and Committee members needed –

Contact: Zhiwei Mao (zmao@fdu.edu)

EMBS (Engineering in Medicine and Biology Society) is seeking active committee volunteers –

Contact: raquelpc@njit.edu

Computer Society Chapter Committee Volunteers –

Contact zhao@fdu.edu

Technical Management Council Committee Volunteers – **Contact:** almeida@synergymwave.com

North Jersey Section Awards Committee Volunteers – **Contact** k.oexle@ieee.org

Membership Development Committee Volunteers –

Contact miyer108@gmail.com

Additionally, if interested volunteers would like to get more general information about the section, including a complete listing of all chapters and committees, visit the North Jersey section website http://sites.ieee.org/northjersey or contact anyone listed above.

Back to Calendar of Events

Welcome! New Members of the IEEE North Jersey Section

Full Name		IEEE Current Grade
Shegil	Attour Shaji	Graduate Student Member
Roger	Buhay	Student Member
Christopher	Conklin	Student Member
William	Contreras	Graduate Student Member
Abraham	Cosme	Student Member
Sebastian	Falk	Graduate Student Member
Ho	Fung	Student Member
Erica	Gucciardo	Student Member
Patrick	Jan	Student Member
Gillian	Koch	Student Member
Marissa	Liberacki	Student Member
Anqi	Liu	Graduate Student Member
Joel	Manansala	Student Member
Anthony	Matos	Student Member
Sean	Mulligan	Student Member
Mohan Kumar	Palaniswamy	Graduate Student Member
Saumil	Patel	Student Member
Michael	Paulauski	Student Member
Daniel	Pinedo	Student Member
Alexandru	Popa	Student Member
Celiano	Portero	Student Member
Rafy	Reyes	Student Member
Giancarlo	Rico	Student Member
Joao Paulo	Rodrigues	Student Member
Sean	Sullivan	Student Member
Edwin	Tan	Student Member
Kenny	Tanglao	Student Member
David	Umana	Student Member
Nicholas	Villa	Student Member
Jackie	Vinasco	Graduate Student Member
Logan	Weiss	Student Member
Jonathan	Wong	Student Member
Darling	Zapata	Student Member

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

IEEE North Jersey Section Course
C# .NET Programming

Saturdays, March 1 through April1 19, 2014
Seven weekly classes (March 1, 8, 22, 29, April 5, 12, 19, 2014)
New Jersey Institute of Technology, Newark, New Jersey (Checks should not be mailed to this address)

IEEE North Jersey Section thanks New Jersey Institute of Technology, for sponsoring this course.

The IEEE North Jersey Section is offering a course entitled "C# .NET Programming". Since 2004, C# .NET has generated significant headway in Fortune 1000 enterprise development systems. Dice.com lists 1000+ C# .NET jobs (up from 720 last year) in the New York tri-state area daily! This course will cover the fundamentals of C# language, the .NET framework, window and web-based applications, ADO.NET, ASP.NET, and XML. It will be useful for anyone to develop applications based upon these tools.

You will receive the IEEE Certificate of Completion when you finish the course. Microsoft Corp. has MCAD and MCSD certifications. You may wish to get certified by taking the necessary Microsoft exams with the knowledge gained from this course.

Past attendees got jobs at AT&T, Goldman Sachs, IBM, Microsoft, Verizon, and other Fortune 500 firms.

Instructor: Donald Hsu, PhD., has been a corporate manager for 11 years and is an experienced trainer. Since 2006, he has trained 700+ people in C++, Java, Oracle, and WebLogic, XML, and C #.NET in 8 different organizations.

TOPICS

- Compare the enterprise development tools using Java to C# .NET
- Define Visual Studio .NET Version 2008 to latest
- Identify C# syntax, data type, control structures and common language runtime
- Distinguish methods, arrays, object-oriented programming
- Build graphical user interface, multithreading, files and streams
- Explain the benefit of using extensible markup language (XML)
- Select database, SQL server, and ADO .NET
- Choose ASP .NET, web forms, web services, advanced topics
- Present student Projects

WHERE: New Jersey Institute Technology, Newark, New Jersey

WHEN: 7 Saturdays, March 1, 8, 22, 29, April 5, 12, 19, 2014, 9:00 AM to 12:00 noon

COST: IEEE members $500; Non-IEEE members $550.

Contact: Donald Hsu, yanyou@hotmail.com

REGISTRATION: C# .NET Programming

Please mail the completed registration with a check **(payable to "North Jersey Section IEEE") to:**

Donald Hsu, PhD, Chair Education Committee, IEEE North Jersey Section, P.O. Box 2093, Fort Lee, New Jersey 07024.

Name: _____   Email address _____

☐ Non-member

☐ IEEE Member   Member #:_____

Employer: _____

Employer Address: _____

_____

Home Address: _____

Business (day) telephone #:_____   Home telephone #:_____

Please enclose required fee payable to: **North Jersey Section IEEE**

☐ I wish to receive IEEE Completion Certificate   Signature: _____

IEEE North Jersey Section Course

Project Management

Saturdays, March 1 through April1 19, 2014
Seven weekly classes (March 1, 8, 22, 29, April 5, 12, 19, 2014)
New Jersey Institute of Technology (Checks should not be mailed to this address)
IEEE North Jersey Section thanks New Jersey Institute Technology for sponsoring this course

   The North Jersey Section IEEE is offering a course entitled "Project Management". Dice.com lists *5000+* Project related jobs in the New York tri-state area daily! This course will help you to break down a master project into manageable tasks, pinpoint possible solutions, and provide information to keep the project under control. Using *Microsoft Project 2010* software, you will learn to accomplish various project plans. In addition, it will greatly enhance your business, communications and interpersonal skills.

   You will receive the IEEE Certificate of Achievement and earn 2 IEEE Continuing Education Units (CEUs) when you complete the course. You may wish to take the Certification exam in *Project Management* administered by Project Management Institute from the knowledge that you learned in this course. This is *not an exclusive PMP-PMI examination prep course.* No PDUs are issued for PMP eligibility. However, past attendees did successfully get the PMP certifications!

   Instructor: Marilyn Moux, PMP, ITILv3, Cloud Essentials, CAP and Security+., has been a corporate manager for 20+ years and an IT security professional with experience within the entire Software Development Life Cycle Project Management.

TOPICS

* *Explain the need for a project manager*
* *Define SOW, PERT, GANTT, CPM, and Scope of the project*
* *Identify the team members, resources and plan for the strategy*
* *Calculate schedule, budget variances, and monitor project progress*
* *Manage changes, estimates, and communications*
* *Set a baseline, import tasks from MS Excel, export MS Project files to MS Word*
* *Approve updates and conclude a project plan*
* *Analyze Cloud Computing, Service Level Agreements, IT Security*
* *Present student Projects*

WHERE: New Jersey Institute Technology, Newark, New Jersey
WHEN: 7 Saturdays, March 1, 8, 22, 29, April 5, 12, 19, 2014, 9:00 am to 12:00 noon
COST: IEEE (& affiliate) members $500; Non-IEEE members $550.
CONTACT: Donald Hsu, yanyou@hotmail.com

REGISTRATION: Project Management

Please mail the completed registration form with a check **(Checks payable to "North Jersey Section IEEE") to**

Dr. Donald Hsu, Chair Education Committee, IEEE North Jersey Section, P. O. Box 2093, Fort Lee, New Jersey 07024.

Name: _____ Email address _____

☐ Non-member

☐ IEEE Member Member #:_____ Member of _____ technical society

Employer: _____

Employer Address: _____

Home address: _____

Business (day) telephone #:_____ Home telephone #:_____

Please enclose required fee payable to: **North Jersey Section IEEE**

☐ I wish to receive the IEEE Completion Certificate   Signature: _____

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

2014 IEEE North Jersey Section Volunteer

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