



THE IEEE NORTH JERSEY SECTION NEWSLETTER

Vol. 58, No. 7

NOVEMBER 2011

- *Everyone is welcome to all our Section events*
- *You do not have to be a member of IEEE to attend them*
- *Non IEEE Members can receive the monthly newsletter too using our new public mailing list*
 - ❖ *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"*
- *Unless otherwise stated, all events are free of charge and free refreshments are provided*
- *If there is any fee, it is waived for unemployed IEEE members*
- *All section events are posted and updated on our website and VTOOLS*
- *Prior registration on VTOOLS is encouraged and appreciated*
- *For more details, updates and registration of events please visit:*
http://webinabox.vtools.ieee.org/wibp_calendar/index/R10327

Calendar of Events:

- **Nov 01, 2011: 7:00 PM TO 8:30 PM**

Synthesis of Carbon-Based Nanoscale Materials and Direct Write of Structures for the Next Generation Antennas – Kate Duncan, US Army, CERDEC

Location: Synergy Microwave Corporation, 201 McLean Boulevard, Paterson, NJ 07504

Contact: Dr. Chandra Gupta (973) 881 8800 x2250)

- **Nov 02, 2011: 6:00 PM TO 8:45 PM**

North Jersey Section Excom Meeting

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

Contact: Library Number: (973) 471-0555

- **Nov 05, 2011: 1:00 PM – 6:00 PM**

ISTEP: Integrated Student Transition to Engineering/Technology Professional

Location: ECEC 202, NJIT, 161 Warren Street, Newark, NJ 07102

Contacts: Durga Misra (dmsira@ieee.org)

- **Nov 08, 2011: 4:15 PM – 6:00 PM**

Cross-Layer Architecture and Design Approaches for Optical Networks - Balagangadhar G. Bathul, Columbia University

Location: ECEC 202, NJIT, 161 Warren Street, Newark, NJ 07102

Contacts: Nirwan Ansari (973)-596-3670

- **Nov 09, 2011: 6:30 PM – 8:45 PM**

ENGINEERS MEET: NEW EMPLOYMENT NETWORK

Location: Clifton Memorial Library, 292 Piaget Ave, Clifton, NJ 07011

Contacts: Paul Ward - 973 790-1625 or peward@ieee.org Richard F. Tax - 201- 664-6954 or rtax@verizon.net

- **Nov 09, 2011: 6:30 PM – 8:30 PM**

Personal Financial Management - Edward Colville of Edward J. Colville LLC

Location: Conference Room 6A-106, Alcatel-Lucent, 600 Mountain Ave, Murray Hill, New Jersey

Contacts: Dandan Wang @ 972-259-7222.

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NOVEMBER 2011

Calendar of Events cont'd:

- **Nov 11, 2011: 6:30 PM – 8:30 PM**

An FDU S-PAC Event: What Engineering School Does Not Teach You - Carl Selinger

Location: Fairleigh Dickinson University, Muscarelle Building Room 105

Contacts: IEEE.FDU@gmail.com or FDU.IEEE@gmail.com

- **Nov 12, 2011: 7:30 PM – 10:00 PM**

The Dangers of Electric Lighting: Presentation about Tesla and Edison

Location: LUNA STAGE, 555 Valley Road, West Orange, NJ 07052

Contacts: John Taylor (973-395-5551)

- **Nov 16, 2011: 4:30 PM – 6:15 PM**

The Perspective of Nanotechnology and its Convergence with Future Information Technology

- Jong Min Kim of Samsung Advanced Institute of Technology, South Korea

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

Contact: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu) or Dr. Edip Niver (973) 596-3542

- **Nov 17, 2011: 12:00 PM TO 6:00 PM**

Mini Colloquium: From Beam-Leads to MEMS and Beyond: Devices, Circuits and Photonics to Systems Approach in Modern Communications -

Dr. Renuka Jindal, President IEEE Electron Device Society,

Distinguished Lecturers Dr. Antony Fiory, NJIT; Dr. Martin P. Lepselter, Retired from Bell Labs; Dr. Jeffrey S. Walling, Rutgers University and many other distinguished members

Location: ECE Building, Room 202, NJIT, 161 Warren Street, Newark, NJ 07102

Contacts: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu) or Dr. Edip Niver (973) 596-3542 (NJIT) or Dr. Haim Grebel (973) 596-3538 or Prof. N.M. Ravindra (973) 596-3278 (ravindra@adm.njit.edu)

- **Nov 17, 2011: 6:45 PM TO 8:45 PM**

Distinguished Lecture: A Sensitivity Based Generalization Error Model for Supervised Learning Problems - Daniel Yeung, Chair Professor of Computing, The Hong Kong Polytechnic University, Hong Kong

Location: ECEC Room Number: 202, 140 Warren St. Newark, NJ 07102

Contact: Dr. Mike Liechenstein (973-471-0721) or Prof. MengChu Zhou (908-268-1183)

E-Mails: ITSMIKESJU@AOL.COM or ZHOU@NJIT.EDU

Please RSVP and check the electronic newsletter for any changes.

- **Nov 22, 2011: 6:00 PM TO 8:00 PM**

BPSolver's Winning Solutions to the ASP Competition Problems - Neng-Fa Zhou, Ph.D. & Professor, Brooklyn College & Graduate Center, The City University of New York

Location: ECEC 202, Jersey Institute of Technology (NJIT)

Contact: Prof. MengChu Zhou (908-268-1183 or (ZHOU@NJIT.EDU)

- **Nov 30, 2011: 4:00 PM TO 5:00 PM**

SP Seminar on Spatiotemporal Event Detection in Mobility Network - Principle Member of Technical Staff at the AT&T labs, Florham Park, NJ

Location: Babbio Center 310, Stevens Institute of Technology, NJ 07030

Contact: Prof. Hong Man (201) 216-5038, hman@stevens.edu

- **Dec 07, 2011: 6:00 PM TO 8:45 PM**

North Jersey Section Excom Meeting

Location: Chand Palace, Banquet Hall, 269 Littleton Road, Parsippany NJ 07054

Contact: Naresh Chand, Cell # 908 723 7001 (**Restaurant Number:** (973) 334 5444)

- **Dec 14, 2011: 6:30 PM TO 9:00 PM**

ENGINEERS MEET. Career Coaching: A Three-Fold Approach

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

Contact: Paul Ward, 973 790-1625, peward@ieee.org Richard F. Tax, 201- 664-6954, rtax@verizon.net, (**Lib. No:** (973) 772- 5500)

- **Dec 16, 2011: 9:00 AM TO 2:00 PM**

Electrical Testing of Protective Relays

Location: PSE&G - Hadley Road Facility, 4000 Hadley Road, South Plainfield, NJ 07080

Contact: Ronald W. Quade, P.E., (973) 219-8802 or rwquade@ieee.org

- **North Jersey Section announces election of the officers for 2012!**

- **Not a North Jersey IEEE Member? Find out how to subscribe to our public mailing list!**

Meeting Announcements:

November 01, 2011

IEEE North Jersey Aerospace and Electronics Systems Society (AESS) and AP/MTTS Chapters present:

Synthesis of Carbon-Based Nanoscale Materials and Direct Write of Structures for the Next Generation Antennas

By: Kate Duncan, US Army, CERDEC

Abstract: This talk will present the current and future of carbon based materials, especially focusing on the direct write technologies of nanomaterials for the next generation of antennas. Synthesis methods of graphene shall be highlighted, with a detailed discussion of chemical methods to produce graphitic oxide for printing of RF structure will be covered. Direct write technologies shall be discussed graphene and other transparent conductors for flexible electrodes and radiating structures will be addressed. Printable and flexible electronics of nano materials will be covered in detail.

Biography: Kate Duncan obtained her PhD in Applied Physics from New Jersey Institute of Technology. For her dissertation work she developed and demonstrated affordable manufacturing techniques for integrating electrically conductive polymer based shock, vibration and infrared sensors into composite aviation structural components. Kate is currently an electrical engineer with the Army in the Antennas Technology & Analysis Branch of CERDEC. Since joining CERDEC she has been engaged in the development of novel nanomaterials for the next generation antennas systems. Synthesis, deposition, material and electrical characterization have been her focus. This has resulted in her group being among the first to successfully deposit chemically reduced graphene by ink-jet printing on transparent substrate for RF applications. She has developed a direct write laboratory enhancing the Army's in-house prototyping capabilities.

Location: Synergy Microwave Corporation, 201 McLean Boulevard, Paterson, NJ 07504.

Time: 6:30 PM – 8:30 PM

Contacts: Dr. Chandra Gupta (973 881 8800 x2250)

[For Updates and Registration:](#)

November 02, 2011

North Jersey Section Excom Meeting

Note: Buffet 6 PM, meeting 7 PM, 8:45 PM (hard end time)
Section Business Discussion/Planning for all chapters, groups, committee chairs

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

Time: 6:00 PM – 8:45 PM

Contacts: Library Number: (973) 471-0555

[For updates and registration:](#)

November 05, 2011

ED/CAS and R1 Southern Area presents:

ISTEP: Integrated Student Transition to Engineering/Technology Professional

Abstract: Whether it is global networking, professional development, or access to the world's most advanced technical innovations, IEEE offers a wide spectrum of benefits!

iSTEP, Region 1's Integrated Student Transition to Engineering/Technology Professional program, provides students, industry professionals, and IEEE leaders the opportunity to share career experiences at one venue. Learn how IEEE can shape your future, and provide career development tools to help you succeed, at this iSTEP event. Attend an iSTEP and glean wisdom from local industry and IEEE leaders in mentoring breakout sessions where they can help you navigate through the professional world to realize your aspirations. All 2011 iSTEP events take place between 1:00pm and 6:00pm.

Meeting Agenda:

1:00PM: Welcome

1:10PM: Keynote: "Scalability of YOUR IEEE Membership"

1:30PM: "IEEE One Voice" Video

1:45PM: Introduction of IEEE Organization, Membership Benefits, Activities, GOLD Program, and Volunteering Opportunity

2:15PM: IEEE Mentoring Connection

2:45PM: Break

3:00PM: Panel Session "Mentoring for Professional Development"

4:00PM: Breakout Session: Meet your Mentors and Mentees

5:00PM: Mentoring Game

6:00PM: Ice-Cream -OR- Pizza Party

Parking will be in the parking deck located at 154 Summit Street, Newark, NJ 07102

Location: ECEC 202, NJIT Newark, NJ 07102

[Getting to NJIT](#)

Time: 01:00 PM - 06:00 PM

Contacts: Durga Misra (dmisra@ieee.org)

November 08, 2011

North Jersey COMSOC and NJIT present:

Cross-Layer Architecture and Design Approaches for Optical Networks

By: Balagangadhar G. Bathul, Columbia University

Abstract: In the recent past, optical networks had evolved as the provider for high bandwidth pipe in Internet. Telecom vendors across the world have already started to deploy optical data rates in the order of 100 Gb/s and beyond. These next generation, long distance optical networks would

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

require rapid provisioning of connections, fast protection schemes against failures, quality of transmission (QoT), and fully dynamic wavelength switching. Redesigning the complex layered network architecture would be necessary to provide the service level agreements (SLAs), to improve energy efficiency, and to decrease the cost per bit for switching traffic. This talk discusses our efforts to achieve such clean-slate network design, which will enable a programmable optical layer.

Biography: Balagangadhar G. Bathul received his M.Tech (Opto Electronics and Laser Technology) from International School of Photonics, Cochin University, India and PhD degree in Electrical & Communication Engineering, Indian Institute of Science, Bangalore in 2004 and 2008, respectively. Between Aug 2007 - May 2008 and Oct 2009 - May 2010, Bala was with University of Massachusetts, Dartmouth as a Visiting Scholar. In 2008-2009, he was a post-doc fellow at the Department of Electrical Engineering, University of Leeds, UK. Since May 2010, he is working as the post-doc at Lightwave research laboratory at Columbia University. He is coordinator for working group on Intelligent Aggregation Networks in CIAN (Center for Integrated Access Networks) NSF ERC (Engineering Research Center).

Location: ECEC 202, NJIT, Newark, NJ 07102

Getting to NJIT

Time: 4:15 PM – 6:00 PM

Contacts: Nirwan Ansari (973)596-3670

For Updates and Registration: and COMSOC Chapter Activities

November 09, 2011

NJ Section PACE presents:

ENGINEERS MEET: NEW EMPLOYMENT NETWORK

Abstract: Engineers meet to DISCUSS a new initiative: An employment network Project to help IEEE members with employment assistance. IEEE USA has initiated a project called Employment Network comprising a group of individuals who come together in face-to-face meetings or electronically to help each other's employment search. The vision is that an Employment Network would allow participants to talk candidly about job searching and career advancement with the shared goal of supporting all members' efforts to regain employment. Typical activities will include networking among members and potential employers, job leads, information-sharing, coaching, training and cheerleading. To support this noble cause, on Wednesday, November 9, 2011, the North Jersey Section Professional Activities Committee (PACE) invites all those who are interested to participate and lead this network. We will meet to discuss the formation of this Engineers Employment Network and elect its leaders. This is designed to bring engineers and employers together. It will also provide networking opportunities. At mid-meeting, we will enjoy conversation with Pizza, soda & refreshments. This is a special side of the profession that needs to be covered. IEEE USA and North Jersey Section of IEEE will provide all

initial support and tools that are necessary to start this network. Please come and attend. All are welcome. Feel free to bring your friends. Engineers, employers and Students are, all, encouraged to attend. Our PACE meetings offer opportunities for lively discussions. Historically, once members get started they just do not want to leave. Our meetings are entertaining, thought provoking and provide opportunities to network.

Job Notices: Bring any job notices or employment information to the meeting. Employment Opportunities are always welcome.

Location: Clifton Memorial Library, 292 Piaget Ave
Clifton, NJ 07011

Time: 6:30PM to 8:45PM

Contacts: Paul Ward - 973 790-1625 or peward@ieee.org

Richard F. Tax - 201- 664-6954 or rtax@verizon.net

Directions: tel. 973 772-5500

For updates and registration:

November 09, 2011

IEEE GOLD and Women in Engineering Society presents:

Personal Financial Management

By: Edward Colville of Edward J. Colville LLC

Abstract: This talk is to give some general ideas on personal financial management, which include three parts. First, it helps to review the personal budget, including the expense/income percentages, set -up and tracking of budget and debt reduction. Secondly, it will talk about the tax planning and preparation, which will cover W-4(s), 401(k) plans/Company Stock Plan, IRAs and Other pre-tax expenses. Lastly, this talk will discuss the life insurance plans. It aims to help both engineering students and professional engineers to better manage their finance.

Biography: Edward Colville is the owner of Edward J. Colville LLC, an Accounting & Tax Consultants Firm. Edward graduated from Fordham University with a Bachelor's Degree in Accountancy. He is a Certified Public Accountant licensed by the State of New York. He started his career in public accounting and has experience in the Media, Entertainment, Financial Services, and other industries as well. He has worked in the finance & accounting departments in both large publicly traded companies and small to mid-sized private companies. Edward also has experience and a vast knowledge of small businesses, individual & business taxation, and business formation. He is a member of the American Institute of Certified Public Accountants (AICPA) and the Insurance Internal Audit Group (IIAG).

All are welcome! You do not have to be a member of the IEEE to attend.

Location: Conference Room 6A-106, Alcatel-Lucent, 600 Mountain Ave, Murray Hill, New Jersey (The conference room 6A-106 is located at the back side of the Bell Labs Technology Showcase area, which is in the visitor's area at the right side

of the main entrance reception desk.)

Time: 6:30PM to 8:30PM (Dinner starts at 6:00PM)

Contacts: Dandan Wang (972-259-7222)

wangdan79@hotmail.com or

Dr. Zhiwei Mao at zmao@fdi.edu

For updates and registration:

November 11, 2011

IEEE Student Branch at Fairleigh Dickinson University and Women in Engineering Society presents:

An FDU S-PAC Event: What Engineering School Does Not Teach You

By: Carl Selinger

Abstract: Carl Selinger provides straightforward, practical skills to acquaint young engineers. This seminar will discuss in **plain English** many of the "soft" skills and need to know knowledge that is often not taught in school. Come and learn what you might be missing. Come and ask questions about his work experience and how he got into the work force. There can be invaluable tips that will aid you in your success!

Biography: Carl Selinger holds civil and transportation engineering degrees from Cooper Union, Yale University, and Polytechnic University. He is active professionally in American Society of Civil Engineers (ASCE); Institute of Transportation Engineers (ITE); American Society for Engineering Education (ASEE); and Women's Transportation Seminar (WTS). In WTS he has mentored young professionals for ten years, and the Greater NY Chapter honored him as "1998 Member of the Year." He is an Honorary Member of the Sperry Transportation Award. He is a globally published author whose book and articles on professional and career development appear widely. Carl gives professional development seminars. His forty-year career spans aviation, transportation planning and strategic business planning, mainly during his 31-year career with The Port Authority of NY & NJ. Leaving as Manager, Aviation Business Development, Carl developed business, concessions and technology initiatives to improve services and increase revenues at Kennedy, LaGuardia and Newark Liberty airports, one of the world's largest airport systems. Carl has extensive college teaching experience: Adjunct Professor of Civil Engineering at The Cooper Union teaching urban transportation planning for over 35 years. He has taught graduate-level aviation and transportation planning courses at SUNY Maritime College, Pace University, New Jersey Institute of Technology and City University of New York (York College and City College). He is a faculty advisor to Cooper Union's chapter of Tau Beta Pi (the national engineering honorary society), which elected him "Eminent Engineer". Carl is a Past President of the Cooper Union Alumni Association, and was Cooper Union's "1993 Alumnus of the Year." His motto: "Ideas are always welcomed!"

All are welcome! You do not have to be a member of the IEEE to attend.

Time: 12:00PM to 1:00PM, Pizza lunch will be provided.

Location: Fairleigh Dickinson University, Muscarelle Building Room 105

Contacts: IEEE.FDU@gmail.com or FDU.IEEE@gmail.com

November 12, 2011

IEEE GOLD, Women in Engineering Society and SAC presents:

The Dangers of Electric Lighting: Presentation about Tesla and Edison

Abstract: In the mid 1880s the world is emerging from darkness; the advent of the electric light is about to illuminate the globe. The power to spread this new wonder sits cradled in the hands of one man, Thomas Alva Edison. But when a young Serbian immigrant named Nikola Tesla arrives looking for work, Edison must struggle to keep the future of electricity within his control. The Dangers of Electric Lighting examines the ambitions and pride that accompany genius, the concessions made in the name of progress, and the darkness on the road to light up the world.

\$25 attendance fee with use of CODE DR5

Location: LUNA STAGE, 555 Valley Road, West Orange, NJ 07052

Time: 7:30PM to 10:00PM

Contacts: John Taylor or call 973-395-5551

For Updates and Registration:

www.lunastage.org

November 16, 2011

Electron Devices Society, Circuits and Systems Society and NJIT presents:

The Perspective of Nanotechnology and its Convergence with Future Information Technology

By: Jong Min Kim of Samsung Advanced Institute of Technology, South Korea

Abstract: This talk will present the current and future of nanotechnology, especially focusing on the convergence of nanotechnology with electronics, photonics, energy, and biology. Nanoelectronics aspect will address the nano-carbon such as graphene and carbon nanotubes in flexible and transparent electrodes, transistors, and in switching devices. This will further address displays, lighting, THz radiation, network transistors and many other applications. As a part of nanophotonics, quantum dot and its related application for LED and displays will be addressed. The talk will also discuss nano-energy generator for energy harvesting. Concept of e-nose and e-tongue with nano wires will be presented. Printable and flexible electronics is discussed with nano materials. The convergence of nanotechnology is covered in details.

Biography: Dr. Jong Min Kim is a Samsung Group Fellow and a Senior Vice President of Samsung's Frontier Research Labs, Samsung Advanced Institute of Technology (SAIT) at Seoul, South Korea. He has authored and co-authored more than 225 refereed journal publications and 144 Conference presentations and several articles are in the journals "Nature" and "Science" in quantum dot photonics area. He received numerous awards in display technology and in nanostructure science including Special Achievement Award by Nano Korea'09 by Korean Government and Best paper Award from Samsung for his paper in 'Science.' He received his BSEE in 1980 from Hong-ik University, M.S.E.E. and Ph.D. in Electrical Engineering from New Jersey Institute of Technology in 1986 and 1992 respectively. He has worked at the US Army Research Laboratory and during 1992-94 for FED Corporation. He is listed as an Inventor on 72 domestic patents and 107 international patents.

Location: NJIT, ECEC 202, 140 Warren St. Newark, NJ 07102

For Directions: [Getting to NJIT](#)
[For Street Map please click here](#)

Time: 4:30 PM – 6:15 PM

Contact: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu) or Dr. Edip Niver (973) 596-3542

For more details, updates and registration please visit:
[For Updates and Registration:](#)

November 17, 2011

Electron Devices/Circuits and Systems, PHO36, NJIT ECE and Physics Dept. presents a series of talks on the topic:

Mini Colloquium: From Beam-Leads to MEMS and beyond: A celebration of the contributions of Dr. Marty Lepselter

By: Dr. Renuka Jindal, President IEEE Electron Device Society, Distinguished Lecturer, EDS

Abstract: This Mini-Colloquium is organized to celebrate the contributions of Dr. Marty Lepselter.

Biography: Renuka P. Jindal received his Ph.D. degree in Electrical Engineering from University of Minnesota in 1981 with minors in Physics and Material Science. Upon graduation, he joined Bell Laboratories at Murray Hill, New Jersey. His experience at Bell Labs over 22 years bridged both technical and administrative roles. On the technical side he worked in all three areas of devices, circuits and systems. Highlights include fundamental studies of noise behavior of scaled sub-micrometer MOS devices; design of high-performance Gigahertz-band RF integrated circuits and physics of low-noise signal amplification and detection including optoelectronic integration. On the administrative side he developed and deployed a corporate-wide manufacturing test strategy in relation to contract manufacturing for Lucent Technologies. In addition, he established and taught RF IC design courses at Rutgers

University. In Fall of 2002 Dr. Jindal joined University of Louisiana at Lafayette as William and Mary Hansen Hall Board of Regents Eminent Scholar Endowed Chair. He academic interests include teaching and fundamental research using an end-to-end approach from devices to circuits to systems in relation to modern wireless and Lightwave communications.

In 1985 Dr. Jindal became a senior member of IEEE. He received the Distinguished Technical Staff Award from Bell Labs in 1989. In 1991, he was elected Fellow of the IEEE for his contributions to the field of solid-state device noise theory and practice. From 1987 to 1989 he served as editor of the solid-state device phenomena section of IEEE Transactions on Electron Devices. In 1990 he was named Editor-in-Chief of the IEEE Transactions on Electron Devices. In December 2000 he received the IEEE 3rd Millennium Medal. From 2000 to 2008 he served as the Vice-President of Publications for the IEEE Electron Devices Society (EDS). In December 2007 he was voted in as President-Elect of EDS. Beginning in January 2010, Dr. Jindal now serves as President of IEEE Electron Devices Society. He has also participated in ABET activities as an evaluator for Electrical Engineering programs at institutions in the United States.

Topic: CMOS Power Amplifiers: Switching to a new paradigm

By: Dr. Walling

Abstract: Wireless devices and sensors are increasingly ubiquitous in all aspects of life. As a result, researchers have worked tirelessly to provide more functionality and ever higher data rates to the devices. Researchers are challenged to use energy more efficiently, due to finite battery capacity and increasing need to reduce their demands from the electric grid. In this talk I will address the challenge of using energy more efficiently in wireless communications systems by leveraging linearization around CMOS switching amplifiers. These switching amplifier topologies provide means to increase output power, efficiency and integratability of the PA with the rest of the radio circuitry, a major stumbling block in the quest for the RF system-on-a-chip (SOC). The talk will summarize why switching amplifiers can outperform their linear counterparts and introduce several switching amplifier topologies, and focus on linearization methods that allow their use in systems with non-constant envelope modulation, including pulse-width and -position modulation (PWPM) and envelope elimination and restoration (EER). The talk will conclude with the introduction of a new topology that utilizes switched capacitors to enable a significant improvement in average efficiency and linearity utilizing a combination of data converter and power amplifier techniques.

Biography: Dr. Walling received the B.S. degree from the University of South Florida, Tampa, in 2000, and the M.S. and Ph. D. degrees from the University of Washington, Seattle, in 2005 and 2008, respectively. Prior to starting his graduate education he was employed at Motorola, Plantation, FL working in cellular handset development. He interned for

Intel, Hillsboro from 2006-2007, where he worked on highly-digital transmitter architectures and CMOS power amplifiers and continued this research while a Postdoctoral Research Associate with the University of Washington. He is currently an assistant professor in the electrical and computer engineering department at Rutgers, The State University of New Jersey.

His current research interests include low-power wireless circuits, energy scavenging, high-efficiency transmitter architectures and CMOS power amplifier design. Dr. Walling has authored over 20 articles in peer reviewed journals and refereed conferences. He received the Yang Award for outstanding graduate research from the University of Washington, Department of Electrical Engineering in 2008, an Intel Predoctoral Fellowship in 2007-2008, and the Analog Devices Outstanding Student Designer Award in 2006.

Program Details:

12:00 – 01:00 Buffet Lunch
 01:00 - 01:05 Introduction by D. Misra (co-chair)
 01:10 - 01:15 Introduction of Marty Lepselter by Don Sebastian, VP Research, NJIT
 01:15 - 01:30 Renuka Jindal (IEEE EDS President)
 01:30 – 01:45 James C. Phillips
 01:45 – 02:00 George E Georgiou
 02:00 - 02:30 Dr. Anthony Fiory, NJIT: (Technical Talk)
 02:30 - 03:00 Coffee Break
 03:00 - 03:15 Marty Lepselter
 03:15 - 03:30 Al MacRae
 03:30 – 03:45 Ally VonNeida
 03:45 – 04:00 Haim Grebel
 04:00 - 04:45 Professor Jeffrey S. Walling of Rutgers University: “RF-Mixed-Signal IC”
 04:45 - 04:50 Presentations: Renuka Jindal
 04:50 – 05:00 Concluding Remarks by N.M. Ravindra (co-chair)
 05:00 Reception
 All Welcome!

You do not have to be a member of the IEEE to attend.

Location: ECE Building, Room 202, NJIT
 161 Warren Street, Newark, NJ 07102

Time: 12:00PM to 06:00PM
 (Buffet Lunch will begin at 12:00 PM)

Contacts: Dr. Durga Misra (973) 596-5739 (dmisra@njit.edu)
 or Dr. Edip Niver (973) 596-3542 (NJIT) or Dr. Haim Grebel
 (973) 596-3538 or Prof. N.M. Ravindra (973) 596-3278
 (ravindra@adm.njit.edu)

No Admission Charge.

For Updates and Registration:

November 17, 2011

IEEE SMC Chapter presents:

Distinguished Lecture: A Sensitivity Based Generalization Error Model for Supervised Learning Problems

By: Daniel Yeung, Chair Professor of Computing, The Hong Kong Polytechnic University, Hong Kong

Abstract: Generalization error model provides a theoretical support for a classifier's performance in terms of prediction accuracy. However, existing models give very loose error bounds. This explains why classification systems generally rely on experimental validation for their claims on prediction accuracy. In this talk we will revisit this problem and explore the idea of developing a new generalization error model based on the assumption that only prediction accuracy on unseen points in a neighborhood of a training point will be considered, since it will be unreasonable to require a classifier to accurately predict unseen points "far away" from training samples. The new error model makes use of the concept of sensitivity measure for multiplayer feedforward neural networks (Multilayer Perceptrons or Radial Basis Function Neural Networks). The new model was developed for both single and multiple classifier systems. Its usefulness is demonstrated in the problems of architecture selection and feature reduction for RBFNN classifiers. A number of experimental results on image classification, content based information retrieval and bankruptcy prediction will be presented.

Biography: Daniel S. Yeung (Ph.D., M.Sc., M.B.A., M.S., M.A., and B.A.) is the Junior Past President of the IEEE Systems, Man and Cybernetics (SMC) Society, a Fellow of the IEEE and an IEEE Distinguished Lecturer. He received the Ph.D. degree in applied mathematics from Case Western Reserve University. In the past, he has worked as an Assistant Professor of Mathematics and Computer Science at Rochester Institute of Technology, as a Research Scientist in the General Electric Corporate Research Center, and as a System Integration Engineer at TRW, all in the United States. He was the chairman of the Department of Computing, The Hong Kong Polytechnic University, Hong Kong, and a Chair Professor from 1999 to 2006. Currently he is a Chair Professor in the School of Computer Science and Engineering, South China University of Technology, Guangzhou, China.

His current research interests include neural-network sensitivity analysis, data mining, and fuzzy rough set. He was the Chairman of IEEE Hong Kong Computer Chapter (91 and 92), an associate editor for both IEEE Transactions on Neural Networks and IEEE Transactions on SMC (Part B), and for the International Journal on Wavelet and Multiresolution Processing. He has served as the President (2008 and 2009), President-Elect (2007), a member of the Board of Governors, Vice President for Technical Activities, and Vice President for Long Range Planning and Finance for the IEEE SMC Society. He co-founded and served as a General Co-Chair since 2002

for the International Conference on Machine Learning and Cybernetics held annually in China. He also served as a General Co-Chair (Technical Program) of the 2006 International Conference on Pattern Recognition. He is also the founding Chairman of the IEEE SMC Hong Kong Chapter.

His past teaching and academic administrative positions include a Chair Professor and Head at Department of Computing, The Hong Kong Polytechnic University, the Head of the Management Information Unit at the Hong Kong Polytechnic University, Associate Head/Principal Lecturer at the Department of Computer Science, City Polytechnic of Hong Kong, a tenured Assistant Professor at the School of Computer Science and Technology and an Assistant Professor at the Department of Mathematics, both at Rochester Institute of Technology, Rochester, New York.

He also held industrial and business positions as a Technical Specialist/Application Software Group Leader at the Computer Consoles, Inc., Rochester, New York, an Information Resource Sub-manager/Staff Engineer at the Military and Avionics Division, TRW Inc., San Diego, California, and an Information Scientist of the Information System Operation Lab, General Electric Corporate Research and Development Centre, Schenectady, New York.

Location: NJIT, ECEC 202, 140 Warren St. Newark, NJ 07102

[Getting to NJIT](#)

Time: 6:45 PM – 8:45 PM

Contacts: Dr. Mike Liechenstein (973-471-0721) or Prof. MengChu Zhou (908-268-1183)

E-Mails: ITSMIKESJU@AOL.COM or ZHOU@NJIT.EDU

[For Updates and Registration:](#)

November 22, 2011

IEEE North Jersey Section TM Chapter presents:

BPSolver's Winning Solutions to the ASP Competition Problems

By: Neng-Fa Zhou, Ph.D. & Professor

Brooklyn College & Graduate Center, The City University of New York

Abstract: In this talk, I'll give an overview of the BPSolver team's solutions in B-Prolog to the benchmark problems used in the third ASP Solver Competition. Except for three problems that required only plain Prolog, all the solutions used either CLP (FD) or tabling. Most of the winning CLP (FD) programs used global constraints such as all distinct, element, circuit, cumulative, and path_from_to. Mode-directed tabling demonstrated a strong performance in the competition. It not only helped easily solve the path-finding problems such as Airport-Pickup and Hydraulic Planning problems, but also helped provide elegant and efficient dynamic programming solutions to the Sokoban and Hanoi Tower problems which had been considered unsuited for B-Prolog. The participation of B-Prolog in the competition created a great opportunity to directly compare top-down tabled evaluation with bottom-up evaluation of logic programs, and CLP (FD) with SAT-based

ASP solvers. In this talk, I'll analyze the competition results from my personal perspective and offer my two cents on possible improvements for both CLP (FD) and SAT-based ASP solvers. This talk is based on the article entitled "BPSolver's Solutions to the Third ASP Competition Problems", ALP Newsletter, June, 2011.

Biography: Neng-Fa Zhou is a professor of Computer Science at the City University of New York (Brooklyn College & Graduate Center). He received a BS degree in Computer Science from Nanjing University, China, in 1984, and MS and PhD degrees in Computer Science and Engineering from Kyushu University, Japan, in 1988 and 1991, respectively. Before joining CUNY, he was an associate professor at Kyushu Institute of Technology from 1991-1999. He had visiting positions at Yale University (1997), University of Alberta (1998), Tokyo Institute of Technology (2002), and Monash University/the University of Melbourne (2005). Neng-Fa Zhou has been an active researcher in programming language systems for over fifteen years. He has authored over thirty papers on programming language, constraint-solving, graphics, and machine learning systems published in journals (ACM TOPLAS, Journal of Logic Programming, Theory and Practice of Logic Programming, Journal of Functional and Logic Programming, and Software Practice and Experience) and major conferences. His papers on compilation of logic programs, constraint solving, and tabling have received a number of citations. He is the principal designer and implementer of the B-Prolog system, a fast CLP system which has thousands of users world-wide in both academia and industry. He has reviewed articles for all major journals and conferences in his area of research and has served on the program committees of several important conferences including International Conference on Logic Programming (ICLP) and International Symposium on Practical Aspects of Declarative Languages (PADL). He is a co-chair of PADL'12, a symposium sponsored by Association for Logic Programming with cooperation of ACM SIGPLAN and Microsoft Research. He is the principle investigator of an NSF grant entitled "An Integrated Parallel Constraint Programming Platform for Combinatorial Search Problems".

All Welcome!

You need not be a member of IEEE to attend, and there is no charge for admission.

Location: ECEC 202, Jersey Institute of Technology (NJIT)

Time: 6:00 PM

Contact: Prof. MengChu Zhou (908-268-1183). E-Mails: ZHOU@NJIT.EDU.

November 30, 2011**SP Seminar on Spatiotemporal Event Detection in Mobility Network****By:** Rong Duan, Principle Member of Technical Staff at the AT&T labs, research in Florham Park, NJ

Abstract: Learning and identifying events in network traffic is crucial for service providers to improve their mobility network's performance. In fact, large special events attract cell phone users to relative small areas, which causes sudden surge in network traffic. To handle such increased load, it is necessary to measure the increased network traffic and quantify the impact of the events, so that relevant resources can be optimized to enhance the network capability. However, this problem is challenging due to several issues: (1) Multiple periodic temporal traffic patterns (i.e., non-homogeneous process) even for normal traffic;

(2) Irregularly distributed spatial neighbor information;

(3) Different temporal patterns driven by different events even for spatial neighborhoods;

(4) Large scale data set. This paper proposes a systematic event detection method that deals with the above problems. With the additive property of Poisson process, we propose an algorithm to integrate spatial information by aggregating the behavior of temporal data under various areas. Markov Modulated Non-homogeneous Poisson Process (MMNHPP) is employed to estimate the probability with which event happens, when and where the events take place, and assess the spatial and temporal impacts of the events. Localized events are then ranked globally for prioritizing more significant events. Synthetic data are generated to illustrate our procedure and validate the performance.

An industrial example from a telecommunication company is also presented to show the effectiveness of the proposed method.

Biography: Rong Duan received her M.S. degree in Computer Science and Ph.D degree in Computer Engineering respectively from Stevens Institute of Technology. She is currently Principle Member of Technical Staff at the AT&T labs, research in Florham Park, NJ. Her research interests include data mining, knowledge discovery, business applications with temporal and spatial data analysis, data integration and data quality assessment.

Her publications are in the areas of time series modeling, spatial-temporal event detection, and data quality control. Rong served as Secretary/Treasurer, Vice Chair and Chair for the Data Mining Section of INFORMS in 2006-2008, 2008-2009, and 2009-2010 respectively, PC member of IEEE ICME and editorial review board member of International Journal of Information Systems in the Service Sector.

Location: Babbio Center 310, Stevens Institute of Technology, Hoboken NJ 07030

Time: 4:00PM to 5:00PM

Contacts: Prof. Hong Man (201) 216-5038, hman@stevens.edu

For Updates and Registration:**December 07, 2011****North Jersey Section Excom Meeting****Note:** Annual year end dinner buffet 6 PM,

Meeting 7 PM, 8:45 PM (hard end time)

Review of 2011 activities (achievements and unfulfilled tasks), Section Business Discussion/Planning for all chapters, groups, committee chairs

Location: Chand Palace, Banquet Hall, 269 Littleton Road, Parsippany NJ 07054

Getting to Chand Palace

Time: 6:00 PM – 8:45 PM

Contact: Naresh Chand, Cell # 908 723 7001

(Restaurant Number: (973) 334 5444)

For Updates and Registration:**December 14, 2011****NJ Section PACE presents:****ENGINEERS MEET. Career Coaching: A Three-Fold Approach**

Abstract: Navigating in this rough economy and lack-luster job market is no easy task. Whether you are out of work, trying to weather the storm or unsure of which way your career winds are blowing then this seminar is for you. Trying to find your way through these rough seas by yourself could be a challenge. Needed is a guide or coach to help you on your way to survive in this time.

Dru Reynolds, will focus on three issues:

- 1) Review and Revise the Resume for Maximum Impact
- 2) Train You to Think Outside the Box to Find Hidden Opportunities
- 3) Coaching through the Interview Process.

This interactive talk will briefly cover the highlights of these "Critical Topics" in the process of job search. Bring your questions!

Biography: Dru has been in the employment / recruiting industry for more than 25 years and began her own business when she was laid off in 1998 and could not find a job. With some help from the State of NJ – a program for entrepreneurs – she started her own recruiting company, Reynolds, Recruiters, working from her apartment and specializing in RF/MW Wireless, nationally. Earlier experience included consulting for the Small Business Association of Monmouth County and independently teaching entrepreneurs how best to market their businesses. She attended both, Brookdale CC and Rutgers / Douglas. She is an active volunteer with the IEEE locally; serves as Region II coordinator for the MTT society; and is an active member of Women in Engineering. It has long be a passion to bring encouragement and enthusiasm for engineering to students and Dru is delighted to be the originator and moderator for "Engineering Career Day" program for middle and high schools.

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

Engineers, employers and Students are, all, encouraged to attend. Our PACE meetings offer opportunities for lively discussions. Meetings are entertaining, thought provoking and provide opportunities to network.

Pizzas and soft drinks will be served

About CARE: CARE is the Congressional Advocacy Recruitment Effort CARE is a voluntary network of IEEE members who are interested in public policy.

To HELP visit: www.ieeeusa.org/policy/care/

Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 (Directions: tel. 973 772-5500)

Time: 6:30PM to 9:00 PM

Contacts: Paul Ward, 973 790-1625, peward@ieee.org
Richard F. Tax, 201- 664-6954, rtax@verizon.net

For Updates and Registration:

December 16, 2011

PES and IAS Chapters present:

Electrical Testing of Protective Relays

Abstract: The PES and IAS Chapters will sponsor a series of technical seminars on the topic of electrical testing. This third seminar will be on the topic of electrical testing of protective relays. The session will be held on Friday, November 18, 2011 at PSE&G's Hadley Road Facility, 4000 Hadley Road, South Plainfield, NJ. The seminar fee includes lunch, refreshments and handouts. Non-members joining IEEE within 30 days of the seminar will be rebated 50% of the IEEE registration charge.

Four hours of instruction will be provided. If desired, IEEE Continuing Education Units (0.4 CEUs) will be offered for this course - a small fee of \$45 will be required for processing.

Please pay attention to the "Registration Fee" and choose the appropriate choice either with or without CEUs.

Location: PSE&G - Hadley Road Facility, 4000 Hadley Road South Plainfield, NJ 07080

[Click here for Map](#)

Time: 9:00 AM – 2:00 PM

Contacts: Ronald W. Quade, P.E., (973) 219-8802 or rwquade@ieee.org

For Updates and Registration:

North Jersey Section announces election of the following officers for 2012

- Chair: Naresh Chand
- Vice Chair 1: Russ Pepe
- Vice Chair 2: Har Dayal
- Secretary: Adriaan Van Wijngaarden
- Treasurer: Paul Ward
- Members-At-Large: Chris Peckham

- Members-At-Large: Kalyan Mondal
- Members-At-Large: Goran Djukinc

R1 Southern Area Innovation Day Success Highlighted by IEEE-USA

The third annual Region 1 Southern Area day conference was held this year at NYU-Poly on May 17, 2011. The ground-breaking efforts of the Southern Area sections and METSAC have contributed to another successful conference. This year's theme of Innovation found its way into several different topics, ranging from Industry, Technology, Energy, Globalization, and Professional Advancement.

Much of the conference was captured by IEEE TV and videos were posted online at:

IEEE TV: Event-Showcase: IEEE Region 1 Innovation day 2011
Event pictures and slides are also available online.

IEEE - Region 1- Innovation Day - Photo Gallery

Read the full article in the Fall 2011 issue of IEEE-USA in ACTION available at:

Article: IEEE USA Fall 2011

Not a North Jersey IEEE Member? Subscribe to our public mailing list!

The North Jersey IEEE Section has a non-members public mailing list. Its purpose is to be the public mailing list for IEEE North Jersey Section non-members and external organizations. It will only be used for communicating information and activities sponsored by or held in and around the North Jersey Section for the interest of its current and potential new membership.

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"

This email list is a moderated one-way list used for distributing our newsletter and other critical event notifications to those who are not already IEEE members. It is not a general discussion list and there are no subscriber public postings. As usual, please visit the homepage for the IEEE North Jersey Section at: <http://www.ieee.org/go/njsection> for additional information, event calendar, RSS feed subscription and contact information.

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: www.linkedin.com/groupInvitation?groupId=2068051

Welcome to New IEEE Members to the North Jersey Section!

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Seyed Ebrahim Safavi
Graduate Student Member

JohnPaul Valentino
Graduate Student Member

Hebah A Zakrea
Student Member

Henry Angert
Graduate Student Member

Luis W Delos Santos
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Guoqi Luo
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