

THE IEEE NORTH JERSEY SECTION NEWSLETTER

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MAY 2015

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*The **DEADLINE** to get your articles, advertisements, flyers in the newsletter is the **15th OF THE MONTH**. Events **MUST** be on vTools. Word limit for Abstracts is 100 and speaker biography is 250. Remember to provide the sponsoring society/chapter/committee names, contact person information, and location with link for directions. E-mail Anisha Apte at anisha_apte@ieee.org only if required, for inclusion in the next month's newsletter....*

A Note from the Chair

The April issue of the Newsletter introduces the IEEE North Jersey Section's five newly elected IEEE Fellows, three IEEE Award recipients, one IEEE MGA Award recipient, four IEEE Region 1 Award recipients and two IEEE Section Award recipients.

Several events are being organized, including a major event for students– IEEE Region 1 Student Conference, which will be held at the University of Vermont, Burlington, Vermont, on April 10-11, 2015. For more information, please check

<http://sites.ieee.org/r1/committee/sac/2015-R1-SC>

I encourage everyone to reach out to both non-members and former IEEE members who have not been member for a

number of years to join (again). Currently, one can become a member and pay half-year dues, which provide IEEE membership for the remainder of the calendar year (8 months). The same holds for societies and this is thus also a good opportunity for members to check out new societies. New members should go to the site <http://www.ieee.org/join>, which also gives a good overview of the benefits of IEEE membership. Additional advantages of IEEE membership include: a unique IEEE e-mail address, which gives, at no additional cost, access to (ad-free) Gmail, Google Drive, Google+ and Picasa, with 30 GB of shared storage. Another useful site can be found at <http://www.ieee.org/discounts>, which provides an overview of discounts on insurance, travel, electronic equipment and several other categories.

Please become or stay involved in the Section and do e-mail your suggestions and comments to me at: avw@ieee.org or alw@research.bell-labs.com.

Sincerely,

Adriaan J. van Wijngaarden,

Chair, IEEE North Jersey Section

2015 EXCOM Meeting Schedule

The new 2015 EXCOM meeting schedule is now in vTools. The events start at 6 pm with a buffet, and the EXCOM meeting starts at 7 pm. The meeting locations are:

Sun	May 3	Awards at Birchwood Manor
Wed	Jun.3	Clifton Library
Wed	Aug.5	Bell Labs, Murray Hill
Wed	Sep.2	Clifton Library
Wed	Oct.7	NJIT, Newark
Wed	Nov.4	Bell Labs, Murray Hill

How to subscribe to this Newsletter if you are not an IEEE North Jersey Member?

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

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

Additionally, you can join the IEEE North Jersey Section Facebook Fan Page at:

www.facebook.com/pages/IEEE-North-Jersey-Section

Follow us on Twitter at: twitter.com/ieeenorthjersey.

Or join the LinkedIn IEEE North Jersey Section Group at: [LinkedIn Group Invitation](#)

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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 Adriaan van Wijngaarden (avw@ieee.org) and Naresh Chand, the Section's Nominations Committee Chair (chandnaresh@gmail.com) and/or any other volunteer (see the last page of this Newsletter for a list of the current volunteers, their contact information and positions. The Section's Executive Committee meeting is generally held the first Wednesday of every month (see the schedule and locations above, as well as more detailed information in the calendar). These meetings are a good opportunity to learn more about the Section's activities, and which volunteer activities require some help. Some committees needing volunteers include the following. Please contact the person indicated for additional information.

IEEE North Jersey Section's Affinity Groups

- **Consultants Network**

The Consultants Network is very active and holds monthly meetings. Please consider attending the presentations, and contact Robert Walker, Secretary (r.d.walker@ieee.org) if you would like to give a presentation or become a volunteer.

- **Professional Activity Committee for Engineers (PACE)**

PACE organizes monthly meetings (every second Wednesday of the month). Currently, most meetings are held at the library in Clifton, NJ. PACE is looking for speakers and volunteers to help organize events, also at other locations. For more information, please contact Richard Tax (rtax@verizon.net) and Adriaan J. van Wijngaarden (avw@ieee.org).

- **Women in Engineering (WIE)**

IEEE Women in Engineering is the largest international professional organization dedicated to promoting women engineers and scientists, and to inspire girls around the world to follow their academic interests to a career in engineering. The IEEE North Jersey Section currently has 36 WIE members, 14 of which are student members. Please consider volunteering and organizing WIE activities. Contact: Jyoti Bali (jyoti.bali@alcatel-lucent.com).

- **Young Professionals (YP)**

Young Professionals is an international community of enthusiastic, dynamic and innovative members and volunteers. Recent graduates automatically become a YP member. The IEEE North Jersey Section currently has 509 YP members. Please consider becoming involved in the organization of social and networking events. For more information, please contact John Taylor

(john.taylor1204@gmail.com), Adriaan van Wijngaarden (avw@ieee.org), and/or Daniel Cerone (d.a.c@ieee.org).

IEEE North Jersey Section Society Chapters

- **Aerospace and Electronic Systems (AES)**

The North Jersey Section has 27 AES members. If you are interested in giving a presentation or to volunteer, please contact Goran Djuknic (gd@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

- **Engineering in Medicine and Biology (EMBS)**

The North Jersey Section has 63 EMBS members. If you are interested in giving a presentation or to volunteer, please contact Russell Pepe (rcpepe@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

- **Computer Society (C)**

The IEEE Computer Society has 526 members in North Jersey. If you are interested in giving a presentation or to volunteer, please contact Hanna Zhao (zhao@fdu.edu) and/or Howard Leach (h.leach@ieee.org).

IEEE North Jersey Section Committees

- **Awards Committee**

The Awards Committee has several important tasks, including the nomination of candidates for IEEE Region 1 and IEEE MGA Awards, and the co-organization of the Annual Awards Banquet. If you are interested in volunteering, or if you would like to nominate a candidate, please contact Ken Oexle (k.oexle@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

- **Membership Development Committee**

Membership development is very important for the IEEE and for the Section. If you are interested to help, please contact Kai T. Chen (k.t.chen@ieee.org) and/or Adriaan van Wijngaarden (avw@ieee.org).

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.

Promote STEM

Russell C. Pepe, Pre-University Co-Chair

Hi all. I hope you still remember me. This is Russell Pepe, your former North Jersey Section Chair for 2013-2014. I am now the Co-Chair of the Pre-University Committee. My focus in this position is to introduce our High School and Elementary School children to the world of technology. I strongly believe that a life steeped in technology is exciting, important and beneficial to the world. I have a great video which was prepared by the IEEE Headquarters. I spice this presentation with anecdotes from my own career. My mission is to first expose our children to the world of technology, educate them about Science, Technology, Engineering and Math (STEM), and then encourage them to consider a STEM education and career.

I am available to speak at a school in your area. If you are interested in having me make a presentation, please contact me at: rcpepe@ieee.org

Make a Life Plan

Introduction

My long-time friend and colleague always said....."If you don't know where you are going, any road will take you there". In today's ever-changing and unforgiving business world, his words ring truer each day; and to know where you are going, you will need a plan. The trouble is making a plan for your life is a tough job. I know. I had to do it. Here was my awakening.

Getting the Message

Making a life plan is a lot like making a strategic plan for a company. It takes lots of time and thinking, and like most companies, people tend to shy away from it. Companies and people tend to do what is comfortable, and so life plans and strategic plans are not done well, if at all. This is why suddenly terminated employees have a hard time adjusting to the dislocation in their lives.

Early in my career, I was fortunate to have met some incredible on-the-job mentors, many of whom were IEEE members/colleagues, who taught me the importance of professional development. They challenged me constantly to grow, and expand my skills. The greatest lesson learned and mastered was to develop a personal log of my growth, a file system that showed what new skills I had gained, the professional papers and articles I had written, copies of major activities and projects I had led and managed, and the contacts I had made.

This data bank would, in my 25th year in engineering, become the major source of inspiration for my life plan; as a series of major events and re-organizations shook my world to its foundations. In the middle of all this I began consulting those files and personal logs I had been accumulating, putting them in order and carefully examining my career. I made lists of interesting new ways to apply myself, not passing any judgment on their practicality, just making laundry lists of new and interesting avenues to pursue. Perusing my files, it became apparent I had developed four major areas of strength which could become the bones and muscles of a new life plan:

1) Engineering

This was a core strength I could always fall back upon, and I had plenty of credentials here; but, maybe I should think about a new life course just in case.

2) Teaching

Throughout my engineering career, I had worked with schools and teachers to bring the excitement of my profession into the classroom. I had become quite involved with the teaching community, their annual conferences, and spoke often and presented papers and gave in-service seminars to a wide variety of classroom teachers, administrators, and supervisors. I had even taught evening graduate engineering courses for ten years at my old alma mater.

3) Authorship

I had learned early in my career the value of good communications, both written and oral; realizing I was probably the most published engineer in the history of the

company, writing both in the scientific and popular presses. People had read "my stuff" and often called to discuss my works. I was also branching out into educational science and technology writing during my off-hours.

4) Invention

The normal course of my research work for the company had resulted in a bunch of patents, putting me in a high category of achievement among fellow engineers, probably the top three most patented people in the company. I also was inventing with other colleagues in my weekend time. This could be a new path for me.

These then represented an arsenal of major skills for my life plan, and I began making a list of possible ways I could use one or more, or better yet blend them into something very unique. I spent many evenings working my contacts and sources, inquiring about possibilities for potential jobs and career changes, and researching opportunities.

All this craziness at work calmed down after a few years, leaving me much relieved, but also prepared with some important contingencies if needed. After you come close to losing your job at age 46, your focus really sharpens; and you realize that time is your most critical resource, something you can never recover. I was much more aware and miserly about what I spent time on and for whom I gave it away to. I was fortunate to have a pension from which I could retire early at 55...so my next big milestone was 9 years away, but in between there was plenty of planning to do-both career-wise and financial to be ready.

I started a small home writing business and began to accumulate many written articles and several small books. It was then I started doing family financial spreadsheets....tabulating income before and after retirement and how far I could stretch a pension due me from the company...scenario runs to see how good or bad it could get, with cost increases and such. I started to get a visceral feel for where I could go and what might be realistic or out of reach. At age 57, I pulled the "rip cord" and parachuted into a variety of new work experiences:

- Consulting for several firms
- Advisory and part-time work at a local foundation
- Writing, publishing, and lecturing
- Special lecturer/docent at a National Park Service site
- Working with a number of local schools to teach kids about invention

I have never looked back nor regretted for one minute my decision to retire early....because I was prepared and ready. Many of my soon-to-be-retired friends always ask how I did it. I challenge them with this question:

Suppose Numero Uno appears before you one morning and says, "I have a good news and bad news story for you today. The good news is you will live another 35-40 years, but you cannot do any longer what you have been doing. So what will you do with the extra time I am giving you?"

It never fails to stop people cold in their tracks. We just don't think enough about the possibility of such a major change to our lives. We tend to see such discontinuities as disasters, rather than opportunities to grow in other directions.

If I am successful in retirement it is because I:

- Planned for it.
- Asked some tough questions of myself before retirement
- Documented my life accomplishments and mined that data
- Identified key areas where I could work and contribute meaningfully.
- Networked with friends, colleagues, and other professionals
- Was creative in imagining myself in new jobs.

You gotta' have a plan if you hope to succeed after leaving your primary job. You can make yourself an irresistible jewel that others will eagerly seek. Your years of business experience have great value....but you have to understand where your strengths reside and how to parlay them into profitable applications. You have to market yourself and that may be quite uncomfortable at first; but, you must do it. Retirement is a profound chance to be 18 again, and if you were thrifty throughout your career, enjoy a little "jingle" in your pocket.

Any young folks out there reading this? Start early and create your data bank of skills and accomplishments, continually mine them, and develop plans to expand your resources. Unwrap your skills and talents and apply them vigorously. Believe me, it will pay off. Job security is very tenuous. Get comfortable with calling the shots.

Oh, by the way, I re-discovered another gift I had, something that had lain dormant for years. As a young teenager, I loved to make games and modify existing ones to give them enhanced playing fun. Since there is a strong national need to improve student math skills, I tried my hand at creating educational math card games for the classroom. My twelfth new game hit the educational catalogs market; and I have at least that many more ready for submission and editorial review. There is plenty of opportunity for creativity to be had in retirement. Plan to make it a top priority to get in on the fun!

Talk to you again soon.....

Harry

Harry T. Roman

Senior Member, IEEE

North Jersey Section

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.

For additional information or to join the LinkedIn group, please email the Employment Network Chair, Vaseem Ahmed (vas201@gmail.com).

[Back to Calendar of Events](#)

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 IEEE North Jersey Section Executive Committee members including the Membership Development Chair or Society Chapter Chairs at the local level or attend an IEEE North Jersey Section meeting or upcoming Senior Member Drive, where qualified attendees will be happy to actively support you in the nomination process.

If you would like to join the Pre-University forces of the IEEE North Jersey Section, I can provide you with my presentations. Again, please contact me by e-mail.

Taylor's World Conference – Call for Papers

On September 24-25, 2015, Stevens Institute of Technology will be hosting a conference on the life and legacy of Frederick Winslow Taylor, a graduate of Stevens who is widely recognized as the father of scientific management. The event marks the centennial of Taylor's death in 1915, and will explore both Taylor's place in history and his legacy in the 21st century. We welcome proposals for either individual papers or full panels.

For details about the event please visit

<http://www.stevens.edu/library/taylorworld>

Please submit proposals for papers or panels by March 1, 2015, by filling out submission proposal form. Paper proposals should be 250–500 words; panel proposals should collect individual paper abstracts of that same length and also include a brief description of the panel's overarching theme. Panel proposals may also suggest possible commentators.

All other inquiries about the conference can be sent to Leah Loscutoff (lloscuto@stevens.edu).

Welcome! New Members of the IEEE North Jersey Section

Full Name	IEEE Current Grade
Daniel T DeChiara	Member
Carl C Cowley	Member
Jossell Delroy De Coteau	Student Member
Aalok Sanjay Kharidia	Student Member
Hsuan-Tsung James Wang	Member
Vely A Dales	Member
Arsal Huda Syed	Graduate Student Member
Shannel C. Diaz	Student Member
David Silverio	Member
Kevin Surujballi	Student Member
Robert Glenn Sheldon	Student Member
Susana Marques Freire	Student Member
Ayush Rai	Graduate Student Member
Yuchi Zhang	Graduate Student Member
Albaro Claros	Student Member
Qiang Fan	Graduate Student Member
Pedro Jose Castro Ventura	Student Member
Luis Corona	Student Member
Angel David Del Valle	Student Member
Bryan Andres Diaz	Student Member
Elliot Finkelstein	Graduate Student Member
Zhaolong Fu	Graduate Student Member
Kevin Huertas	Student Member
Dennis Reer	Member
Juan Enrique Sanchez-Pastor	Student Member
Daniel Zuluaga	Student Member
christian tafur	Student Member

Gladstone V Reid Jr.	Member
Monsur Latif	Student Member
Brian Donovan	Student Member
Walter John Chalupa	Associate Member
John Bloore	Student Member
Jelena Stijovic	Student Member
Juan Zuniga	Student Member
Rafael Gatdula Garcia	Student Member
Ravichandran C Manimaran	Member
Haixin Wang	Graduate Student Member
Elizabeth Ann Livermont	Graduate Student Member
John Hernandez	Student Member
Afreen Nikhath	Graduate Student Member
Omar Itani	Student Member
chen wang	Member
Stefan M. Schuele	Member
Tomer Lee Shapira	Student Member
Yufei Wu	Student Member
David Chmielewski	Student Member
Dylan Hutchison	Student Member
Jiaren Li	Student Member
Morisa Manzella	Student Member
Randall Suliga	Student Member
Nasrin Khansari	Graduate Student Member
Harris Ahmed Sheikh	Student Member
Morgan Brattstrom	Student Member
Andrea Cummis	Member
Hirendra H Bakhtarwala	Student Member
Daniel T DeChiara	Member

Calendar of Events

- May 03, 3:00 PM to 6:00 PM: IEEE North Jersey Section Awards Banquet**
Location: Birchwood Manor, 111 North Jefferson Road, Whippany, NJ 07981 [Getting to Birchwood Manor](#)
Contact: Adriaan J. van Wijngaarden (avw@ieee.org) [Read More...](#)
- May 12, 2:00 PM to 3:00 PM: IEEE IT, COMSOC, VTS – Topics Related to Large Antenna Arrays** - Dr. Thorkild B. Hansen of Seknion, Inc
Location: Bell Laboratories, Alcatel-Lucent, Main Building, Room: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974, [Getting to Bell Labs](#)
Contact: Adriaan van Wijngaarden (avw@ieee.org). [Read More...](#)
- May 13, 6:30 PM to 9:00 PM: IEEE North Jersey Section PACE- Engineers Meet (Second Wednesday of every month)**
Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 [Getting to Clifton Memorial Library](#) (Tel. 973 772-5500)
Contact: Richard F. Tax, (201- 664-6954) rtax@verizon.net [Read More...](#)
- May 14, 6:30 PM to 8:30 PM: IEEE CNNJ – Side-Scan Sonar for Underwater Imaging** - Dr. Brent Horine, Manhattan College and Clarcona Technology, LCC.
Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ 07981 [Getting to Morris County Library](#)
Contact: Robert Walker, 973-728-0344, or visit our website, www.TechnologyOnTap.org [Read More...](#)
- May 18, 4:30 PM to 6:00 PM - IEEE AP/MTT, ED/CAS – MAGIC: Malicious Aging in Circuits/Cores** - Prof. Naghme Karimi, Rutgers University
Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: Ajay Kumar Poddar, (201) 560-3806 (akpoddar@ieee.org), Edip Niver- (973)596-3542 (edip.niver@njit.edu), Durga Misra (dmisra@njit.edu) [Read More...](#)
- May 22, 5:00 PM to 7:00 PM: IEEE AP/MTT, COMSOC, Photonics - Challenges and Potentials of 5G Wireless Communications**, - Junyi Li, Vice President of Engineering at Qualcomm, Bridgewater, NJ **(Check vTools – Date may change)**
Location: Huawei (Futurewei) Technologies R&D Center Room Number: China meeting room 400, Crossing Blvd., 2nd Floor, Bridgewater, NJ 08807 [Getting to Bell Labs](#)
Contact: Naresh Chand (chandnaresh@gmail.com), Ajay Kumar Poddar, (201) 560-3806 (akpoddar@ieee.org), Amit Patel (a.j.patel@ieee.org) [Read More...](#)
- May 28, 2:00 PM to 3:00 PM: IEEE IT, COMSOC, VTS – Cognitive Radio Research: Spectrum Sensing and Identification of Radio Terminals and Malicious Users** - Prof. Yu-Dong Yao of Stevens Institute of Technology
Location: Bell Laboratories, Alcatel-Lucent, Main Building, Room: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974, [Getting to Bell Labs](#)
Contact: Adriaan van Wijngaarden (avw@ieee.org). [Read More...](#)
- May 29, 9:00 AM to 2:00 PM: IEEE PES/IAS- Introduction to Smart Grid** - Dr. Raziq Yaqub of NIKSUN
Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080, [Getting to PSE&G - Hadley Road Facility](#)
Contact: Ronald W. Quade (rwquade@ieee.org) [Read More...](#)
- June 3, 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: Adriaan J. van Wijngaarden (avw@ieee.org) or Kai T. Chen (k.t.chen@ieee.org). [Read More...](#)
- June 15, 5:30 PM to 7:00 PM - IEEE AP/MTT, ED/CAS – 3D Surface Reconstruction** – Dr. Vincenzo Piuri, Università degli Studi di Milano
Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: Ajay Poddar, (201) 560-3806 (akpoddar@ieee.org), Edip Niver (973)596-3542 (edip.niver@njit.edu), Durga Misra (dmisra@njit.edu) [Read More...](#)
- June 17, 6:30 PM to 8:00 PM - IEEE EMC/PSES - Construction and operation of a reverberation chamber** - David Larrabee of ESU
Location: Bell Laboratories, Alcatel-Lucent, Main Building, Room: 6A-106, 600 Mountain Avenue, Murray Hill, NJ 07974, [Getting to Bell Labs](#)
Contact: Dan Roman (danpses@verizon.net) [Read More...](#)
- June 18, 4:30 PM to 6:00 PM - IEEE AP/MTT, ED/CAS – LIGHT and LIFE: Applications to Biology and Medicine** – Prof Siva Umapathy of Indian Institute of Science, Bangalore, India
Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)
Contact: Naresh Chand (chandnaresh@gmail.com), Ajay Kumar Poddar, (201) 560-3806 (akpoddar@ieee.org), Amit Patel (a.j.patel@ieee.org) [Read More...](#)

- 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

Meeting Announcements

May 3, 2015

IEEE North Jersey Section Awards Banquet

The annual IEEE North Jersey Section Awards Banquet will be held on Sunday, May 3, 2015 at the Birchwood Manor, in Whippany, New Jersey.

A time to relax, unwind and enjoy --

A time to pay tribute to our new Fellows --

A time to honor our Award Winners --

The Annual Section IEEE Awards Reception will be held at the Birchwood Manor, 111 North Jefferson Road, Whippany, this year. The affair is scheduled for Sunday, May 3, 2015 from 3 pm to 6 pm. Spouses and guests are welcome. Tickets are \$35 per person. The capacity of the location is 90 persons, so please make your reservations early. Please use the vTools link to make the reservation. Please register all persons by completing the name, address, and e-mail entries on the form. Payments can be made through vTools, or by sending a check, payable to the IEEE North Jersey Section, with your name(s), address and e-mail to Adriaan J. van Wijngaarden, Bell Labs, Alcatel-Lucent, Room 2A-425, 600 Mountain Ave, Murray Hill, NJ 07974, by Monday April 27, 2015. We will send you a confirmation e-mail upon request.

For more information, please contact Adriaan J. van Wijngaarden (avw@ieee.org). Ken Oexle, Awards Committee Chair, Adriaan J. van Wijngaarden, North Jersey Section Chair

Location: Birchwood Manor, 111 North Jefferson Road Whippany, NJ 07981 [Getting to Birchwood Manor](#)

Time: 03:00PM to 06:00PM

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

[For Updates and Registration: Click Here](#)

May 4, 2015

IEEE AP/MTT and ED/CAS present: SoC Design – Trends, Challenges and First Pass Success

Speaker Dr. NagiNaganathan of Avago Technologies

Abstract Moore's law scaling of sub-nanometer design process has enabled the integration of several million transistors with a variety of functionality as a System-On-Chip (SoC). The first generation of SoCs were designed with a single processor, DSP and a large number of reusable IP (Intellectual Property), memory software. The current generation of SoCs have multiple processors, multiple buses, analog components and a large amount of software.

I'll present the trends and challenges in SoC Design. Will present some thoughts on complexity and provide some ideas for managing the complexity. Will provide a motivation for first pass success and will present some practical approaches

for verification. Will also present the Zen and Art of Debugging. We will conclude with the practical ideas with a holistic view for getting it right.

Biography: NagiNaganathan is currently a Principal Engineer with Avago Technologies, Allentown. He has 20+ years of experience with the design of chips for video, networking and storage products. He is currently involved with the design of SoCs for storage products. His areas of interests are SoC Design and Architecture, Low Power and ARM Based designs. He served as an adjunct professor in Rutgers University. He is the Secretary of IEEE Princeton/Central Jersey Section and also the Chair of SSCS Chapter. He received his Phd from Southern Methodist University, Dallas, M.ScE from University of New Brunswick and B.E from University of Madras all in Electrical Engineering.

Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)

Everyone is welcome to attend this meeting.

Time: 5:30PM-7:00PM

Contact: Prof. D. Misra (973-596-5739), dmsira@njit.edu, Dr. Ajay K. Poddar, (201-560-3806), akpoddar@ieee.org, Prof. Edip Niver, (973-596-3542), edip.niver@njit.edu

[For Updates and Registration: Click Here](#)

May 12, 2015

IEEE IT, COMSOC, VTS present: Topics Related to Large Antenna Arrays

Speaker: Dr. Thorkild B. Hansen of Stevens Institute of Technology

Abstract: Large antenna arrays have been used widely for decades in radar, imaging, and communications applications. The large number of degrees of freedom attainable with these arrays makes it possible to simultaneously amplify desired signals and filter out undesired signals. This talk discusses two topics related to antenna arrays. The performance of an array improves with its electrical size. Naturally, it would be advantageous if one could reduce the size of an array without degrading its performance. Using Huygens' sources and spherical-harmonics expansions, we revisit this size-reduction problem consisting of finding a smaller source that radiates the field of a larger source. Explicit expressions for Huygens' sources and for the field everywhere outside the smaller source will be derived. The expressions demonstrate that for multi-wavelength sources, a meaningful size reduction will result in prohibitively large field values in the vicinity of the smaller source. Array elements are often spaced half a wavelength apart on a regular grid. For large arrays, this classical array geometry ensures low sidelobe levels and guarantees that no grating lobes will exist. However, in many situations it is beneficial to increase or randomize the element spacing, so that the array becomes sparse. Also, sometimes it is advantageous to use arrays that consist of a number off

smaller subarrays. Such non- classical array geometries can be useful if the artifacts they produce (higher sidelobe levels and grating lobes) can be controlled or eliminated. We evaluate some classical and non-classical array geometries in conjunction with both matched-filter and zero-forcing methods.

Biography: Thorkild B. Hansen received the Ph.D. degree in electromagnetics from the Technical University of Denmark, Lyngby, Denmark, in 1991. He was with the Air Force Research Laboratory (formerly, Rome Laboratory), Hanscom Air Force Base, USA, from 1991 to 1997, where he worked on techniques for analyzing electro- magnetic waves and antennas. He joined Schlumberger's underground radar project in 1997 and transferred with the project to Witten Technologies in 2000. Since 2004 he has worked as an independent consultant in the areas of wave propagation, electromagnetics, antenna theory, arrays, imaging, synthetic aperture radar, and channel models for wireless communication. Also, he is developing techniques for RFID and near-field communications at Seknion, Inc., a company he co-founded. He is co-author of the book Plane-Wave Theory of Time-Domain Fields (IEEE Press, 1999). Dr. Hansen was a recipient of the R.W.P. King Prize in 1992 and the S.A.Schelkunoff Prize in 1995 for publications on electromagnetic wave propagation. The underground radar imaging technology he helped develop at Schlumberger and Witten Technologies won the 2002 NOVA Award for innovation in construction and Wall Street Journal's 2004 Technology Innovation Award in Software.

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

Time: 2:00 PM to 3:00 PM

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

[For Updates and Registration: Click Here](#)

May 13, 2015

IEEE North Jersey Section PACE – Engineers Meet

Abstract: On Wednesday, April 8, 2015 the North Jersey Section Professional Activities Committee will meet with IEEE-USA Lobbyist, Russell Harrison for a discussion about the real world of Engineering, Politics and IEEE-USA. Bring your Members and friends and discuss the Profession and your thoughts about Engineering.

The 114th Congress began in early January. Since 2016 is a Presidential election year, Congress has only six months, give or take, to pass any substantial legislation before Washington becomes consumed by Presidential politics. This means engineers need to get in contact with their legislators early in the session if they want to be heard.

Join the IEEE North New Jersey Section for an evening discussing the new Congress, what we can expect, and what we can do about it

A mid-meeting break will provide pizza and refreshments.

Biography: Russell Harrison is IEEE-USA's Director of Government Relations. He provides insights, predictions and opportunities for engineers in 2015.

Location: Clifton Memorial Library, 292 Piaget Ave., Clifton, NJ 07011 [Getting to Clifton Memorial Library](#) (Tel. 973 772-5500)

Time: 6:30 PM to 8:45 PM, (second Wednesday of every month).

Contact: Richard F. Tax (201- 664-6954) (rtax@verizon.net)

PACE HELP! To All: We need guest speakers and subjects for meetings.

Call (201 664-6954 or send to rtax@AEA.org)

[For Updates and Registration: Click Here](#)

May 14, 2015

IEEE Consultants' Network of Northern NJ presents: Side-Scan Sonar for Underwater Imaging

Speaker: Dr. Brent Horine, Manhattan College and Clarcona Technology, LCC.

Abstract: Modern engineering education curriculum calls for senior engineering students to complete a one or two semester practical design project. This emphasizes hard design skills, but also many soft skills such as working on multidisciplinary teams, communicating in verbal and written forms, working with customers and limited budgets and time, and project management.

This year, a team of 6 seniors at Manhattan College collaborated with a local company to develop a high resolution imaging system and data collection platform for underwater autonomous vehicles. Most sonar systems are designed for long range targeting or low resolution fish finding and depth finding. Our goal is to produce highly detailed images on a short range basis.

This talk will cover the engineering challenges, the basic concepts and some initial results, in addition to comments about the educational value and challenges in the undergraduate curriculum.

Biography: Dr. Brent Horine is a Visiting Assistant Professor at Manhattan College and the principal of

Clarcona Technology, LCC. His long career has provided him with a diverse background in RF electronics and software development. He has spent most of his career in small, entrepreneurial companies and has an outstanding record in the commercialization of cutting edge technology. Today, he focuses on providing solutions for challenging wireless communications issues.

During his career, Mr. Horine was a key contributor to the commercialization of Surface Acoustic Wave technology, led a development team for a hand-held chemical detector and was responsible for software for a GPS based fleet

management system, just as the market was taking off. With Clarcona, he provides his customers with a refined set of skills in RF engineering and in software-defined radio.

Brent can be reached at brent.horine@manhattan.edu.

ABOUT THE NETWORK: Founded in 1992, the IEEE Consultants Network of Northern NJ encourages and promotes the use of independent technical consultants by business and industry.

CNNNJ INVITES YOU TO JOIN THE NETWORK

The IEEE Consultants' Network of Northern NJ invites all engineers engaged in independent practice to join its ranks. For more details on member benefits and on sign-on requirements, please visit our website at (www.TechnologyOnTap.org)

ALL ARE WELCOME! No fees or registration required.

Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ, [Getting to Morris County Library](#)

Time: 6:30PM to 8:30PM

You don't have to be an IEEE member to attend.

Contact: Robert Walker (973-728-0344), (r.d.walker@ieee.org) or visit, www.TechnologyOnTap.org.

[For updates and Registration: Click Here](#)

May 18, 2015

IEEE AP/MTT, ED/CAS present: MAGIC: Malicious Aging in Circuits/Cores

Speaker: Prof. Naghmeh Karimi, Rutgers University

Abstract: The circuitry comprising an IC degrades over its lifetime, ultimately resulting in IC failure. While IC designers put a tremendous effort on reducing aging effects and enhancing the reliability of electronic chips, adversaries may aim at accelerating the wearout of these chips. In practice, a malicious adversary may accelerate the aging process of an IC and thus shorten the devices life span. This talk explores the security vulnerability of modern microprocessors against aging attacks and presents a hardware attack (called MAGIC) that maliciously accelerates NBTI aging effects in processor cores. By analyzing the structural information of a processor, a sequence of assembly instructions that accelerate the aging process is developed and a program consisting of these instructions is crafted. By executing this application, the core is maliciously aged and the chip fails sooner than expected.

Biography: Dr. Naghmeh Karimi is currently a visiting Assistant Professor at the ECE Department of Rutgers University. She received the Ph.D. degree in electrical engineering from University of Tehran in 2010. Between 2007 and 2009, she was a visiting researcher at Yale University. She was a Postdoctoral researcher at Duke University in 2011 and a visiting Assistant Professor at New York University between 2012 and 2014. Dr. Karimi's research interests include Design-for-Testability, Design-for-Reliability, Design-for-Security, Computer Architecture and VLSI. She has

published over 25 papers in journals and refereed conference proceedings and authored three book chapters.

Email: naghmeh.karimi@rutgers.edu

Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)

Time: 4:30 PM to 6:00 PM

Contact: Ajay Kumar Poddar, (201) 560-3806 (akpoddar@ieee.org), Edip Niver- (973)596-3542 (edip.niver@njit.edu), Durga Misra (dmisra@njit.edu)

[For Updates and Registration: Click Here](#)

May 22, 2015

IEEE AP/MTT, COMSOC, Photonics present: Challenges and Potentials of 5G Wireless Communications

Speaker: Junyi Li, Vice President of Engineering at Qualcomm, Bridgewater, NJ

Abstract: The search for innovative solutions to enable the Next Generation Mobile Communications (5G) has recently begun worldwide. In early 2013, the European Commission announced that it would invest €50 million in 2013 for 5G research in multiple projects such as METIS. This was quickly followed by the formation of the Chinese Government-led IMT-2020 Promotion Group in February 2013, the initiation of the Korean Government-led 5G Forum in May 2013, and the formation of 2020 and Beyond Ad-hoc within ARIB (Association of Radio Industries and Businesses), Japan, in October, 2013. While the standardization of 5G specifications in standards bodies such as the Third Generation Partnership Project (3GPP) and the formal ratification of 5G standards by the International Telecommunication Union (ITU) are still several years away, many share the vision of targeting 2020 for the initial commercialization of 5G cellular with drastically enhanced user experiences in several aspects including Gbps data rate support. In this talk, we will discuss immersive service experiences that 5G will provide including ultra-fast data transmission, superior user experience, massive connectivity etc. based on green and cost-effective technologies. This talk presents vision, requirements, and key enabling technologies for 5th generation wireless communications.

Biography: Junyi Li is a Vice President of Engineering at Qualcomm. He was a key inventor of Flash-OFDM, arguably the first commercially deployed OFDMA-based mobile broadband wireless communications system. He holds over 270 U.S. patents and has more than 400 pending patent applications. He was a founding member of Flarion Technologies, a startup acquired by QUALCOMM in 2006. Prior to that, he was with Bell-Labs research in Lucent Technologies. He has a Ph.D. degree in E.E. from Purdue University and an MBA from the Wharton School at University of Pennsylvania. He is a Fellow of the IEEE. He is a co-author of the book "OFDMA Mobile Broadband Communications" published by Cambridge University Press.

He received the Outstanding Electrical and Computer Engineers award from Purdue University in 2012.

Location: Huawei (Futurewei) Technologies R&D Center
Room Number: China meeting room 400, Crossing Blvd., 2nd Floor, Bridgewater, NJ 08807 [Getting to Huawei Technologies, NJ](#)

Time: 5:00 PM to 7:00 PM

Contact: Naresh Chand (chandnaresh@gmail.com),
Ajay Poddar, (201) 560-3806 (akpoddar@ieee.org), Amit Patel (a.j.patel@ieee.org)

[For Updates and Registration: Click Here](#)

May 28, 2015

IEEE IT, COMSOC, VTS present: Cognitive Radio Research: Spectrum Sensing and Identification of Radio Terminals and Malicious Users

Speaker: Prof. Yu-Dong Yao of Stevens Institute of Technology

Abstract: Cognitive radio is a promising technology for improving spectrum utilization and providing opportunities for new and advanced wireless services. Challenging research issues in cognitive radio include spectrum sensing and network security. This presentation reports recent research activities and results in cooperative spectrum sensing, classification and identification of cognitive radio terminals using machine learning algorithms, and techniques for countering malicious users and attacks.

Biography: Dr. Yu-Dong Yao has been with Stevens Institute of Technology, Hoboken, New Jersey, since 2000 and is currently a professor and department director of electrical and computer engineering. Previously, from 1989 to 2000, he worked for Carleton University, Ottawa, Spar Aerospace Ltd., Montreal, and Qualcomm Inc., San Diego. His research interests include wireless communications and cognitive radio. He is an IEEE Fellow and IEEE ComSoc Distinguished Lecturer.

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

Time: 2:00 PM to 3:00 PM

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

[For Updates and Registration: Click Here](#)

May 29, 2015

IEEE PES and IAS present - Introduction to Smart Grid

Speaker: Dr. Raziq Yaqub of NIKSUN

Abstract: The PES and IAS Chapters will sponsor a technical seminar on the topic of Introduction to Smart Grid. The session will be held on Friday, May 29, 2015 at PSE&G's Hadley Road Facility, 4000 Hadley Road, South Plainfield, NJ 07080-1192.

Topic: This talk will explain the real meaning and scope of Smart Grid. It will set the stage by comparing how existing power grid is different from the smart grid, and what future generations (1stG, 2ndG and 3rdG) of smart grid would bring. It will highlight features of intelligent self healing transmission system. It would also explain the role of communication networks in achieving a vision of future smarter transmission framework. The talk would also elucidate the importance of Energy Management Systems (EMS), and emerging trends in this area. EMS are important as they provide consumers with information about their energy consumption patterns and help them adopt energy-efficient behavior. This behavior consequently enables the utility companies in load management on a distribution network"

Biography: Dr. Raziq Yaqub earned a Ph.D. in Wireless Communication from Keio University, Japan, and MBA in Marketing from Fairleigh Dickenson University, NJ. He is an inventor of numerous technologies in the field of Wireless Communication (4G/LTE - Long Term Evolution), and Smart Grid Technologies. He received "Inventor of the Year Award" from the Governor of the State of New Jersey, USA, through New Jersey Inventors Hall of Fame, for making extra ordinary contributions to the advancement of knowledge and technology through his inventions.

Dr. Yaqub remained an Executive Director of Toshiba America Research, Inc. (TARI) from June 2001 to June 2009, Sr. Consultant to the State of New for 700 MHz LTE Public Safety Network. He also developed Industry Requirements for Dept. Homeland Security for "Govt. Emergency Telecomm Service" and led the standardization efforts of these requirements in 3GPP. Realizing that Energy Efficiency demand is on the verge and there is an urgent need of Smart Grid Education for US college graduates, he took initiative to develop and deliver Smart Grid courses for graduate studies in Stevens Institute of Technology, New Jersey, and University of Tennessee in Chattanooga.

Currently he is working as Director Technical Training at NIKSUN, Princeton, New Jersey. where he oversee instructors and trainees, manage and enhance teaching quality, establish training policies and procedures, define curricula and develop courses, deliver trainings to company employees or external customers

His research interests addressed the problems related to Telecommunications and Smart Grid. He submitted 100+ contributions in standards, filed several patents, and published numerous papers in the proceedings of international conferences. He delivered numerous tutorials in international

conferences, and workshops, Universities and Industries. He remained working group chairman of Mobile Wireless Internet Forum, rapporteur of several work items in 3GPP, key note speaker at several conferences, organizing chair of international events, panelist or panel organizer for panel sessions, and Chairman IEEE membership Development.
Email: Dr.raziq@gmail.com

Location: PSE&G - Hadley Road Facility, Auditorium, 4000 Hadley Road, South Plainfield, NJ 07080-1192.

[Getting to PSE&G - Hadley Road Facility](#)

Time: 9:00 AM to 2:00 PM

Contact: Ronald W. Quade (rwquade@ieee.org)

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.

[For Updates and Registration: Click Here](#)

June 3, 2015

IEEE North Jersey Section EXCOM Meeting – Clifton, NJ

Meeting 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 Adriaan van Wijngaarden (avw@ieee.org) and/or Kai Chen (k.t.chen@ieee.org).

Location: Clifton Public Library (Allwood Branch, 44 Lyall Road, Clifton, NJ 07012 [Getting to Clifton Public Library](#))

Time: 06:00 PM to 08:45 PM

Contact: Adriaan van Wijngaarden (avw@ieee.org) or Kai T. Chen (k.t.chen@ieee.org)

[For Updates and Registration: Click Here](#)

June 15, 2015

IEEE AP/MTT, ED/CAS present: – 3D Surface Reconstruction

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

Abstract: Applications based on three-dimensional object models are today very common, and can be found in many fields as design, archeology, medicine, and entertainment. A digital 3D model can be obtained, for example, by means of physical object measurements performed by using a 3D scanner. In this approach, an important step of the 3D model building process consists of creating the object's surface representation from a cloud of noisy points sampled on the object itself. This process can be viewed as the estimation of a function from a finite subset of its points. Problems of this kind occur in many branches of applied mathematics, and computer science. Many techniques have been developed to face them, such as interpolation, extrapolation, regression analysis, and curve fitting. In computational intelligence this problem is viewed as a supervised learning problem, where the two-dimensional vector coordinates of the single point is an input instance, while the third coordinate is considered as an output label. The approximation function identifies how to obtain labels from instances. Several effective computational intelligence paradigms have been developed for solving these kinds of problems. For the solution of the function reconstruction problem, neural techniques, generally, show a good trade-off between computational complexity, accuracy and robustness of the solution with respect to other methods. In this context, there are many different paradigms which are able to find the approximation function, e.g., Multi-layer Perceptron Networks, Radial Basis Function (RBF) Networks, and Support Vector Machines (SVM). In general, there is not a single paradigm better than the others, but each one performs differently depending on the application context. This keynote speech is directed to introduce the needs of the 3D surface reconstruction, to briefly overview the techniques for surface reconstruction, to analyze and discuss in detailed the neural techniques suited for addressing this problem, and to present the most recent results of research. **Biography:** Asif D. Gandhi is a distinguished member of technical staff in Alcatel-Lucent's Wireless Business Unit. His current focus is on CDMA/EVDO and OFDMA technologies, and he has been the customer technical prime for a Tier 1 customer since the last 2 years. He has led several cross-functional teams to solve complex technical problems in CDMA systems. He specialized expertise is in the area of RF performance, capacity, and coverage of wireless systems. He holds more than 15 U.S. patents and has several other patents pending, all in the area of wireless technologies. Several of these innovations have found their way into Alcatel-Lucent CDMA and UMTS products. Dr. Gandhi has published several journal and conference papers and numerous technical memorandums on the above topics, and is the author of a chapter in the book, "Handbook of CDMA System Design, Engineering and Optimization." He received his bachelor of technology (B. Tech.) degree in electrical engineering from the Indian

Institute of Technology (IIT), Mumbai, India, and an M.S. and Ph.D. in electrical and computer engineering from the University of Massachusetts, Amherst.

Location: NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)

Time: 5:30 PM to 7:00 PM

Contact: Ajay Kumar Poddar, (201) 560-3806 (akpoddar@ieee.org), Edip Niver- (973)596-3542 (edip.niver@njit.edu), Durga Misra (dmisra@njit.edu)

[For Updates and Registration: Click Here](#)

June 17, 2015

IEEE EMC/PSES present: Construction and operation of a reverberation chamber

Speaker: David Larrabee of ESU

Abstract: Topic is the work my students have done in the construction and operation of a reverberation chamber at ESU. I have involved undergraduates in this work and they really enjoy the metal bending and machining; it seems to make the theory go down a little easier. It turns out that the chamber also has some acoustic resonances in the audio as well as the electromagnetic ones. We did an audio of the mode stirring which is kind of fun (I would have to dig that up). I gave a talk to the faculty here at ESU and used the audio, how else do you explain reverberation chambers to english professors.....

Biography: I teach in the physics department so the students have had the junior/senior level Electricity and Magnetism course.

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

Time: 6:30 PM to 8:00 PM

Contact: Dan Roman (danpses@verizon.net)

[For Updates and Registration: Click Here](#)

June 18, 2015

IEEE AP/MTT, ED/CAS present: LIGHT and LIFE: Applications to Biology and Medicine

Speaker: Prof Siva Umamathy of Indian Institute of Science, Bangalore, India

Abstract: Lasers have become an essential light source in spectroscopic applications due to their inherent coherence and intensity. These properties enable both time (fs) and spacial (nm) resolutions required to study materials at the nanoscopic to microscopic level and also their dynamics in femtosecond to seconds time scale. In this talk we will present various applications of laser spectroscopy, particularly vibrational

spectroscopy, in biology and medicine. In the case of biology and medicine, we would present results of both infrared and Raman microscopic approaches to studying tissues, cell-drug interactions, bacterial classifications, sepsis, muscle disorders and lab-on-chip applications. We demonstrate subjective classification of grade IV glioblastoma brain cancer tissues using infrared microscopy. Our study on effect of drugs on various cancer cell lines resulted in identification of propionylation which may be an indication of cancer cell death. During the lecture we would also present results of new technological applications in classification of bacterial species which are relevant to human diseases. We have also explored sepsis and muscle disorders using model systems, such as, mice and drosophila, respectively. Further, very recently we have built a lab-on-chip system for use with Raman microscopy. We demonstrate the utility in combining surface enhanced Raman with lab-on-chip to study extremely low concentration of biofluids. References: (i) Raman and mid-infrared spectroscopic imaging: applications and advancements, S Umamathy, et.al., Current Science, 2014; (ii) Molecular profiling of sepsis in mice using Fourier Transform Infrared Microspectroscopy, S Umamathy, et. al., J. Biophotonics, 2015; (iii) Raman Spectroscopic Studies on Screening of Myopathies, S Umamathy et.al., Anal. Chem., 2015; (iv) Infrared Spectroscopic Studies to Understand the Effect of Drugs at Molecular Level, S Umamathy, SPIE Proceedings, 2013.

Biography: Prof Siva Umamathy, a J. C. Bose Fellow at the Indian Institute of Science (IISc), Bangalore, is internationally reputed for his considerable contributions in the field of laser spectroscopy, chemistry and biology over the last 30 years. He is a professor in both the department of Instrumentation and Applied Physics and Inorganic and Physical Chemistry. In 2004, he was awarded the Bhatnagar Award, the highest civilian award for scientists in India. Uma is the Chairman of the International Steering Committee of Raman Spectroscopy, member of international committee on time resolved vibrational spectroscopy. He plays key roles in the editorial boards of a number of journals including Spectrochimica Acta A, Applied Spectroscopy, Journal of Raman Spectroscopy, Journal of Biophotonics and Chemical Physics. Before joining IISc, he held positions at the Rutherford Appleton Laboratory and University of York in late 80s. He has been visiting professor at the University of Tokyo, Imperial College London, University of Groningen and others. Currently he is also a Honorary Professor position at the University of Nottingham, United Kingdom.

Email: umamathy@ipc.iisc.ernet.in**Location:** NJIT - ECE 202, 161 Warren Street, Newark, NJ 07102 [Getting to NJIT](#)

Time: 4:30 PM to 6:00 PM

Contact: Ajay Kumar Poddar, (201) 560-3806 (akpoddar@ieee.org), Edip Niver- (973)596-3542 (edip.niver@njit.edu), Durga Misra (dmisra@njit.edu)

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avw@ieee.org

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