

# THE IEEE NORTH JERSEY SECTION NEWSLETTER

Vol.59, No. 6

**JUNE 2012** 

#### **Calendar of Events:**

• June 04, 6:30PM-8:30PM IEEE North Jersey AP/MTT Chapter Presents: Millimeter Wave Integrated Circuit Techniques and Technology - Dr. Shiban Koul, Professor at the Indian Institute of Technology Delhi and the Chairman of Astra Microwave Products Limited, Hyderabad Read More...

Location: NJIT, ECE 202, 161 Warren Street, Newark, NJ 07102, Getting to NJIT & Parking Information

Contact: Ajay K. Poddar, (akpoddar@synergymwave.com), (cell: 201-560-3806)

• June 06, 5:30PM-6:30PM Membership Development Committee: IEEE Senior Member Drive- Read More...

**Location:** Bell Laboratories, Alcatel-Lucent Room: 6A-106, 600 Mountain Ave, Murray Hill, NJ 07974 Getting to Bell Labs

Contact: Mani Iyer (Cell: 908 304 2623); mani.iyer@ieee.org; Dr. Ajay K. Poddar: (poddar ajay@yahoo.com)

June 06, 6:00PM-8:45PM IEEE North Jersey Section EXCOM meeting Read More...

Location: Bell Laboratories, Alcatel-Lucent, Room: 6A-106: 600 Mountain Ave Murray Hill, NJ 07974

Getting to Bell Laboratories

Contact: Naresh Chand (908 723 7001); (nchand@ieee.org), Adriaan van Wijngaarden (avw@ieee.org)

• June 14, 5:00PM-8:00PM Instrumentation Measurement Society: Multiport Vector Network Analysis - From the beginning to modern signal integrity applications - Dr. Andrea Ferrero of Politecnico di Torino Read More...

**Location:** Bell Laboratories, Alcatel-Lucent, Room: 6A-106: 600 Mountain Ave Murray Hill, NJ 07974 Getting to Bell Laboratories

Contact: Peter J. Pupalaikis (845) 323-1376 PeterP@LeCroy.com Russell C. Pepe 201-960-6796 rcpepe@ieee.org

• June 27, 6:30PM-8:30PM IEEE Consultants Network: Submarine Cable Systems - Gerald E. Tourgee, the principal of Tourgee Consulting. Read More...

Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ 07981 Click here for Map

Contact: Robert Walker (973-728-0344), or visit our website, www.TechnologyOnTap.org

• August 01, 6:00PM-8:45PM IEEE North Jersey Section EXCOM Meeting – Murray Hill Read More...

**Location:** Bell Laboratories, Alcatel-Lucent, Room: 6A-106: 600 Mountain Ave Murray Hill, NJ 07974 Getting to Bell Laboratories

Contact: Naresh Chand (908 723 7001); (nchand@ieee.org), Adriaan van Wijngaarden (avw@ieee.org)

- How to subscribe to this newsletter if you are not a North Jersey IEEE Member?
- Welcome New Members of IEEE North Jersey Section!

Prior registration is encouraged and appreciated.

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

For up to date information, visit our website: www.ieee.org/go/njsection

## **Meeting Announcements:**

#### June 4, 2012

IEEE North Jersey AP/MTT Chapter presents: Millimeter Wave Integrated Circuit Techniques and Technology

**Speaker:** Dr. Shiban Koul, Professor at the Indian Institute of Technology Delhi and the Chairman of Astra Microwave Products Limited, Hyderabad

**Abstract:** Millimeter Wave Integrated Circuit Techniques and Technology

Millimeter waves offer widespread applications in defense, space and commercial sectors. In this talk, different technologies for building Millimeter Wave Integrated Circuits and Subsystems will be presented. Starting from conventional microstrip technology, other key technologies including suspended stripline, dielectric integrated guide, Finline, LTCC, MEMS and MMIC will be described. Design methodology leading development of several high performance components/ subsystems at 35 GHz, 60 GHz and 140 GHz along with experimental results will be presented. The talk will conclude by giving a comparison of various technologies.

**Biography:** Shiban K Koul is a Professor at the Indian Institute of Technology Delhi. He is also the Chairman of Astra Microwave Products Limited, Hyderabad, a major company involved in the Development of RF and Microwave systems in India. His current research interests include: RF MEMS, Device modeling, Microwave and Millimeter wave IC design and Reconfigurable microwave circuits including antennas.

Dr. Koul has been a member of the IEEE for the past 30 years. He has served as the Chairman of IEEE ED/MTT Chapter, India Council in (1988, 89, 1992, 93, 94, 95). He has also been a member of the executive committee of the IEEE Delhi Section and IEEE ED/MTT Chapter, India Council. He was the past chairman of the Fellow and awards nomination committee of IEEE Delhi Section. Currently, he is the Chairman of Delhi section and also chairman of the Microwave Theory and Techniques Chapter under Delhi section. He is currently a serving ADCOM member and a Member of IEEE MTT

society's Technical committees on Microwave and Millimeter Wave Integrated Circuits (MTT-6) and RF MEMs (MTT-21), Member of India Initiative team of IEEE MTT-S, Membership Services Regional Coordinator India, and Vice Chair MGA and MTT-S Speaker bureau lecturer. Dr. Koul is the author/co-author of 199 Research Papers and 7 state-of-the art books and holds 6 patents and 6 copyrights. He is a Fellow of the Institution of Electrical and Electronics Engineers, USA (IEEE), Fellow of the Indian National Academy of Engineering (INAE) and Fellow of the Institution of Electronics and Telecommunication Engineers (IETE).

Email: s.k.koul@ieee.org

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

Getting to NJIT & Parking Information

Time: 6:30PM - 8:30PM

**Contact** MTT/AP Chapter Chair: Ajay K. Poddar, (akpoddar@synergymwave.com), (cell: 201-560-3806)

For Updates and Registration: Click here Back to Calendar of Events:

#### June 6, 2012

**IEEE North Jersey Section:** 

Membership Development Committee presents: IEEE Senior Member Drive-

#### **Meeting Agenda:**

Get your senior-membership application process, started now and have your references completed by mid-June. Review by the IEEE senior member selection review panel will be conducted at the end of June 2012.

For Senior Member requirements please visit: Requirements for Senior Member Grade

For application, please visit:

IEEE Senior Member Application, Nomination, and Reference Form

If you are having trouble finding that last senior member reference, bring printed out hardcopies of your full resume and senior member application portfolio with you to the meeting for review by other senior members and to find that last reference. Registration link is below.

All section members are invited to attend, especially those who are current senior members and are willing to volunteer as references, and any of those interested in becoming more active in general IEEE activities, volunteering, or those seeking senior membership.

If you are interested in serving as a reference contact our membership development chair at the address: northjerseymembership@yahoo.com or mani.iyer@ieee.org

The event will be held on Wednesday, June 6, 2012, 5:30-6:30PM, there will be a free buffet dinner and an opportunity to network with section members. Seating is limited and registration is required for all.

The meeting will take place at Bell Laboratories, Alcatel-Lucent, in Murray Hill, NJ. in Room 6A-106, which is located near the main entrance behind the Bell Labs Showcase exhibition area. It is not necessary to sign in to access this area.

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

**Location:** Bell Laboratories, Alcatel-Lucent Room: 6A-106, 600 Mountain Ave, Murray Hill, NJ 07974

Click here for Map

**Time:** 5:30 PM – 6:30 PM

**Contact:** Mani Iyer (Cell: 908 304 2623);

mani.iyer@ieee.org

Dr. Ajay K. Poddar: (poddar\_ajay@yahoo.com)

For Updates and Registration: Click here

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### June 6, 2012

#### **IEEE North Jersey Section EXCOM meeting**

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

the Bell Labs Showcase exhibition area. It is not necessary to sign in to access this area. There will be a get-together with a buffet starting at 6pm. The meeting starts at 7 pm EST and typically ends at 8:45 pm. The meeting is meant to discuss and coordinate the section's activities and new initiatives. Everyone is welcome to attend this meeting. Please register in advance for this meeting using VTOOLS to provide the meeting organizers an accurate head count. You can change/cancel the registration if your plans change.

**Location**: Bell Laboratories, Alcatel-Lucent, Room: 6A-106: 600 Mountain Ave Murray Hill, New Jersey 07974 Getting to Bell Laboratories

Time: 6:00 PM - 08:45 PM

**Contact:** Naresh Chand (908 723 7001);

(nchand@ieee.org),

Adriaan van Wijngaarden (avw@ieee.org)

For Updates and Registration: Click here

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#### **June 14, 2012**

**Instrumentation Measurement Society presents: Multiport Vector Network Analysis - From the** 

beginning to modern signal integrity applications

**Speaker:** Dr. Andrea Ferrero of Politecnico di Torino

**Abstract:** Following topics will be discussed

- Single Ended and differential S-parameters review
- VNA Architectures
- Error Models and Calibration Techniques
- Interconnection and Fixture design for digital applications measurements
- On Wafer design of multiport standards
- Microwave Board and Socket characterization

**Biography:** Born in 1962 Andrea Ferrero took the Laurea and the Ph.D. in Electronics at Politecnico di Torino in 1987 and 1992 respectively. During the same period he joined Hewlett Packard Microwave Technology Division in Santa Rosa as visiting scientist and started his career in the same Politecnico di Torino as Assistant Professor.

In 1988 he worked for Aeritalia (Gruppo Sistemi Avionici) as Microwave Measurement System consultant on EMC problems for Avionics.

In 1994 he won the Canadian National Scientist Fellowship and spent one year at the Ecole Polytechnic of Montreal. In 1997 he won the Italian National Contest for Associate Professor Chair becoming Associate Professor of Politecnico di Torino for Microwave Measurements. In 2006 he became Full Professor at the Politecnico di Torino.

He currently teaches Electronic Instrumentation and Measurements and Microwave Instrumentation in the Electronic Engineering course.

In the past he taught Avionic Sensor and Display for the Master in Avionic class of Alenia Aeronautica.

Since 1994 he is an IEEE reviewer for Microwave Theory and Technique and Instrumentation and Measurement Societies as well international scientific Journals. In 1994 he won the Microwave Best Presentation award at the 1994 MMT-S. Since 2000 Prof. Ferrero became a member of the Technical Committee (MTT11) for microwave measurement of the IEEE MTT Society and member of the TPC 27 of the MTT symposium. In 2006 he became senior member of the IEEE and won the IEEE ARFTG Technology Award for advance in Network Analyzer Calibration and Non linear microwave measurement contributions. He has been an international reviewer for the EC metrology program. In 2010 he became Distinguished Microwave Lecture for the IEEE MTT Society and from 2011 he is IEEE Fellow.

Prof. Ferrero worked as consultant on instruments and measurements for the major semiconductor companies and instrumentation makers like: Intel, Infineon, HP, ST Microelectronics, Freescale, Agilent, Anritsu and many others overall the world and his microwave measurements design and calibration techniques have been widely adopted in commercial as well as research test systems.

Prof. Ferrero is the author or coauthor of over 80 papers on microwave technologies and measurements techniques and his current interests are focused on device characterization, calibration techniques and measurement system design.

Finally he is a competition glider pilot with more than 20 years of activity, 2000 flying hours on different gliders and small airplanes.

**Location:** Bell Laboratories, Alcatel-Lucent, Room: 6A-106: 600 Mountain Ave Murray Hill, NJ 07974

#### Getting to Bell Laboratories

**Time:** 5:00 PM – 8:00 PM

Admission is free. Members and non-members all are welcome. Presentation starts at 6:00 PM.

Free buffet will be provided at 5:00 PM.

**Contact:** Peter J. Pupalaikis (845) 323-1376 (PeterP@LeCroy.com)

Russell C. Pepe 201-960-6796 (rcpepe@ieee.org)

For Updates and Registration: Click Here

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#### June 27, 2012

#### **IEEE Consultants Network presents:**

**Submarine Cable Systems -**

**Speaker:** Gerald E. Tourgee, Principal of Tourgee Consulting.

**Abstract:** Submarine Cable Systems - Bringing the World Closer to Home

In our increasingly interconnected world, demand for international bandwidth is growing, fueled by data, video, and voice needs. Hidden from the public eye, not as glamorous as satellite links, Submarine Cable Systems are the real foundation on which international communications depend.

Not many of us think about how our voice and image are carried seamlessly to our international partners and friends, how YouTube videos are shared across continents, or how responses from foreign websites are "nearly" instantaneous. Few of us realize that nearly all international communications travels the depths of the oceans to reach the intended recipient. Even fewer are aware as to how it happens – from financing to design and manufacture to installation and operations.

Join us to get an overview of this fascinating world of subsea communications and cable systems.

**Biography:** Gerald E. Tourgee is consulting for the telecommunications industry since 2001. With an MSME from Carnegie Mellon and a BSME from MIT, Jerry Tourgee has been involved in the field of optical communications in both fiber and free space systems for over 20 years.

In recent years, Jerry has supported clients in planning and implementing new undersea networks for both commercial telecommunications applications and sensor systems. Significant recent accomplishments include implementation of the Micronesia Submarine Cable System, the SEACOM System in East Africa, and the GBI System in the Persian Gulf and Arabian Sea.

At Bell Labs, Jerry Tourgee was instrumental in new developments of free-space optical transmission design for terrestrial networks, highpower optical communication transmission between satellites, and undersea hydrophone development.

Jerry can be reached at getourgee@verizon.net

**Location:** Morris County Library, 30 East Hanover Avenue, Whippany, NJ 07981

Click here for Map

**Time:** 6:30 PM – 8:30 PM

Contact: Robert Walker, 973-728-0344, or visit our

website, www.TechnologyOnTap.org

#### 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.

ALL ARE WELCOME!

No fees or registration required.

For Updates and Registration: Click Here

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## August 01, 2012

# **IEEE North Jersey Section EXCOM Meeting – Murray Hill**

**Agenda:** This executive committee (EXCOM) meeting of the IEEE North Jersey Section will be held at Bell Laboratories, Alcatel-Lucent, in Murray Hill, NJ. The meeting will take place in Room 6A-

106, which is located near the main entrance behind the Bell Labs Showcase exhibition area.

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

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

The meeting is meant to discuss and coordinate the section's activities and new initiatives. Everyone is welcome to attend this meeting. Please register in advance for this meeting using VTOOLS to provide the meeting organizers an accurate head count. You can change/cancel the registration if your plans change.

**Location:** Bell Laboratories, Alcatel-Lucent, Room: 6A-106: 600 Mountain Ave Murray Hill,

NJ 07974

**Time:** 6:00 PM – 8:45 PM **Getting to Bell Laboratories** 

**Contact:** Naresh Chand (908 723 7001);

(nchand@ieee.org),

Adriaan van Wijngaarden (avw@ieee.org)

For Updates and Registration: Click Here

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

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

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

www.linkedin.com/groupInvitation?groupID=2068

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#### Welcome New Members of IEEE North Jersey Section!

Ali Amer Student Member
Amponsah Kwabena Student Member
Badri Matab Student Member
Bisutti Justin Student Member
Collins Daniel Student Member

Corson Mathew Member

Dalal Phiroze Associate Member
Greulich Steven Student Member
Hatchard Jenene Student Member
Hernandez Daniel Student Member

Jose LLiver Graduate Student Member

Kshatriya Anish Student Member

LaBoy Henry Graduate Student Member

Li Ke Member

Liu Haojiong Graduate Student Member Long Chengjiang Graduate Student Member

Lynch Candace Member
Malleichervu Bhasuranand Member

Malmud Evan Student Member

Marcy Jr. Wayne Graduate Student Member

McDonald Erick Student Member
Moscoso Albert Student Member
Niebo Anthony Student Member

Petajan Eric Member

Reddy Ajay Student Member

Shen Lee Member

Vadlakonda Chetan Kumar Graduate Student Member

Volpe Michael Member Wangikar Lalit Member

Felix Joshua Student Member Girgis Kirles Student Member

#### **2012 IEEE North Jersey Section Volunteers**

Executive Committee
Chair - Naresh Chand
chandnaresh@gmail.com

Vice Chairman 1 - Russell Pepe

rcpepe@ieee.org

Vice Chairman 2 - Har Dayal

dayalhar@gmail.com

Secretary - Adriaan van Wijngaarden

avw@ieee.org

Treasurer - Kalyan Mondal

mondal@fdu.edu
Members at Large
1. Chris Peckham

cdp@ieee.org

2. Vacant

3. Goran Djuknic gd@ieee.org

Junior Past Chair - Amit Patel

a.j.patel@ieee.org

Senior Past Chair - Kirit Dixit

kdixit@ieee.org

**Society Chapters** 

**Aerospace Electronic Systems** 

Society

**Chair** - Chandra Gupta c.gupta@ieee.org

**Co-Chair** - Naresh Chand chandnaresh@gmail.com

Antennas and Propagation Society/ Microwave Theory and Techniques

**Society** 

Chair - Ajay Poddar

akpoddar@synergymwave.com

**Vice-Chair** – Edip Niver niver@adm.njit.edu

Circuits and Systems Society / Electron Devices Society

Chair - Durga Misra

dmisra@niit.edu

**Communications Society** 

Chair - Nirwan Ansari nirwan.ansari@njit.edu

ini wan.ansan @ njit.co

**Computer Society** 

Chair - Hanna (Hong) Zhao

zhao@fdu.edu
Controls Society

Chair - David Haessig

davidhaessig@ieee.org

**Engineering in Medicine and** 

**Biology Society** 

Chair - Raquel Perez-Castillejos

raquelpc@njit.edu

**Industrial Applications Society** 

Chair - Ken Oexle k.oexle@ieee.org

Instrumentation Measurement

**Society** 

Chair - Russel Pepe

rcpepe@ieee.org

Vice-Chair – Peter J. Pupalaikis

peterp@lecroy.com

Photonics Society
Chair – Naresh Chand

chandnaresh@gmail.com

**Power & Energy Society** 

Chair - Ron Quade

rwquade@ieee.org

**Signal Processing Society** 

Chair - Yun Q. Shi

shi@njit.edu

Systems, Man, and Cybernetics

Society

Chair - Mike Liechenstein

itsmikesju@aol.com

**Vehicular Technology Society** 

Chair - Yu-Dong Yao yyao@stevens.edu

**Technical Councils** 

**Technology Management Council** 

Chair - Tony Almeida

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Affinity Groups

**Consultants Network** 

Chair - Peter Schutz

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**GOLD** 

Chair - Dandan Wang

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Women in Engineering

Chair - Zhiwei Mao

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**LIFE Members** 

Chair - Art Greenberg

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Committees

Awards/Recognition

Chair - Ken Oexle

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**Audit Committee** 

Chair - Fred Chichester

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Co-Chair 2- Kalyan Mondal

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Co-Chair 3 - Mengchu Zhou

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**Group coordinator / History** 

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**Membership Development** 

Chair - Mani Iyer

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Vice-Chair - Ajay Poddar akpoddar@synergymwave.com

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Symposium

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Vice-Chair – Har Dayal

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TPC Co-Chair - George Kennall

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**TPC Co-Chair** – Ajay Poddar

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PACE

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Vice-Chair – Paul E Ward

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**Pre-College Activities** 

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Vice-Chair – Hitaish Sharma

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Webmaster

Chair – Suzanne McIntosh

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**Industrial Liaison** 

Chair-Kirit Dixit

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**Intersection activities Chair**- Amit Patel

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Joel Miller

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