



THE IEEE NORTH JERSEY SECTION NEWSLETTER

Vol. 59, No. 1

JANUARY 2012

Calendar of Events:

- **Jan 04, 6:00PM-8:45PM IEEE North Jersey Section EXCOM meeting**
Location: Activity Room of the Clifton Public Library (Allwood Branch), 44 Lyall Road, Clifton, NJ 07012
Contact: Naresh Chand (Cell # 908 723 7001), Library Number: (973) 471 0555
- **Jan 25, 6:30PM-9:30PM Financial Crisis of 2008: An engineer on Wall Street – Samir Padalkar**
Location: Morris County Library, 30 East Hanover Avenue, Whippany, NJ [Getting to Morris County Library](#)
Contact: Robert Walker (973-728-0344) OR Visit our website: www.TechnologyOnTap.org
- **Feb 01, 6:00PM-8:45PM IEEE North Jersey Section EXCOM meeting**
Location: Bell Laboratories, Alcatel-Lucent Room: 6A-106, 600 Mountain Ave, Murray Hill, NJ 07974,
Contact: Naresh Chand (Cell # 908 723 7001), Adriaan van Wijngaarden (avw@ieee.org). [Click here for Updates and Registration](#)
- **Feb 28, 5:30PM-8:40PM North Jersey Spring 2012 Student Presentation Contest**
Location: Muscarelle Building, Room Number: Room M105, FDU, 1000 River Road, Teaneck, NJ 07666, [Getting to FDU](#)
Contact: John C Taylor (john.taylor86@live.com)
- **Congratulations!! Upon Elevation to the 2012 IEEE Fellow Grade**
- **Congratulations to Prof. Lawrence Bernstein for receiving the 2011 Industrial Innovation Award !**
- **Not a North Jersey IEEE Member? Find out how to subscribe to our public mailing list!**

- *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

Meeting Announcements:

January 04, 2012

IEEE North Jersey Section EXCOM meeting

Agenda: The meeting agenda typically includes reports from the Secretary and Treasurer, reports from the Chapter and Affinity Group Chairs and Representatives, Committee Chairs, news related to the IEEE and the North Jersey Section, planning and new initiatives.

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 to be held at the Clifton Public Library (Allwood Branch)

Location: Activity Room of the Clifton Public Library (Allwood Branch), 44 Lyall Road, Clifton, NJ 07012,

Time: 6:00 PM – 8:45 PM

Contact: Naresh Chand (Cell # 908 723 7001)

Library Number: (973) 471 0555)

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

January 25, 2012

IEEE Consultants Network presents:

Financial Crisis of 2008: An engineer on Wall Street

By: The first 2012 meeting of the IEEE Consultants' Network of Northern New Jersey (www.TechnologyOnTap.org), scheduled for Wednesday, January 25, 6:30 PM, features a presentation by Samir Padalkar.

Please note: breaking with our past custom, CNNNJ meetings in 2012 will generally be held on the last Wednesday of the month.

Please visit the Network web site or IEEE Event Calendar for details of our schedule.

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.

Abstract: An Overview of the 2008 Financial Crisis (From the perspective of an electrical engineer on Wall Street)

Do you know what factors really caused the worst recession since the Great Depression?

What are the prospects for the US economy in the near future?

The speaker, Samir Padalkar, will take a quick look at some often-debated basics of the 2008 financial crisis including causes, financial products and the role of various players; banks, insurers, rating agencies, Fannie - Freddie and the

Federal Reserve. Finally, he will compare the 2008 crisis with the Internet Bubble and offer some thoughts for the future.

Topics covered:

- Deconstructing 'Toxic' assets- CDOs and derivatives and how they work, how they were priced, Monte-Carlo simulations, role of rating agencies and AIG , who bought them.
- Fannie and Freddie - subprime mortgages - and the mortgage - crisis, credit crisis and credit crunch
- The role of the Federal Reserve
- Looking at the Internet Bubble in 2000 - how this was different

Biography: Samir Padalkar has over 20 years of experience building Real-Time decision systems, first in the chemical/aerospace industry and later in Real-Time trading systems such as those used in algorithmic trading. Most recently, he was CTO of Hold Brothers, a proprietary trading firm in NYC, where he built a real-time equities and derivatives trading platform. Samir started his career with a B.Tech from IIT Madras and a PhD from Vanderbilt University. His research was patented and commercialized by the Osaka Gas Company of Japan. Later he joined Quant Trading as lead software developer and applied his Real-Time systems work to developing Fixed Income & Derivatives trading systems. In 1996 he lead the launch of "Sector", one of the first off- the-shelf trading products on Wall Street, selling it to companies like Daiwa, GovPX, TD, ABN Amro, Lehman & Chase. In 2002, Thomson Financial bought Quant and Samir went to lead their fixed income development team as Vice president of Fixed Income Development. The following year he moved to TradeWeb, to lead a development team launching online Mortgage Backed Securities trading. Samir lives in Summit, NJ with his wife and 2 kids, is an avid bicyclist, hiker & cricket lover and enjoys travelling to wine regions. He can be reached at samirpad@gmail.com, (908) 420-9022

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

[Getting to Morris County Library; Click here for Map](#)

Time: 6:30 - 9:30 PM

Contact: Robert Walker (973-728-0344) OR

Visit our website: www.TechnologyOnTap.org

ALL ARE WELCOME! Snack food and refreshments will be available. Although there is no fee involved, in order to accommodate all participants, if possible, please advise us by noon, Monday, January 23, if you plan to attend.

For registration and updates: Call or Email Robert Walker (973-728-0344), r.d.walker@ieee.org or [Click here](#)

February 01, 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.

The meeting agenda typically includes reports from the Secretary and Treasurer, reports from the Chapter and Affinity Group Chairs and Representatives, Committee Chairs, news related to the IEEE and the North Jersey Section, planning and new initiatives.

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

[Click here for Map](#)

Time: 6:00 PM – 8:45 PM

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

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

February 28, 2012

Student Activities section presents:

North Jersey Spring 2012 Student Presentation Contest

The Spring 2012 Student Presentation Contest is coming up! The North Jersey Section will be holding presentation contests scheduled for February 28th for undergraduate and graduate students. Its overwhelming success in generating student participation and interest make it a fantastic event for up and coming engineers.

The main focus of the presentation contest is to give students an opportunity to sharpen their communication skills, and help prepare for real life situations as practicing engineers and researchers. Additionally, the North Jersey Section contest provides an excellent chance for students to practice for the Region I Student Paper contest in the spring.

The contest at the North Jersey Section level is also supplemented by awarding cash prizes to the three best presentations in both graduate and undergraduate categories. All engineering students are encouraged to participate in submitting individual presentations on any project work RELATED to engineering. This LOCAL contest does NOT require students to write a full paper, just a slide-based presentation on technical or non-technical work is sufficient. Senior design projects, lab projects, personal engineering hobbies,

engineering policy etc. are great topics to submit. Moving onto the regional contest requires submitting a short written paper.

The details of contest RULES, JUDGING criteria, viable TOPICS for presentations, and ABSTRACT FORM WILL BE SAME AS LAST YEAR. Please contact your chapter president for judging criteria.

This year's North Jersey Section Contest will be open to graduate and undergraduate students and first/second/third place prizes will be awarded in each category of \$100/\$75/\$50. All participants MUST REGISTER by submitting their presentation to the North Jersey SAC Chair (john.taylor86@live.com) no later February 25th.

Location: Muscarelle Building, Room Number: Room M105
FDU, 1000 River Road, Teaneck, NJ 07666

[Getting to FDU](#)

Time: 05:30PM to 08:40PM

No Admission Charge.

Contact: John C Taylor (john.taylor86@live.com)

Meeting Agenda: 5:30 pm – 6:00pm Dinner

6pm – 8pm (approx) Student Presentations

8:15pm – 8:30pm Winners Announced

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

2012 IEEE Fellow Elevations:

Congratulations!! Upon elevation to the 2012 IEEE Fellow Grade

JUNYI LI



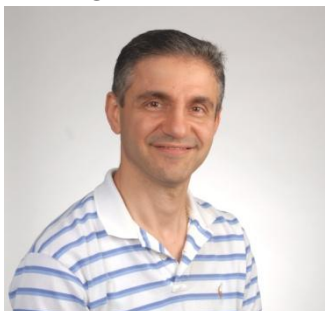
Junyi Li is a Vice President of Engineering at Qualcomm Flarion Technologies, responsible for conceptualizing and developing next-generation wireless networking solutions. He was a key inventor of Flash-OFDM, arguably the first commercially deployed OFDMA-based mobile broadband wireless communications system. He holds over 120 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.

CHARLES R. KALMANEK

Charles R. Kalmanek is Vice President-Research, AT&T Services, Inc. He is responsible for research in AT&T on algorithms, communications technologies, large-scale networks, speech and language understanding, machine learning, multimedia technologies, human-computer interfaces, mobile applications, converged services, and software and information systems. Chuck joined AT&T Bell Laboratories in 1980. He has extensive experience in network architecture, protocols and distributed systems.

His research spans IP network management, access network architectures, wireless networks, voice over IP (VoIP), multimedia streaming, content distribution networks and storage networks, as well as packet-switch and host-interface design.

Chuck received a B.S. degree from Cornell University in Applied and Engineering Physics and M.S. degrees in Electrical Engineering and Computer Science from Columbia University and New York University, respectively. He is a recipient of AT&T's Strategic Patent and Strategic Standards awards. Chuck is a former co-chair of the IEEE Internet Technical Committee, and is AT&T's technical representative on the Broadband Internet Technical Advisory Group (BITAG). Chuck co-edited Guide to Reliable Internet Services and Applications, published by Springer in 2010.

MAZIN GILBERT

Mazin Gilbert is the Executive Director of Speech and Language Technologies at AT&T Labs-Research. He has a Ph.D. in Electrical and Electronic Engineering, and an MBA for Executives from the Wharton Business School. Dr. Gilbert has

over 24 years of research experience working in industry at Bell Labs and AT&T Labs and in academia at Rutgers University, Liverpool University, and Princeton University.

Dr. Gilbert is a well-known technology leader in the areas of speech and language processing. He is the evangelist behind the AT&T WATSON™ software engine and is responsible for the advancement of AT&T's technologies in areas of interactive speech and multimodal user interfaces. This includes fundamental and forward looking research in automatic speech recognition, spoken language understanding, mobile voice search, social media, multimodal user interfaces, and speech and web analytics. Dr. Gilbert has contributed to numerous services in AT&T including VoiceTone™ Enterprise contact centers, Mobility applications including YPMobile, and a number of new services such as AT&T Speech Enabler, Talkalytics and SONAR. Dr. Gilbert has over 100 publications in speech, language and signal processing and is the author of the book entitled, Artificial Neural Networks for Speech Analysis/Synthesis (Chapman & Hall, 1994). He holds 54 US patents and is a recipient of several national and international awards including the Most Innovative Award from SpeechTek 2003 and the AT&T Science and Technology Award, 2006.

Dr. Gilbert is a Fellow of the IEEE, and a Director of the IEEE Signal Processor Society Industrial Relationship Committee.

Congratulations to Prof. Lawrence Bernstein for receiving the 2011 Industrial Innovation Award !

Background of the work that led to the award:

The Regional Bell Operating Companies and several independent telephone companies are using the FACILITIES AND CONTROL SYSTEM (FACS) at the core of their network operations support systems since the early 1980's to manage the accounts of 100 million telephone lines in the United States. Bell Labs first developed FACS to provision the access network and the core network. The potential for both FACS grew to include network element configuration, force management and engineering decision support systems; it warranted an investment well in excess of a billion dollars. That investment paid off tenfold in terms of productivity benefits.

There were seven previous failed attempts to build such a system. Today's system required the project management of Larry Bernstein for it to become a success.

FACS was part of the huge investment in computer hardware and software telephone companies made in the 1980s and early 1990s showed the largest productivity gains after 1995. Telephone companies subsequently saw strong productivity growth.

The innovations pioneered by this system have now become standard operating practice. Here are just a few of the groundbreaking ideas:

1. Application development using UNIX prior to the availability of the production operating system.

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

2. Integration of test teams with the developers to expedite system feature testing using a novel process called Cooperative Testing.
3. Work flow engine to provide 'flow-through', thereby completely automating previously manual processes.
4. Bob Martin's FCIF interface language, a precursor to XML which is now used extensively on the World Wide Web.
5. Automatic configurations of network devices such as local switches, digital loop carrier systems to fully use in place equipment

FACS has operated for more than twenty years; this is no small feat for software. That it they will continue to work far into the future is a testament to the vision of their designers and implementers. Many individuals contributed to FACS. It is impossible to honor all of them

"Larry Bernstein was the seminal leaders for large, powerful teams for the FACS family. His vision, technical acumen and above all his ability to inspire and excite their talented people to advance communications technology are in the tradition of Bell Labs," commented middle manager Lou Casulli.

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.



EXCOM at Chand's Palace - Dec 6, 2011

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

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 - Paul E Ward

peward@ieee.org

Members at Large

1. Chris Peckham

cdp@ieee.org

2. Kalyan Mondal

Mondal@fdu.edu

3. Goran Djuknic

goran.djuknic@baesystems.com

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@njit.edu

Communications Society

Chair - Nirwan Ansari

nirwan.ansari@njit.edu

Computer Society

Chair - Hanna (Hong) Zhao

zhao@fdu.edu

Controls Society

Chair - David Haessig

davidhaessig@ieee.org

Engineering in Medicine and Biology Society

Chair - Raquel Perez-Castillejos

raquelpc@njit.edu

Industrial Applications Society

Chair - Ken Oexle

k.oexle@ieee.org

Instrumentation Measurement Society

Chair - Russel Pepe

rcpepe@ieee.org

Vice-Chair – Peter J. Pupalaikis

peterp@lecroy.com

Photonics Society

Chair – Naresh Chand

chandnaresh@gmail.com

Power & Energy Society

Chair - Ron Quade

rwquade@ieee.org

Signal Processing Society

Chair - Yun 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

almeida@synergymwave.com

Affinity Groups

Consultants Network

Chair - Peter Schutz

schutz@compuserve.com

GOLD

Chair - Dandan Wang

wangdan79@hotmail.com

Women in Engineering

Chair - Zhiwei Mao

zmiao@fdu.edu

LIFE Members

Chair - Art Greenberg

a.h.greenberg@ieee.org

Committees

Awards/Recognition

Chair - Ken Oexle

k.oexle@ieee.org

Audit Committee

Chair - Fred Chichester

fdchichester@gmail.com

Education

Co-Chair 1 - Donald Hsu

yanyou@hotmail.com

Co-Chair 1 - Kalyan Mondal

Mondal@fdu.edu

Co-Chair 2 - Mengchu Zhou

zhou@njit.edu

Group coordinator / History

Chair - Howard Leach

h.leach@ieee.org

Membership Development

Chair - Mani Iyer

Mani-iyer@alcatel-lucent.com

Vice-Chair - Ajay Poddar

akpoddar@synergymwave.com

MTT/AP Trade Show and Symposium

Chair - Kirit Dixit

kdixit@ieee.org

Vice-Chair – Har Dayal

dayalhar@gmail.com

TPC Co-Chair – George Kennall

gkk@lgsinnovations.com

TPC Co-Chair – Ajay Poddar

akpoddar@synergymwave.com

Newsletter

Chair - Anisha Apte

anisha_apte@ieee.org

Nominations

Chair - Kirit Dixit

kdixit@ieee.org

PACE

Chair - Richard Tax

rtax@verizon.net

Vice-Chair – Paul E Ward

peward@ieee.org

Pre-College Activities

Chair - Har Dayal

dayalhar@gmail.com

Vice-Chair – Hitaish Sharma

hitaish@gmail.com

Student Activities

Chair - John C Taylor

john.taylor86@live.com

Webmaster

Chair – Suzanne McIntosh

SKranjac@us.ibm.com