

May 29, 2009

2009 IEEE Fellows



Dr. Gagan Choudhury *"for contributions to design and analysis of telecommunication networks and routing protocols"*

Dr. Gagan Choudhury is a Lead Member of Technical Staff in AT&T Labs Research, Middletown, NJ. He is a key modeler and designer of the Control and Data Plane of AT&T's

global IP/MPLS network. His specialty is in Queuing Theory, Voice/Data Integration, IP/MPLS TE and Fast Reroute, OSPF Stability, IGP Convergence Time, combined IP/Optical network design, and Multicast Routing. He published around 90 technical papers, IETF RFCs and Internet Drafts, and holds about 10 patents. Gagan has a Ph.D. in Electrical Engineering from the State University of New York, Stony Brook. His professional achievements include: 1) elevation to IEEE Fellow (2009), 2) best paper award at the IFIP 2007 conference on network and parallel Computing (2007), 3) honorable mention of Lanchester prize (1998), 4) Marcel Neuts award for the best paper in stochastic modeling (1997), and 5) finalist in Eta Kappa Nu's Outstanding Young Electrical Engineer award competition (1989).



Dr. Peter J. Winzer *"For contributions to high-speed digital optical modulation in transport networks"*

Peter J. Winzer received his Ph.D. in electrical engineering from the Vienna University of Technology, Austria, in 1998. Supported by the European Space Agency (ESA), he investigated space-borne Doppler

lidar and laser communications using high-sensitivity digital modulation and detection. In this context, he specialized in advanced digital optical modulation formats and high-sensitivity optical receivers using coherent and direct detection. In 2000 he joined Bell Labs, focusing on physical-layer as well as architectural aspects of high-bandwidth fiber-optic data networks, including Raman amplification, optical modulation formats, advanced optical receiver concepts, and digital signal processing techniques from 10 to 100 Gb/s, and soon became a leading expert in his field. In 2002 he applied this expertise to Lucent Technologies' 40-Gb/s products during

a nine-month stay in Lucent's development unit for high-speed data transmission in Nuremberg, Germany.

Since 2005 he has been establishing a series of world records by demonstrating the first 100-Gb/s electronically multiplexed optical transmission systems for 100G Ethernet applications, leading up to the first field trial of live 100G video traffic over an existing carrier network in 2007. He has authored and co-authored about 200 peer-reviewed papers in international journals and at international conferences and 9 bookchapters, and holds several patents in the fields of optical communications, lidar, and data networking. He is actively involved as a reviewer, guest editor, and associate editor of international journals and serves as a committee member and organizer of various international conferences and workshops, including ECOC, OFC, CLEO, and the IEEE Photonics Society, where he is an elected member of the board of governors (BoG). He is a Distinguished Member of Technical Staff at Bell Labs, a Member of the Optical Society of America (OSA), and a Fellow of the IEEE.



Les Baxter, P.E. *"for contributions to high-speed digital communication networks."*

Mr. Baxter is a registered Professional Engineer in New Jersey. His education includes a BSEE from Rochester

Institute of Technology, an MSEE from the University of Delaware, and a mini-MBA in Global Business from Penn State. He has published more than 30 articles in technical and trade publications, and is the author of *Residential Networks* and co-author of *Premises Cabling*. He has been a frequent speaker at industry conferences and has made technical presentations on 5 continents. He has contributed to a number of EIA/TIA, IEEE, and ISO/IEC standards and currently chairs the IEEE 1394 Working Group. He holds 8 US patents.

Mr. Baxter's primary technical contributions have been in digital PBX architecture and structured cabling systems. In January 2009, he was named an IEEE Fellow for "contributions to high-speed digital communication networks."

Mr. Baxter was employed at Bell Laboratories for 24 years in the Business Communication Systems, Network Cable Systems, Optical Fiber Solutions, and Optical Networking business units. In 2001, he founded Baxter Enterprises, which provides consulting, engineering, and expert witness services for telecommunications products, systems, and applications. In recent years, his practice has focused on structured cabling systems, LANs, and residential networks.

2008 IEEE Region 1 Award

Dr. K. Raghunandan *"for outstanding contribution in the design and construction of wireless communication"*

K. Raghunandan worked in the Indian Space Research Organization from 1977 till 1987 on launch vehicle systems. From 1987 to 1992 he worked on a European Space Agency project in England. He worked in Bell Labs, Lucent Technologies from 1993 till 2004. During this period he worked in the field of wireless communications specializing in TDMA, CDMA, Satellite Digital Audio Radio Systems, as well as Access systems (ADSL) and other communication technologies. In 2005 he was granted a US patent on integrated access network using wireless and cable.

Since 2004, he works for New York City Transit (MTA), in the Communication Engineering department and is responsible for evaluating new wireless technologies for the organization. Raghu received the bachelors' degree in Electronic engineering from the University of Mysore, Masters Degree in Instrumentation from IIT, Kharagpur and Research degree in Satellite communication from the University of Surrey, England. Raghu has several international publications in IEEE conferences and journals. Raghu was one of the panelists for an on-line webinar conducted by Wireless Week magazine on the topic of "3G and beyond" held on Nov 17, 2005. He has also delivered lectures at several universities in USA, UK, Malaysia and India.



Sarbmeet has contributed to several publications in communications journals, including articles in the Bell Labs Technical Journal (BLTJ). He has also been a speaker and panelist at communications conferences around the globe. He has a pending patent application for a new service concept around mobile multimedia ringback services. Sarbmeet received his MSc in physics from Indian Institute of Technology in Kanpur, India and a PhD in theoretical physics from Caltech, Pasadena, CA.

Friend of IEEE & Engineering Profession

Since 2008 the IEEE NJ Coast Section started recognizing those companies and leaders that provided extra-ordinary and sustained support for IEEE and professional activities. This year, on behalf of NJ Coast Section, we are honored to recognize Telcordia Technologies- Advanced Technology Solutions, Piscataway, NJ by conferring the award of "Friend of IEEE & Engineering Profession"

Telcordia Technologies has been serving the professional members in New Jersey and New York area for the last seven years in a variety of ways. Telcordia Technologies has encouraged its employees to take leadership roles in local section related activities. Its employees have served in IEEE Princeton Central Jersey's executive committee as well as, Region 1 board of governors. Over the last seven years, Telcordia has contributed to the success of the prestigious IEEE Sarnoff Symposium by: providing equipment, location facilities for meetings, preparing the printing of materials and encouraging its employees attend the conference. Employee participation has included: contributing to organizing committee in the roles of registration chair, technical program chair, publication chair, and conference co-chair. Thanks to the excellent support from Telcordia management, IEEE Sarnoff Symposium has established itself as the premier conference in the local area. In addition, Telcordia employees have been involved in, and taken leadership roles, in other IEEE sponsored conferences: MILCOM, ICC, and IMSAA are a few.

Telcordia Technologies has consistently encouraged its employees to give technical talks at IEEE New Jersey Coast Section's meetings.

In keeping with its tradition of continued and sustained support to IEEE's activities over the years, Telcordia Technologies recently hosted first-of-its kind IEEE Industry Day on February 5, 2009. The program was a joint event by IEEE sections in the Southern Area in Region 1. This strong commitment by Telcordia Technologies and the loyal volunteers from all Southern Area Region 1 sections, including the NJ Coast Section, ensured a successful event. The daylong conference sponsored by IEEE Region 1 focused on how communications and green technologies are changing the way companies do business. Industry Day drew more than 300 participants who came to listen to industry leaders and university professors who presented papers on cutting edge technologies. In addition, many viewed a Webcast on the

Dr. Sarbmeet S. Kanwal *"for Managerial Leadership in the Development of Wireless Network Systems"*



Dr. Sarbmeet S. Kanwal of Holmdel, NJ, is currently employed as a senior manager at Alcatel-Lucent and is responsible for leading marketing initiatives for the company's wireless product portfolio. Sarbmeet started his career with the former AT&T (which later became Lucent and finally Alcatel-Lucent) in 1983, as a systems engineer for digital multiplexing and cross-connect products. He was promoted to a management position in 1986 and headed large teams of software engineers to help develop new products, successively, in the areas of voice messaging, fast packet switching and wireless network management. During this time he was instrumental in transferring wireless GSM knowledge and technology from the US to Lucent's GSM development facility in the UK. More recently Sarbmeet has been spearheading new wireless applications concept development and wireless solutions marketing activities at his company.

event shown throughout the company's facilities. Telcordia Technologies management made sure that all the logistics were taken care of which allowed other IEEE volunteers the time to oversee successful execution of programs. Employees went out of their way to arrange webcasting at remote facilities to take care of unexpected attendance level. Telcordia generously allowed the organizers to use its facilities during the four-months long preplanning activities leading to the successful industry day.

In addition to the logistical help, Telcordia's CTO and President of ATS Dr. Drobot delivered the telecom keynote talk and participated in the panel discussion. Telcordia has definitely set a standard for how the Industry can help IEEE by working with its volunteers in fostering a strong collaboration, which is the need of the hour. In particular, leaders like Dr Drobot are role models and it is our unique privilege to recognize Dr Drobot and his R&D Organization with this award.



Dr. Adam T. Drobot, CTO & President, Advanced Technology Solutions

As Chief Technology Officer and President of Advanced Technology Solutions, Dr. Drobot is responsible for the company's Applied Research and Government & Public Sector groups. He oversees an Applied Research organization of more than 220 researchers who are

involved in many aspects of Internet, broadband and information networking, and software technologies. The Applied Research group is renowned for developing such groundbreaking technologies as ADSL, AIN, ATM, ISDN, Frame Relay, PCS, SMDS, SONET, video-on-demand, and Internet telephony.

Dr. Drobot's Government & Public Sector group is the single focal point that concentrates all Telcordia resources to accelerate company growth in the government space. As its head, he is responsible for planning and implementing systems engineering solutions that are applicable to Federal, State and Local government problems. These solutions span telecommunications and IT areas, including networking and operations for traditional, as well as evolving IP and converged general purpose and mission-specific networks. The Government & Public Sector group's areas of expertise include security and information assurance as well as business process outsourcing.

Prior to Telcordia, Dr. Drobot managed the Advanced Technology Group at Science Applications International Corporation (SAIC), a \$7B Fortune 250 firm. He also served as the Senior Vice President for Science and Technology in his 26 years at SAIC

2009 Best Volunteer of NJ Coast Section



John Palframan assumed role of chairing a newly created 'Inter-section Seminar' function during middle of 2008. This position was created by Section Chair in 2008 in anticipation for an event which eventually culminated in the first ever "IEEE Industry Day" conducted in collaboration with sections of Southern Area within Region 1.

John assumed the role of Project Manager of the Industry day and reached out to volunteers and industry leaders across many locations and worked tirelessly with others for a successful execution. In a very short time John has earned the respect across many sections within Region 1 for his easy style and for his disciplined approach to planning and execution.

Our section is very happy to recognize John for his significant contributions in a very short time since John volunteered his time within NJ Coast Section.

John is currently a research scientist for the Avaya Resource Center for Software Technology in Avaya Labs where he utilizes many approaches to help improve R&D software development competencies. He conducts goal-oriented project assessments, manages annual distributed software conferences across 16 time zones, moderates architecture reviews, co-authors an annual State of Software in Avaya Report that assesses software practices in projects across the company and makes recommendation on how to improve projects use of development practices, and works with projects on specific topics such as agile development, software metrics, development tools, and collaboration.

John has worked as a software developer, system engineer, technical manager for development and support groups, and as a research scientist. In Canada he has worked for "The Globe and Mail", the "Computer Communications Networking Group" at the University of Waterloo, and for "Bell Canada". In 1979 he moved to New Jersey where he has worked for "Bell Labs (AT&T)", "AT&T Information Systems", "Lucent Technologies", and "Avaya Labs".

Development assignments included developing a system for automated protocol testing, developing a data network gateway, developing communications software for a large AT&T project, and developing code to collect and present software project metrics. As a system engineer he has represented Canada at the CCITT, specified communications protocols, and worked on software curriculums for the Bell Labs Software Technology Center. As a technical manager he managed software developers on the Definity PBX and a software tools group.

2009 Best Speaker of NJ Coast Section



Martin Alexander, PE – Mr Alexander has worked in the field of acoustics & vibration for 30 years & with the international firm of Bruel & Kjaer for more than 25. He has been a Field Sales Engineer, an Application Specialist, and a Product Manager. As product manager, he helped to define specifications for modern sound level meters. He acts as Solution Manager for the Telecom-Audio market in the Americas, and lectures

for Bruel & Kjaer in the areas of Acoustics, Vibration, and Noise Control. He serves as an industry representative on several Acoustical Society standards groups and is a member of the ASA noise committee. Since 1972, he has worked as a consultant in architectural acoustics and noise control and participated on projects for the EPA, the Federal Highway Administration, and architects and private sector clients in power generation, food processing, and pharmaceutical industries. He has managed projects as far ranging as acoustical design for the USGA testing lab, to the noise and vibration impact analysis of the Hudson Bayonne Light Rail Transit project. He holds a BS from the Cooper Union and a MS from MIT, both in mechanical engineering. He has presented papers at Institute of Noise Control Engineering & Acoustical Society conferences, and is published in several journals.

Presentation Title: EVALUATING VOICE QUALITY

ABSTRACT The purpose of the presentation is to describe the methodology for analyzing end-to-end voice quality in hybrid system. With the press' focus on mobile phone functions such as email, messaging, web browsing and GPS location based services, its easy to forget that the primary function of a phone is speech service. Evaluating how successful the phones provide this service can be a difficult task. This presentation will provide some background and challenges on how to design and analyze end-to-end audio. The testing and complications in evaluating voice quality could be a challenge and this talk will focus on some of those challenges. Test platforms, relevant parameters, and test environments will be discussed.

Monmouth Junior Science Symposium Winners

Moyukh Chatterjee “for Growth and Imaging of Bismuth Nanowires”

Moyukh Chatterjee is a junior at High Technology High School and is interested in the



biomedical engineering and nanotechnology fields. He is currently working on an internship at Princeton University, and is also the fundraising chair of his school's Model UN chapter. Moyukh is a member of the National Honor Society, a member of the academic team, and a National Science Bowl participant. In his spare time, Moyukh plays guitar, loves to cook, and plays Ultimate Frisbee with his friends.

Jeffrey Hart “for Developmetn of Criteria for Accurately Predicting Passive RFID Tag Performance in Various Metal Packing Arrangements”

Jeffrey hart is a senior at High Technology High School, will be attending Franklin W. Olin College of Engineering next fall. Well-rounded in his interests, Jeffrey plays tennis, frisbee, juggles and plays guitar. He is also a member of the St. Rose of Lima Junior Handbell Choir.



Jeffrey is active in several clubs and organizations at this school and has served as a teacher's assistant in a forensic science class. He is a 2008 category winner in the international Ruckus Nation competition, an innovation and ideas competition that seeks solutions to improve levels of physical activity in children. Jeffrey has participated and has won first place in 2007 and 2008 at the Delaware Valley Science Fair and won an honorable mention at the 2008 MJSS.

Nirali Shah “for Comparative Analysis: the Effects of Varying Gel Substrates on Dendrite Branching and Myocyte Development”

Nirali Shah is currently a senior at John P Stevens High School in Edison, NJ and will be attending Weinberg College of Arts and Sciences at Northwestern University in the fall. She has been conducting independent research studies at the Neuroscience and Cell Biology Laboratory at Rutgers University since her sophomore year in high school. She is interested in Neuroscience since her freshman year in high school, and wish to pursue a career in medicine in the near future. She is involved in many extra-curricular activities such as Student Council, Student Action Committee, the school newspaper, the Waksman Student Scholars Program in conjunction with Rutgers University, and the Chemistry-Physics club. She is an executive board member of Student Council, President of Student Action Committee, Editor of the School Newspaper, Vice President of the Science National Honor Society, Secretary of the Spanish Honor Society, and Vice President of a student-run community service organization called People to People International.

