

Biographies

The Unclassified Technical Program Chair would like to acknowledge the Steering Committee members, Track Chairs and the Session Organizers and Chairs for their efforts in developing a high quality technical sessions.

Prof. Dharma P. Agrawal

Prof. Dharma P. Agrawal is a professor of Computer Science, University of Cincinnati, OH, and the founding director for the Center for Distributed and Mobile. He has been a faculty member at the ECE Department, Carnegie Mellon University, North Carolina State University, Raleigh, NC, and the Wayne State University, Detroit. He has published over 500 papers in International Journals, magazines, and international Conferences. He was awarded a “*Third Millennium Medal*,” by the IEEE for his outstanding contributions. He has also been a Fulbright Senior Specialist for a period of five years. He has also been named as an *ISI Highly Cited Researcher* in Computer Science. He is a Fellow of the IEEE, ACM, AAAS, and World Innovation Foundation. Professor Agrawal received his D.Sc. of Technology in Electrical Engineering from the Federal Institute of Technology, Lausanne, Switzerland, April 1975, an M.E. in Electronics and Communications Engineering University of Roorkee (now IIT), Roorkee, India, August 1968 and a B.E. in Electrical Engineering, Ravishankar University, Raipur, India, April 1966.

Arinwale (Wale) Akinpelu

Arinwale (Wale) Akinpelu received the M.S. degree in Computer Science from Newcastle University, United Kingdom in 1977. He joined AT&T Labs in 1980 where he led the design and development of an end-to-end SONET large scale network for enterprise customers. He designed and implemented the Defense Commercial Telecommunication Networks Bulk Data Transfer services for the government agencies. He joined Johns Hopkins University Applied Physics Lab in 2006 and he is currently is a senior professional staff in the optical networking technology group. He is a member of IEEE and his research interests include tactical networking communication systems and protocol specification. He holds eleven patents on telecommunication architecture and services.

Prof. Khaled Alzoubi

Dr. Khaled Alzoubi received his B.S. in Mathematics and Computer Science in 1987 From University of Illinois at Chicago , and Ph.D. in Computer Science in 2002 from Illinois Institute of Technology. Dr. Alzoubi is an Assistant Professor at Saint Xavier University in the department of Computer Science. His research interests focus on quality of service routing, sparse spanners, maximum spanning trees, connected dominating sets, and virtual backbones in mobile ad hoc networks

Biographies

Prof. Moussa Ayyash

Dr. Moussa Ayyash received his B. Sc from Mu'tah University/Jordan in 1997, M.Sc from Jordan University in 1999, and Ph.D. from Illinois Institute of Technology/USA in 2005; all in Electrical Engineering.

Dr. Ayyash is currently an assistant professor at Chicago State University in the Technology Department. His research interests cuts across many digital and data communications areas, wireless networking, quality of service routing, graph theory, and interference mitigation. He is a technical committee member of many conferences and served as reviewer for many conferences and journals. He is a member of both IEE and IEEE.

Jim Bachelor

Jim Bachelor is Principal Systems Engineer with Harris's RF Communication Division. He has over twenty three years of military communication and systems engineering experience with the military and industry. He was the lead government engineer for the MP-CDL program and most recently Harris RF Communication's Technical Director for AMF JTRS program.

Dr. Kesh Bakhru

Dr. Kesh Bakhru received the B.S. degree with honors and the M.S. degree in physics from the Banaras Hindu University, Varanasi, India. M.S. (EE) degree from Columbia University in New York and the Ph.D. degree in Electrical Engineering from Polytechnic Institute of Brooklyn, N.Y. His career spans over the last fifty years starting with research design and development of digital computers at the Tata Institute of Fundamental Research, Bombay, India. For the past thirty years he has been with the Cubic Defense Applications in San Diego, California where he is presently a senior research scientist involved in internal research and development activities. His current research interests are in the analysis and design of communication systems using spread spectrum technology, application of high speed digital signal processing to the design of communication receivers, adaptive systems for interference mitigation and indoor position location for mobile users in military operations in urban terrain. He is also an adjunct professor at the San Diego State University teaching graduate classes in Digital Communications, Error Control and Information theory. Dr. Bakhru is a fellow of the IEEE and a member of the Communication Theory Technical Committee of the IEEE Communications Society.

Biographies

Dr. John Bard

Dr. John Bard For twenty-four years since leaving the University of Minnesota Dr. Bard has been providing innovative software solutions to some of industry's most complex problems. For over 5 years, John has been principal and owner of Space Coast Communication Systems—a leader in systems and software engineering for software defined radio. Previously, Dr. Bard was Technical Committee Chairman of the Software Defined Radio Forum. John has had the privilege to contribute to DISA's Integrated Waveform, the Naval Research Laboratory's JCIT radio, the U.S. Navy's Digital Modular Radio (DMR), the Army's Joint Tactical Terminal (JTT). Together, John and Vince Kovarik have recently completed a book on the SCA available through Wiley and Sons.

Dr. Lotfi Benmohamed

Dr. Lotfi Benmohamed has been a Senior Research Scientist at Johns Hopkins University's Applied Physics Laboratory (JHU/APL) since 2003. His prior professional experience since 1993 includes 1 year at the National Institute of Standards and Technology (NIST) as a Guest Researcher, 6 years in Bell Labs as a Member of Technical Staff, and 3 years in Corvis Corporation as a Senior Network Architect. He published extensively in the area of control, design, and management of ATM, IP, and optical networks with emphasis on algorithms for congestion and admission control, network traffic engineering (network design, QoS, and routing), and more recently on control and routing in mobile ad-hoc networks and data fusion in sensor networks. He received his Ph.D. from The University of Michigan in 1993 and is a Senior Member of IEEE Communications Society.

Dr. Frederick J. Block

Dr. Frederick J. Block received the B.S. (summa cum laude), M.S., and Ph.D. degrees in electrical engineering from Clemson University, Clemson, SC. He is now a Member of the Technical Staff at MIT Lincoln Laboratory, Lexington, MA. His research interests include spread-spectrum communications, channel access techniques, and ad hoc networks. Dr. Block has been a National Science Foundation Fellow and an AFCEA Fellow. He is a member of Tau Beta Pi and Eta Kappa Nu.

Dr. Jerry Brand

Dr. Jerry Brand received the B.S.E.E., M.S.E.E., Ph.D. degrees from Auburn and North Carolina State Universities. He is a registered Professional Engineer in Florida, a Senior Member of the IEEE, member and training coordinator for the Committee on Engineering Accreditation Activities (CEAA), the Engineering Accreditation Commissioner (EAC) of ABET, and a member of the Technical Group of the Network Centric Operations Industry Consortium (NCOIC). Jerry has over thirty-five years experience in electromagnetic, electronic, software, computer, power and communications engineering covering commercial, government and military products including antennas, personal communications products, aerospace equipment and a variety of mobile, transportable and fixed systems. Additionally, Jerry has taught various undergraduate courses and related laboratories. Jerry currently maintains a position as Chief Engineer DoD Programs at Harris Corporation, Government Communications Systems Division, Melbourne, Florida.

Biographies

Dr. Colin Brown

Dr. Colin Brown is a research engineer at CRC, and has expertise in waveform design and signal processing for advanced receivers. He has contributed to both military and commercial standards, and supports Defence Research and Development Canada projects in tactical networks.

Patrick J. (Pat) Browne

Patrick J. (Pat) Browne has held the position of Technical Director for the Mobile User Objective System (MUOS) at the Navy's Communications Satellite Program Office (PMW-146) in San Diego, California since January 2007. In the TD position, he is responsible for top level technical issues and senior input for MUOS risk management, acquisition issues and program outreach. Before assuming TD duties, Pat was the Systems Engineer Division Director for MUOS from April 2002. Pat was responsible for all Government systems engineering activities for MUOS and was the lead engineering interface to the Lockheed Martin MUOS engineering team for execution of the MUOS contract. Prior to coming to PMW-146, Pat served in various P-3 aircraft avionics Test & Evaluation, Systems Engineering and Engineering/Program Management positions for 27 years at the Naval Air Warfare Center and Naval Air Systems Command at Patuxent River, Maryland. He received his Bachelor of Science, Electrical Engineering degree from Manhattan College in 1974 and Masters of Science in Electrical Engineering (Communication Systems) and Computer Science from Florida Institute of Technology in 1979 and 1984 respectively.

Dr. John Buford

Dr. John Buford is a Research Scientist at Avaya Labs. Previously he was a Lead Scientist at the Panasonic Princeton Laboratory, VP of Software Development at Kada Systems, Director of Internet Technologies at Verizon, and Chief Architect-OSS at GTE Laboratories. Earlier he was tenured Associate Professor of Computer Science at the University of Massachusetts Lowell, where he also directed the Distributed Multimedia Systems Laboratory. He has authored or co-authored ninety refereed publications and the book Multimedia Systems. He is co-chair of the IRTF Scalable Adaptive Multicast Research Group and an IEEE Senior Member.

Jack L. Burbank

Jack L. Burbank received his Masters of Science in electrical engineering in 1998 from North Carolina State University and supervises the wireless networking section at The Johns Hopkins University Applied Physics Laboratory. His recent work is in the areas of wireless network electronic attack, computer network attack, sensor networking, and mobile ad hoc networking. He is a professor of networking and telecommunications in the Johns Hopkins University Part Time Engineering Program, and a member of the IEEE and the ASEE.

Biographies

Robert Butler

Robert Butler earned his Ph.D. in Electrical Engineering at the University of Missouri-Rolla, in 1996. He has 14 years of professional experience in the telecommunications and defense system industries. After co-founding Ceterus Networks, he joined Rockwell Collins in 2005 where he conducts behavioral modeling and system architecture verification in the Performance & Architectural Collaboration Environment (PACE) Laboratory in Richardson, TX.

Dr. J. Bibb Cain

Dr. J. Bibb Cain (M'69) received the B.S.E.E., M.S.E.E. and Ph.D. degrees in electrical engineering from the University of Alabama in 1965, 1966, and 1969, respectively. He is a Senior Scientist at Harris Corporation, Melbourne, FL where he has been working in research and development since 1969. During this time he has contributed to the development of a number of different error-correction decoder designs for both block (BCH and Reed-Solomon), convolutional (with sequential, threshold, and Viterbi decoders), and concatenated codes. In addition, he has worked extensively in applications of coding in a variety of systems including digital communication links such as coded spread spectrum data links, communication networks, and storage systems. His research has also included work in the areas of development of algorithms and protocols for computer and communications networks. This work has included the development, performance evaluation, and validation of link assignment, routing, and flow control protocols. He has recently invented a new distributed Directional Time Division Multi-Access (DTDMA) link scheduling protocol for directional mobile ad hoc networks.

This protocol has been implemented and successfully field tested and is planned to be used in a U.S. Army operational network. He has published numerous papers, and he has co-authored the textbook Error-Correction Coding for Digital Communications (New York: Plenum, 1981). He holds over 20 U.S. patents in the areas of error-correction coding and networking protocols.

William Carmichael

William Carmichael received his B.S.E.E. from Northeastern University and his M.S.E.E. from Syracuse University. He is currently a Communication Systems Engineer in Networking Technology at Rockwell Collins.

Dr. Kirk Chang

Dr. Kirk Chang is currently a Director in the Applied Research Area of Telcordia Technologies. He has more than 10 years of technical leadership experience in algorithm and protocol design, performance analysis, systems engineering, and modeling and simulation for communications networks and systems. Most recently he has worked extensively in Quality of Service and Network Design and Planning issues in wireless networks and designing advanced methodologies for quantitative analysis and simulations. He has published extensively, with 12 U.S. patents and 3 additional pending filings. He is a senior member of IEEE. Dr. Chang received the Ph.D. degree from UCLA Electrical Engineering Department.

Biographies

Dr. John Choi

Dr. John Choi received the B.S.E.E. degree from Duke University in 1997 and the M.S.E.E. and Ph.D. degrees from the University of Michigan, Ann Arbor, in 1998 and 2003, respectively. Since October 2003, he has been a Technical Staff Member of the Wideband Tactical Networking Group at MIT Lincoln Laboratory. His main research interests are wireless and satellite communication systems and networking.

Dr. Peter Choi

Dr. Peter Choi is a Sr. InfoSec Systems Engineer in the Harris' Government Communications Systems Division. He possesses over 10 years of information assurance management and systems security engineering experience in a diverse range of Information Assurance related critical national infrastructures: DoD, financial, and higher education. He comes from Northrop Grumman Mission System as an InfoSec expert bringing with him the knowledge and experience of designing and developing security architecture for large scale, operationally intensive, military solutions. His expertise is in providing innovative security solutions for government and military systems. Peter holds extensive knowledge of COMSEC key management systems (EKMS, AKMS, KMI), DITSCAP and DIACAP management experience.

Prof. Song Ci

Prof. Song Ci is an assistant professor of computer and electronics engineering at the University of Nebraska-Lincoln. He received his B.S. from Shandong University, Jinan, China, in 1992, M.S. from Chinese Academy of Sciences, Beijing, China, in 1998, and Ph.D. from the University of Nebraska-Lincoln in 2002, all in Electrical Engineering. He also worked with China Telecom (Shandong) as a telecommunications engineer from 1992 to 1995, and with Wireless Connectivity Division of 3COM Cooperation, Santa Clara, CA, as a R&D Engineer in 2001. Prior to joining University of Nebraska-Lincoln, he was an assistant professor of computer science at the University of Massachusetts Boston and the University of Michigan-Flint. His research interests include: cross-layer design for multimedia wireless communications, intelligent network management, resource allocation and scheduling in various wireless networks, and power-aware multimedia embedded networked sensing system design and development. He has published more than sixty research papers in referred journals and international conferences in those areas.

Biographies

Dr. William Clark

Dr. William Clark is a member of the Systems Engineering Technical Staff at General Dynamics C4 Systems, in Scottsdale, AZ, working on advanced software-defined communication systems. William received his Ph.D. in Physics from the University of Colorado at Boulder in 1998. William's background includes Quantum Physics research in atomic, molecular, and optical systems, design and development of ground and airborne RADAR systems, design and development of wireless communications systems and waveforms, and most recently the design of low cost, low power, highly adaptive wireless network nodes for mobile ad-hoc networking and Cognitive applications. William has spent the last six years with General Dynamics serving as the Lead Systems Engineer for the Digital Modular Radio (DMR) program, supporting waveform porting efforts on the JTRS HMS program, and most recently serving as the Principal Investigator on the DARPA Wireless Adaptive Network Node (WANN) program.

Robert R. Cleave

Robert R. Cleave has over 20 years experience in the satellite communications industry, starting his career as a system engineer and TT&C subsystem engineer on a variety of government and commercial satellite programs, with successive program responsibilities. In 1998 Mr. Cleave helped create the broadband service company known as Cyberstar, which provided IP-based broadband services to offices and consumers worldwide. In 2001 Mr. Cleave developed a company known as XTAR, which provides commercial X-band services to both domestic and international government customers. In late 2003 Mr. Cleave joined Lockheed Martin's Space Systems Company in Sunnyvale, CA, where

he is currently responsible for all business development activities related to government satellite communications, including AEHF, MUOS and TSAT.

Dr. Robert Cole

Dr. Robert Cole is a Senior Member of Professional Staff at the Johns Hopkins University (JHU)/Applied Physics Laboratory (APL). He joined JHU/APL in 2003. He holds an Assistant Research Faculty position in the Department of Computer Science at Johns Hopkins University. Prior to working at JHU/APL, he worked at AT&T Bell Laboratories for roughly twenty years. While at Bell Laboratories, he worked in the areas of performance support to data network fast packet switch product development, enterprise data network performance assurance and analysis, frame relay, ATM and IP service development, Fortune 500 sales and customer technical support, design, prototyping, development and deployment of performance monitoring tools, and performance analysis consulting. He holds a B.S. in Professional Chemistry from the University of Miami, FL, a Ph.D. in Theoretical Chemistry from Iowa State University and held two postdoctoral positions at Yale University and Brown University in Theoretical Chemistry. His research interests and current work can be found at <http://www.cs.jhu.edu/~rgcole/>.

Biographies

Randy C. Coleburn

Randy C. Coleburn earned B.S. and M.S. degrees in Information and Computer Science from The Georgia Institute of Technology. He is a Senior Systems Engineer in the Communications, Networks, & Electronics (CNE) Division at Scientific Research Corporation (SRC) with over 26 years experience in applied research and development, software engineering, data communications, embedded systems, network management, and computer security. He also serves as SRC's Information Systems Security Manager (ISSM). Recent work includes cross-domain enablement of secure, dynamic resource management, distributed control & monitoring of satellite communications terminals, and distributed management of telecommunications facilities over a wide-area network. Prior to SRC, Mr. Coleburn directed the software division at Command Control, Inc. (CCI) where he also developed a pre-emptive multitasking operating system for a packet radio communications system. As a Research Scientist at the Georgia Tech Research Institute (GTRI), he developed simulators, operator training systems, test devices, and prototype touch-interactive graphical user interfaces for Energy Monitoring and Control Systems. Mr. Coleburn has a proven track record of quality products, delivered on schedule, and within budget. He is an accomplished writer and effective speaker, having written or contributed to over sixty (60) major publications and reports.

Dr. Christopher C. Davis

Dr. Christopher C. Davis is Professor of Electrical and Computer Engineering at the University of Maryland, College Park. He received the B.A. degree (with Honors) in Natural Sciences from the University of Cambridge in 1965, the M.A. degree from the University of Cambridge in 1970, and the Ph.D. degree in Physics from the University of Manchester in 1970. From 1973-1975 he was an Instructor/Research Associate at Cornell University, and from 1982-83 was a Senior Visiting Fellow at the University of Cambridge. He has been a recipient of the following Honors and Awards: University of Maryland Distinguished Scholar-Teacher, 1989-90; Fellow of the Institute of Physics, 1989; AT&T/ASEE Award for Excellence in Engineering Education, 1990; Fellow of the IEEE, 1993; Invention of the Year Award in Information Technology, University of Maryland, 2000.

Biographies

Dr. Richard DeSalvo

Dr. Richard DeSalvo is a Principal Investigator and Manager of Technology Studies and R&D Projects for Harris Corporation's Government Communications Systems Division where he coordinates Division research and development activities supporting multi-divisional and multi-disciplinary technical initiatives for DARPA and other Government research laboratories. His technical areas include optics and photonics for high-speed lightwave communication systems, RF photonic sub-system insertion, optical arbitrary waveform generation, next generation wireless networks for future military systems, and development of soft x-ray sources for decontamination against biological pathogens.

Dr. DeSalvo holds six patents in the area of lightwave communications systems and has authored and co-authored 16 technical publications; with one in particular being the 2nd most-cited journal paper in opto-electronics from 1991 to 1999: "Self-Focusing and Self-defocusing by Cascaded Second-Order Effects in KTP", R. DeSalvo, et al., *Opt. Lett.* Vol. 17, 28-30, (1992). In 1993, he received his Ph.D. in physics from the University of Central Florida Center for Research in Education, Optics, and Lasers and his B.S. in physics from Jacksonville University in 1987.

Dr. Bharat Doshi

Dr. Bharat Doshi is the Director of Research center at Johns Hopkins University Applied Physics Laboratory where he directs the research agenda of about 150 professionals. In the past, he has held many technical management positions at Bell Labs. He has also been professor at Rutgers University and University of Massachusetts at Amherst. He has over 120 publications and over 40 patents. He is a Fellow of IEEE and a Fellow of Bell Labs. He has a B.Tech. from I.I.T. Bombay and M.S. and Ph.D. from Cornell University.

Dr. Anurag Dwivedi

Dr. Anurag Dwivedi has over 16 years of experience in communications industry including positions at Corning Inc., Corvis Corp., RHK Inc. and Applied Physics Laboratory at the Johns Hopkins University. He has published extensively in the areas of optical network for commercial and military applications, optical fibers, fiber optics, traffic forecasting, traffic overheads, network planning and architecture, network optimization, analysis of new communications technologies and architectures, capital and operating expense analysis, network utilization, and efficiency and telecom market research.. Currently, he holds the position of Senior Professional Staff at the Applied Physics Laboratory at the Johns Hopkins University, and is a Supervisor for Optical Systems Section.

Biographies

Dr. George F. Elmasry

Dr. George F. Elmasry received his B.Sc. degree in Electrical Engineering from Alexandria University, Egypt, and his M.S. and Ph.D. degrees in Electrical Engineering from New Jersey Institute of Technology. He is currently the president of XPRT Solutions a wholly owned subsidiary of DSCI. Before joining DSCI, he worked for General Dynamics C4S in the WIN-T. Prior to General Dynamics, he worked for Lucent Technologies in the Wireless Networks Wideband CDMA group. His research interests include the areas of large scale simulation, wireless networking, ARQ, joint source and channel coding, and multidimensional interleaving. He holds over 40 publications and patents in these fields. He is also actively involved with technology conference organization and paper reviews.

Dr. Scott C. Evans

Dr. Scott C. Evans is an Electrical Engineer at General Electric Research in Niskayuna, New York. Scott conducts research in advanced communications, ad hoc networks, and algorithmic information theory for information security and DNA sequence analysis. He has numerous patents in the area of wireless and power line communications, network routing, information security. Scott holds a Ph.D. in Electrical Engineering from Rensselaer Polytechnic Institute, an M.S. in Electrical Engineering from the University of Connecticut and a Bachelor of Science in Electrical Engineering from Virginia Tech. Before joining General Electric Research, Scott served as a nuclear-trained Submarine Officer in the United States Navy. He can be reached at evans@research.ge.com.

Dr. Bassam S. Farroha

Dr. Bassam S. Farroha received his B.S. in Computer Engineering and an M.S. and a Ph.D. in Electrical Engineering from the Florida Institute of Technology. He also holds an MBA from the Johns Hopkins University. He is a Senior System Engineer/Architect at the Johns Hopkins University/Applied Physics Laboratory supporting multiple DoD programs in the areas of communications and networking and he is an Assistant Professor at the University of Maryland UC. He has over 22 years experience in the Networking, Systems Engineering/Architecture, Control Systems, DSP, Aviation Communications, and Vision Systems. His current research interests are in areas of systems architecture and optimization, system of systems, QoS, mobile communications and heterogeneous networking. He holds multiple national and international publications. He is a member of the SPIE, NSPE, PMI and a Senior Member of the IEEE and ACM.

Deborah Farroha

Deborah Farroha received her B.S.E.E. from Florida Institute of Technology, M.S.E.E. from Florida Institute of Technology and an M.S. in Systems Engineering from Johns Hopkins University. She is a Level III Certified Acquisition Professional. She has over 21 years experience working for DoD and the Intelligence Community as a Program Manager and Researcher. She is currently the Program Manager for a major analytic data discovery application for the Defense Intelligence Agency. She has published and presented papers at several conferences and forums. Her interests center on Service Oriented Architectures, the Systems Engineering Process, ubiquitous data access and making Information Technology work for the stakeholder.

Biographies

Dr. Barry Felstead

Dr. Barry Felstead received a B.Sc. in Engineering Physics in 1962, and a MSc in Electrical Engineering in 1964 both from the University of Saskatchewan. He received a Ph.D. in EE in 1970 from Queen's University, Kingston, Ontario. He has been at the Communications Research Centre, Ottawa since 1969. Since 1980, he has worked on MILSATCOM especially on spread-spectrum systems, antenna systems and related topics.

Neil Ferguson

Neil Ferguson is a senior engineering manager at Harris Corporation and has expertise in developing C4ISR type systems for both civilian and defense installations. Neil currently is serving on the Senior Advisory Group for the Harris Integrated Information Systems capability lane and leads a department of senior architects and systems engineers.

Bill Furman

Bill Furman is a Harris Corporate Fellow and Senior Scientist who leads the RF Communications Division Waveform Development Group in Rochester, NY. Bill has over 20 years experience at Harris, including positions at the Government Communications System Division in Melbourne, FL as well as the RF Communications Division in Rochester, NY. He has been a key contributor, designer and implementer of the series of HF waveform standards currently in use by the U.S. and NATO. Bill's key expertise lies in communication signal processing techniques and radio systems. He has several patents and numerous published papers. Bill received his B.S. and M.E. degrees in Electrical Engineering from Rensselaer Polytechnic Institute, Troy, NY. Bill has been involved in MILCOM as an author, presenter, session organizer, and session chair numerous times since 1985.

Dilip S. Gokhale

Dilip S. Gokhale is the Chief Domain Technologist for Network and Communications technology at Lockheed Martin Information Systems & Global Services (IS&GS). He is responsible for managing research in areas such as QoS, Routing, and Mobility in the context of military wireless and satcom networks. He is also responsible for providing oversight of implementation focused projects such as software defined radios. He has an M.S. in Electrical Engineering and an Executive M.S. in Technology Management.

Bonnie Gorsic

Bonnie Gorsic is a Technical Fellow in Boeing's Integrated Defense Systems business in Anaheim, California. She has 25 years of experience in software engineering, in all phases of the software life-cycle, and for efforts ranging from small research & development software to a large software effort of 1M operational SLOC. Most of her experience is in the embedded military and space environment, although she was the software architect for a commercial satellite communications link effort. She has made contributions and led teams in international industry efforts in the Net Centric Operations Industry Consortium (NCOIC) and the American Institute of Aeronautics and Astronautics (AIAA). Currently, she works at the enterprise level, supporting proposal efforts and programs across Boeing defense businesses, particularly in System of Systems architecture, requirements, and design. She also evaluates new technology for incorporation into Boeing's programs.

Biographies

Greg Hadynski

Greg Hadynski is a Senior Electronics Engineer at the Air Force Research Laboratory in Rome, NY. He has over 20 years of experience in the general area of communications, having worked on, and been responsible for, projects in a variety of communications disciplines and applications. His current research interests include airborne networks, mobile networking in general, network management, modeling & simulation, and other wireless communications technologies. He received his B.S. and M.S. degrees in Electrical Engineering from Syracuse University, in 1985 and 1991 respectively.

Dr. A. Roger Hammons Jr.

Dr. A. Roger Hammons Jr. received his B.S. degree in Mathematics from Harvey Mudd College, M.A. degree in Mathematics from the University of California at Los Angeles, and Ph.D. degree in Electrical Engineering from the University of Southern California. He is currently a member of the Principal Professional Staff of the Johns Hopkins University Applied Physics Laboratory and the Assistant Group Supervisor of the Communications and Networking Engineering Technology Group. He holds a joint appointment as an Assistant Research Professor in the ECE department of Johns Hopkins University. Prior to JHU/APL, he held previous positions as Senior Technical Director at Corvis Corporation, Assistant Professor at the Ohio State University, and Senior Technical Director and Advisory Engineer at Hughes Electronics Corporation.

His research interests include the areas of wireless and optical communications, with emphasis on channel coding and modulation. He was awarded the IEEE Information Theory 1995 Best Paper Award for his work on Z4-linear codes and is co-

inventor of the Turbo code designs used in third generation cellular radio standards worldwide. In 1999, he was awarded the Hughes Electronics Corporation Chairman's Award for Innovation. He holds 28 U.S. patents in the general area of communication systems.

Dan Hampel

Dan Hampel is a Sr. Associate at Booz Allen Hamilton, supporting the CERDEC S&TCD in a variety of systems engineering and technology development areas. Prior to that he spent most of his career in a number of engineering and managerial roles in the GE and RCS Aerospace Divisions developing technologies for satellite terminals and communications systems for DoD and NASA.

Jerry R. Hampton

Jerry R. Hampton received the B.S. degree (with honors) in physics from the University of Maryland, College Park, and the M.S. degree in electrical engineering from Johns Hopkins University, Baltimore, MD, in 1977 and 1984, respectively. During his career, he has worked in a wide variety of areas related to communications systems engineering and applied physics research, including the design, analysis, modeling, and simulation of military and commercial communication systems. He is presently a member of the Principle Technical Staff at the Johns Hopkins University Applied Physics Laboratory, Laurel, Maryland. His current research interests include RF propagation, MIMO communications, and detection and interception techniques.

Biographies

John Hoag

John Hoag is an Assistant Professor at the J. Warren McClure School of Information and Telecommunication Systems at Ohio University. Dr. Hoag holds a Ph.D. in Industrial and Systems Engineering, Ohio State University (2000), a M.S. in Industrial and Systems Engineering, Ohio State University (1985) and a BS (Honors) Computer Science, University of Akron (1983).

Timothy Hughes

Timothy Hughes is an Engineering Fellow in the Network Centric Systems unit of the Raytheon Company in Fullerton, CA. Tim Hughes serves as the Advanced Networking Technologies Technical Director for Network Centric Systems. He has served as the Networking PI for several DARPA programs and he is directly responsible for the success of the integrated Network/Link/MAC/PHY Cross-Layer solutions and has guided the overall Network Architecture to support Multiple Radio sets working under a homogeneous Routing Layer. Tim has served the Advanced Networking Department in pursuit of CRAD in Mobile Ad-Hoc Networking Technologies (MANET) and in support of JTRS Clusters, Adaptive Joint C4ISR Node (AJCN), Future Combat System (FCS), Digital Radio programs, EPLRS, and the TFXI Tactical Internet.

Dr. Gabriel Jakobson

Dr. Gabriel Jakobson is the Chief Scientist at Altusys Corp., a consulting firm specializing in Situation Management for defense and security applications. During his more than 20 years tenure at Verizon (formerly GTE) he led Artificial Intelligence, IT and telecom operations management programs. Prior to that he was Senior Research Scientist at the Institute of Cybernetics, Tallinn, Estonia. Dr. Jakobson has authored or co-authored more than 85 technical publications and has awarded 3 U.S. patents. He is the chair of the newly created ComSoc's sub-committee on Situation Management, chair of the SIMA workshops 2005-2007 and IEEE Senior Member.

Lori Jeromin

Lori Jeromin received a B.S. in Mathematics from Bucknell University, and an S.M. in Electrical Engineering from Massachusetts Institute of Technology. She has been at the Massachusetts Institute of Technology's Lincoln Laboratory since 1978, working on optical and RF spread spectrum MILSATCOM.

Dr. Subramaniam Kandaswamy

Dr. Subramaniam Kandaswamy is currently a senior research staff at the Johns Hopkins University, Applied Physics Laboratory. He has over 20 years of experience in: Performance Analysis, Statistics, Simulation & Modeling, Network Management, and Systems Engineering. He has hands-on expertise in data (IP, ATM, and Frame) and voice networks. He has presented papers at several national conferences and symposiums.

Biographies

Mr. William Kasch

Mr. William Kasch received a B.S. in Electrical Engineering at the Florida Institute of Technology in 2000 and an M.S. in Electrical and Computer Engineering at the Johns Hopkins University in 2003. His interests include various aspects of wireless networking, including MANET, IEEE 802 technology, and cellular. He participates actively in both the IEEE 802 standards organization and the Internet Engineering Task Force.

Dr. Jae H. Kim

Dr. Jae H. Kim is a Technical Fellow of Boeing Phantom Works Corporate Research Center. He is a Project Manager on the Mobile Networking Technology projects and a Principal Investigator and Program Manager for a number of DoD contract programs. He is currently an Affiliate Professor and Graduate Faculty of Department of Electrical and Computer Engineering, University of Washington, Seattle, WA. He is also presently an IEEE Associate Editor of Communications Letters. Prior to Boeing, he has been a Task Manager and a Member of Technical Staff of California Institute of Technology, Jet Propulsion Laboratory. His current research focuses on tactical mobile networking, with specific interests in MANET cross-layer design, satellite communications on-the-move (COTM), mobility management, airborne networking, more recently cognitive radio networking. Dr. Kim received his Ph.D. degree from the Electrical and Computer Engineering of the University of Florida, Gainesville. He is author/co-author of 70+ publications and holds 3 U.S. patents granted with 1 pending. He has received 10 NASA awards for technical innovation, and 25+ Boeing awards for technical performance recognition.

Prof. Sooyoung Kim

Prof. Sooyoung Kim received the B.S degree in electrical and electronics engineering from KAIST, Korea, in 1990. After having worked Satellite Communication Technology Division, ETRI, Korea from February 1990 to September 1991, she received the M.Sc and the Ph.D. degree in electrical and electronics engineering from University of Surrey, U.K in 1992 and 1995 respectively. From November 1994 to June 1996 she was employed as a research fellow at the Centre for Satellite Engineering Research, University of Surrey, U.K. In 1996 she re-joined the Satellite Communication Technology Division, ETRI, Korea, and worked as a team leader until February 2004 to develop efficient transmission techniques for digital satellite communication systems. She is now an assistant professor in Chonbuk National University. Her research interests include forward error correction coding schemes and multi-carrier transmission techniques for digital satellite communication systems. She has been working on ITU-R since 2000, and has contributed to make radio interface standard of satellite component in the IMT-2000 system. Now, she is actively working on Working Party 4B of ITU-R, and this year she was appointed as an international standardization expert in Korea. She has published more than 100 technical papers in the field of wireless/satellite communications. She has been a Technical Program Committee (TPC) member at various conferences including GLOBECOM 2006, IWSCC 2006, AIAA ICSCC 2007, ICC 2007, and IWSCC 2007.

Biographies

Dr. Kimberly S. King

Dr. Kimberly S. King is a Principal Communications Engineer at the MITRE Corporation where she works with DISA and other DoD organization on networking topics including Black Core. In the past, she has co-chaired a working group at the IETF, participated in the ITU Study Group 13, and supported ONR, NCS and various DISA programs. She holds a doctorate in mathematics from the University of Maryland and a bachelor of computer science from George Mason University.

Dr. Sastri L. Kota

Dr. Sastri L. Kota is a Senior Scientist with Harris Corporation. He received his Ph.D. from the University of Oulu, Finland; Electrical Engineer's Degree from Northeastern University, USA, and M.S.E.E. from IIT, Roorkee, B.S.E.E. from BITS, Pilani, India. Currently, he is also an Adjunct Professor in University of Oulu. Over the years, has held technical and management positions at Loral, Lockheed Martin, SRI International, the MITRE Corp, Xerox Corp and Computer Sciences Corp. and contributed to design and development of satellite communications systems and Mobile Wireless networks for military and commercial applications. He is the principal author of book *Broadband Satellite Communications for Internet Access*, and co-edited book *Emerging Location Aware Broadband Wireless Ad Hoc Networks*. He has published more than 125 papers in book chapters, journals and conference proceedings, He has guest edited for IEEE Communications Magazine, Int'l Journ. of Satellite Comm. & Networking and Space Communications Journal. He served as Asst. Technical Chair, Tutorials and Panel chair, session Organizer/Chair, author and reviewer for MILCOM conference since '86, and member of organizing and technical program

committees of IEEE, AIAA and ACM conferences and Workshops. Currently, he is the Unclassified Technical Program Chair for MILCOM 2007, Business Applications and Services Track Chair for WCNC 2008. He is a member of the editorial boards on the International Journal of Satellite Communications and Networking, and the Space Communications Journal. He has been active in Standardization organizations and Industry Forums such as ITU, IETF and TIA. He is the USA Chairman of ITU-R Working Party 4B. His research interests include satellite IP/DVB networks, mobile and wireless information networks, QoS and traffic management, broadband access and pervasive computing. He is the recipient of Golden Quill awards from Harris Corp. for his contributions to Broadband Satellite Communications and Assured Communications; and ATM Forum Spotlight award. He is a Senior Member of IEEE, Associate Fellow of AIAA, and a Member of the ACM.

Dr. Vince Kovarik

Dr. Vince Kovarik has over thirty years of industry and government experience in system design and development. His professional experience spans a wide range of domains including large-scale, distributed systems, knowledge representation and natural language understanding, satellite command and control, and, for the past several years, software defined radio. Dr. Kovarik leading the development of the Domain Management ToolKit (dmTK), the first commercially available implementation of the SCA, and is a contributing author for the book *Cognitive Radio Technology* by Bruce Fette, Ed. and is co-author with Dr. John Bard of the book, "Software Defined Radio: The Software Communications Architecture." Dr. Kovarik holds a B.S. and

Biographies

M.S. in Computer Science and holds Ph.D. in Computer Engineering.

Dr. Frank Kragh

Dr. Frank Kragh is an Assistant Professor of Electrical and Computer Engineering at the Naval Postgraduate School (NPS) in Monterey, California. In the late 1990s and early 2000s, Dr. Kragh served the Space and Naval Warfare (SPAWAR) Systems Center and the SPAWAR Systems Command, including as Deputy Chief Engineer for Communications Programs (Research and Development). He earned B.S., M.S., and Ph.D. degrees from Caltech, the University of Central Florida, and NPS, respectively. Dr. Kragh's research and teaching interests include modulation and coding, software defined radio, MIMO systems, and satellite communications.

Dr. Amit B. Kulkarni

Dr. Amit B. Kulkarni is a Computer Scientist at General Electric Global Research Center (GE GRC) in Niskayuna, NY. He received his M.S and Ph.D degrees from the University of Kansas in 1996 and 2000 respectively. Amit is currently leading a project on wireless ad hoc networking to develop and apply innovative technologies for optimizing and managing wireless mobile ad hoc networks (MANET). His primary research interests are in the principles of self-organized criticality and its applications to MANET network management, routing and transport protocols and active networking. Amit has co-authored a book on active network management titled "Active Networks and Active Network Management: A Proactive Management Framework," published by Kluwer Academic Publishers. He has developed several new technologies on

many DARPA-funded projects such as Fault-Tolerant Networks and Active Networking to apply fundamentals of information theory and complexity for quantifying network health and security. As part of the DARPA Connectionless Program, he invented an energy-efficient routing protocol for multi-hop sensor networks based on the minimum-energy distance concept. His contributions to the areas of wireless ad hoc networking and active networks are covered by over 10 patents and 15 publications.

Dr. Michael Kurdziel

Dr. Michael Kurdziel is Sr. Managing Engineer, Secure Communications Products Group, for Harris Corporation. His area of technical expertise is secure communications systems design. This includes the design of encryption, key management and authentication systems and algorithms.

Dr. Kurdziel is a member of the International Interoperable Communications Working Group (I-ICWG). The charter of this group is the development and propagation of the Secure Communications Interoperability Protocol (SCIP). He is the principal algorithm architect for the MK-128 and MK-256 algorithms used in the Citadel™ and Citadel IITM Encryption Devices. The devices are Harris Corporation's primary encryption solution for non-Type 1 applications. Dr. Kurdziel has been a member of Harris Corporation's Communication Security Products technical staff since 1992. He holds Bachelor of Science (1986), Master of Science (1988) and Doctor of Philosophy (2001) Degrees in Electrical Engineering from the State University of New York at Buffalo. He holds four patents, has seven patents pending and has been a licensed "Professional Engineer" (License No. 069432) in the State of New York since 1992.

Biographies

Dr. Richard Kurth

Dr. Richard Kurth is an Engineering Fellow and Program Technical Director at Raytheon Company's Network Centric Systems business segment facility in Marlborough, MA. He received his doctorate in Electrical Engineering from M.I.T. His experience includes engineering and management roles in communications system design and signal processing technology development for terrestrial and satellite radios from HF to Q-band and underwater acoustic applications. Dr. Kurth has participated in MILCOM since its inception as an author, reviewer, session chairman, session organizer, and exhibitor.

Prof. Matti Latva-aho

Prof. Matti Latva-aho received the M.S. (E.E.), Lic. Tech., and Dr. Tech degrees from the University of Oulu, Finland in 1992, 1996, and 1998, respectively. From 1992 to 1993, he was a Research Engineer at Nokia Mobile Phones, Oulu, Finland. During the years 1994–1998 he was a Research Scientist at Telecommunication Laboratory and Centre for Wireless Communications at the University of Oulu. Prof. Latva-aho has been Director of Centre for Wireless Communications at the University of Oulu during 1998–2003. Since 2000 he has been Professor of digital transmission techniques at Telecommunications Laboratory. His research interests include future broadband wireless communication systems and related transceiver algorithms. Prof. Latva-aho has published more than 70 conference or journal papers in the field of CDMA communications.

Prof. Pentti Leppanen

Prof. Pentti Leppanen is a Professor of Radio Communication Techniques at the University of Oulu, Finland since 1998, an Associate Professor during 1992-1998 and the Head of the Telecommunication Laboratory since 1990. He has scientific and engineering experience as a researcher and project manager in fields such as digital matched filter systems for scientific radars (ionosounders and the European Incoherent Scatter Radar project (EISCAT) in Scandinavia), several multichannel radio telemetry systems and networks, and digital signal processors for aircraft. He has been a research director of the Spread Spectrum research in the Telecommunication Laboratory since 1988. He has experience in Air Force Data Link Program for Finnish Air Force Combat Control System (FCCS) and experience in SDR radio technology, tactical communication system and national tactical positioning system with adaptive antennas for Finnish Navy in the Finnish Software Radio Programme (FSRP). He has published papers and invited presentations on the area of spread spectrum/CDMA and broadband communications, tactical radio communications. His current research interests include spread spectrum and broadband communication techniques and applications, personal and mobile radio communications, analog and digital signal processing for radio communications, software defined and cognitive radio.

Biographies

Mr. Larry Levine's

Mr. Larry Levine's is currently the Deputy of the Special Projects Office within the CERDEC Space and Terrestrial Communications Directorate. He is the technical lead for the Army IPv6 Transition Plan Working Group and is responsible for planning for the implementation of IPv6 within the Army. He is a member of the IPv6 Forum and a founding member of the North American IPv6 Task Force. Previous assignments have included the introduction of Asynchronous Transfer Mode (ATM) technology into current tactical systems as part of the Army's Task Force XXI program. These demonstrations were a critical first step in the Army's efforts to digitize the battlefield and help to demonstrate for the first time how digital technology could be used to support our soldiers. Prior to that Mr. Levine was involved with the introduction of Local Area Network technology to the field. Mr. Levine earned his Bachelor of Electrical Engineering Degree from Pratt Institute and a Masters of Electrical Engineering Degree from Fairleigh Dickinson University.

Dr. Lundy Lewis

Dr. Lundy Lewis is the Chair of the Department of Information Technology at Southern New Hampshire University and Chief Technology Officer at Altusys Corp. He has authored three books on network and telecommunications management and holds 22 U.S. patents. Currently, Lewis and his colleagues at Altusys Corp conduct research and development in the area of situation management for telecommunications, homeland security, and other domains.

Prof. Ye (Geoffrey) Li

Prof. Ye (Geoffrey) Li received his B.S.E. and M.S.E. degrees in 1983 and 1986, respectively, from the Department of Wireless Engineering, Nanjing Institute of Technology, Nanjing, China, and his Ph.D. degree in 1994 from the Department of Electrical Engineering, Auburn University, Alabama. He was with AT&T Labs—Research at Red Bank, New Jersey as a Senior and then a Principal Technical Staff Member from 1996 to 2000. Since 2000, he has been with the School of Electrical and Computer Engineering at Georgia Institute of Technology as a Full Professor. His general research interests include statistical signal processing and telecommunications, with emphasis on OFDM and MIMO techniques, cross-layer optimization, and signal processing issues in cognitive radios. In these areas, he has published over 100 papers in refereed journals or conferences and filed over 10 patents. He organized and chaired many international conferences, including technical program vice-chair of the IEEE 2003 International Conference on Communications. He has been awarded an IEEE Fellow for his contributions to signal processing for wireless communications in 2005.

Biographies

Burt H. Liebowitz

Burt H. Liebowitz is Principal Network Engineer at the MITRE Corporation, McLean, Virginia. He has more than 30 years experience in computer networking, the last seven of which have focused on Internet-over-satellite services. He was President of NetSat Express Inc., a leading provider of such services. Before that he was Chief Technical Officer for Loral Orion responsible for Internet-over-satellite access products. Mr. Liebowitz has authored two books on distributed processing and numerous articles on computing and communications systems. He has lectured extensively on computer networking. He holds three patents for satellite-based data networking systems. Mr. Liebowitz has B.E.E. and M.S. in Mathematics degrees from Rensselaer Polytechnic Institute, and an M.S.E.E. from Polytechnic Institute of Brooklyn.

Dr. Richard P. Lippmann

Dr. Richard P. Lippmann is a Senior Staff Member in the Information Systems Technology Group of Massachusetts Institute of Technology, Lincoln Laboratory. Recent work focuses on developing new approaches for security analyses of enterprise networks, dynamic and static code analysis to detect vulnerabilities, and other computer security problems. Past research at Lincoln Laboratory focused on automatic speech recognition, developing improved neural network and statistical pattern classifiers, medical risk assessment, the development of software for pattern classification, the development of low-power VLSI neural network circuitry, and the application of neural networks and statistics to many problems. Dr Lippmann has authored or co-authored more than 100 papers, reports, or books in the above research areas. He was a Distinguished Lecturer for the IEEE Signal Processing Society

and received the first IEEE Signal Processing Magazine award for an article entitled "An Introduction to Computing with Neural Nets" published in April 1987.. Recently he has been on the program committees of conferences including Recent Advances in Intrusion Detection (RAID), MILCOM, and the ACM Workshop on Visualization and Data Mining for Computer Security.

Prof. Kejie Lu

Prof. Kejie Lu joined the Department of Electrical and Computer Engineering, University of Puerto Rico at Mayaguez, in July 2005, as an assistant professor. Before he joined UPRM, he was a post-doctoral research associate in the Department of Electrical and Computer Engineering, University of Florida, from 2004 to 2005. Prior to that, he had also worked for several companies in China as senior software engineer and research scientist. Dr. Kejie Lu received his B.S. and M.S. degrees in Telecommunications Engineering from Beijing University of Posts and Telecommunications, Beijing, China, in 1994 and 1997, respectively. He received his Ph.D. degree in Electrical Engineering from the University of Texas at Dallas in 2003. His current research interests include architecture and protocols design for computer and communication networks, performance analysis, network security, and wireless communications. He has published over 60 technical papers in these areas, in the past five years. Dr. Kejie Lu is a senior member of IEEE.

Biographies

Dr. Ryan P. Lu

Dr. Ryan P. Lu, Ph.D. EE, is a project engineer at SPAWAR Systems Center (SPAWARSYSCEN) San Diego. He has served as a member of the U.S. Navy's PEO C4I & Space Technical Director Staff providing technical support to programs of record. As a Co-Lead, Dr. Lu stood up a Navy Wideband Networking Waveform (WNW) Systems Engineering Integrated Process Team. He also participated in the coordination of the Joint Airborne Network – Tactical Edge (JAN-TE) Industry Day.

Walter Lucchesi

Walter Lucchesi is the Chief of the Architecture and Modeling & Simulation Branch in the CERDEC at Ft Monmouth, New Jersey. He has over 25 years of experience in System Engineering, including Information Engineering & Standardization, Interoperability, Metrology & Prognostics, Software & System Architecture Engineering, and other related advanced engineering disciplines. In addition, he is also an adjunct professor at Steven's Institute of Technology and teaches advanced engineering concepts. Mr. Lucchesi received his B.S.E.E. from Pratt Institute, MCS from Farleigh Dickerson University and advanced engineering post graduate certificates in Wireless Communications from Steven's Institute of Technology, Software Intensive Application in C3I Systems from George Mason University, and Information Networks from Steven's Institute of Technology. Mr. Lucchesi recently received an Engineer Degree from Steven's Institute of Technology with an emphasis on engineering large scale C4ISR Enterprise Architectures and their assessment and is currently a Ph.D. candidate at NSU.

Dr. Raphael J. Lyman

Dr. Raphael J. Lyman holds the Ph.D. degree in electrical engineering from the University of Florida, Gainesville. He is currently employed at the Harris Corporation Government Communications Systems Division. His research interests are satellite and mobile communications, signal processing and estimation theory.

Dr. Tom Macdonald

Dr. Tom Macdonald received his B.S. degree in Electrical Engineering from Clarkson University, and his M.S. and Ph.D degrees in Electrical Engineering from Clemson University. He is currently the Assistant Group Leader of the Wideband Tactical Networking Group at MIT Lincoln Laboratory. In this role he works on a number of satellite and tactical networking systems for a variety of military sponsors. From April 2005-May 2006 Tom was the lead engineer for the Airborne Lasercom Terminal Program at Hanscom Air Force Base.

Dr. Brian Matt

Dr. Brian Matt is a member of the Research and Technology Development Center at the Johns Hopkins University Applied Physics Laboratory. His research interests lie in the areas of computer and network security, especially mobile ad hoc network security. Dr. Matt has been a Principal Investigator for DARPA, Army Research Laboratory, and National Security Agency sponsored programs. Previously Dr. Matt was with Sandia National Laboratories and has held other research and development positions in Industry. He holds a Ph.D. in Computer Science from the University of Wisconsin-Milwaukee.

Biographies

Prof. Janise McNair

Prof. Janise McNair is an Assistant Professor in the department of electrical & computer engineering at the University of Florida. She earned her B.S. and M.S. in electrical engineering from the University of Texas at Austin in 1991 and 1993, respectively, and her Ph.D. in electrical and computer engineering from the Georgia Institute of Technology in 2000. Currently, she serves on the Editorial Board of the Ad Hoc Networks Journal and the IEEE Transactions on Mobile Computing. Her current research interests are wireless networks, ad hoc networks, and sensor networks, specifically addressing vertical handoff management, security and authentication, and medium access techniques.

Jon McNeilly

Jon McNeilly is Senior Engineering Manager for the RF and Microwave department at Harris' Government Communications Systems Division. He has over 25 years related experience in the RF and microwave field.

Dr. Stuart Milner

Dr. Stuart Milner is a Research Professor in the Department of Civil and Environmental Engineering, Director of the Center for Networking of Infrastructure Sensors (www.cnis.umd.edu), and Associate Director, Maryland Optics Group in the A.J. Clark School of Engineering at the University of Maryland. He has been conducting research in the scalability of dynamic wireless networks and topology control in hybrid free space optical/RF directional, wireless networks. Dr. Milner directs projects funded by the Department of Defense in the areas of scalable wireless networks, hybrid wireless networks, directional networks with topology con-

trol and test beds. He also directs National Science Foundation projects in optical wireless sensor networks for critical infrastructure surveillance and broadband optical/RF wireless networks. Previously, he was a program manager at the Department of Defense Advanced Research Projects Agency, where he directed research and development in next generation mobile, wireless networking and communications infrastructure to support worldwide simulation networks.

Dr. Aradhana Narula-Tam

Dr. Aradhana Narula-Tam received the B.S.E. degree from the University of Pennsylvania, Philadelphia, in 1990 and the S.M. and Ph.D. degrees from the Massachusetts Institute of Technology (MIT), Cambridge, in 1992 and 1997, respectively, all in electrical engineering. At MIT she developed and analyzed antenna diversity methods for mobile communication systems. From 1997-1998 she was in the Research and Advanced Development Group at Motorola Information Systems Group, Mansfield, MA where she developed methods for improving ADSL modems. Since 1998, she has been with the Advanced Networking group at MIT Lincoln Laboratory, Lexington, MA, and has focused on designing architectures and algorithms for both optical and satellite communication networks. She has co-authored over 30 papers.

Biographies

Captain (select) Jack Nicholson

Captain (select) Jack Nicholson has had multiple tours in the Navy's Communications Satellite Program Office (PMW-146), and has served as the Chief Systems Engineer, Director of Operations, Contracting Officer's Representative, and now Deputy Program Manager. He has had previous tours in space with the National Reconnaissance Office. During his fleet tours, he was stationed in California, Hawaii, and Spain, specializing in airborne reconnaissance missions and conducting sensitive surveillance operations all over the world. CAPT(s) Nicholson has degrees in Mechanical, Aeronautical, and Astronautical Engineering.

John Nieto

John Nieto graduated from the University of Missouri-Rolla with a B.S.E.E. and M.S.E.E. in 1984 and 1985, respectively. He is currently a senior scientist with Harris Corporation. His areas of interest are waveform design, forward error correction, equalization, and iterative demodulation.

Prof. Daniel L. Noneaker

Prof. Daniel L. Noneaker joined Clemson University in 1993 and is currently an Associate Professor of Electrical and Computer Engineering. He received his M.S. in Electrical Engineering in 1984 from the Georgia Institute of Technology and his Ph.D. in Electrical Engineering in August 1993 from the University of Illinois at Urbana-Champaign. Dr. Noneaker has industrial experience in both hardware and software design for communication systems, including employment with Motorola and Sperry-Univac. He is currently engaged in research on wireless communications for both military and commercial applications with empha-

ses on spread-spectrum communications and communication over fading, multipath channels.

Dr. Rich North

Dr. Rich North is a U.S. Government Navy civil servant at the Space and Naval Warfare Systems Center (SPAWAR SSC) in San Diego and serves as the Technical Director for the JPEO JTRS. Dr. North attended the University of California, Davis and received his B.S. in Electrical and Computer Engineering (ECE) and his Masters of Engineering in EE at Cornell University in Ithaca, NY. Dr. North received his Ph.D in ECE from the University of California in San Diego. He has been with the Navy for over 15 years leading a variety of R&D and procurement activities in military communications systems

Dr. Feng Ouyang

Dr. Feng Ouyang holds a Ph D. degree from Cornell University. He has worked on wired and wireless communications technologies for more than 10 years. Currently he is with Johns Hopkins University Applied Physics Laboratory. His research interest includes MIMO systems, wireless security and dynamic spectrum management.

Biographies

Julee Pandya

Julee Pandya received both her B.S. in Computer Science and Engineering and her M.S. in Computer Science at the University of California, Davis. After graduation, she was employed at MIT Lincoln Laboratory for three years as a Systems Analyst, working on the next generation Transformational Satellite System (TSAT) with a focus on Dynamic Bandwidth Resource Allocation (DBRA). There she studied the impact of DBRA on Quality of Service (QoS) as well as investigated various DBRA control messaging protocols for Comm-On-the-Move (COTM) terminals. She is currently working at Lockheed Martin's Advanced Research Technology Laboratory.

Dr. Gary Pei

Dr. Gary Pei is the Principal Engineer of Phantom Works at The Boeing Company. He obtained his Ph.D. from University of California, Los Angeles. His research interests are mobile ad hoc network and wireless sensor networks. He is IEEE Senior Member.

Dr. Wayne G. Phoel

Dr. Wayne G. Phoel received the B.S. and M. Eng. degrees in electrical engineering from Cornell University in 1993 and 1994, respectively, and the Ph.D. degree in electrical and computer engineering from Northwestern University in 2000. From 1994 through 1996, he worked on signal processing for radar applications at Calspan Corporation. He contributed regularly to work at Motorola Cellular Infrastructure Group between 1997 and 2000. Since 2000, he has been a Member of the Technical Staff in the Advanced Satcom Systems and Operations Group, MIT Lincoln Laboratory. His current re-

search interests are in the areas of communications and information theory with emphasis on modulation, coding and medium access.

Ari Pouttu

Ari Pouttu was born in Kokkola, Finland, in 1966. He received his M.Sc. (E.E.), and Lic. Tech. degrees from the University of Oulu, Finland in 1995 and 1997, respectively. His research interests include synchronization, interference suppression, and modulation designs in spread spectrum and multi-carrier systems. The projects under his leadership have resulted in waveforms and system designs for military radio communication, radar and navigation applications. He has also been involved with architecture design for Finnish Software Defined Radio. He is a national expert for European Defence Agency on numerous fields in radio technologies, serves as a board member in many national Security and Defense (S&D) projects and has organized several S&D related co-operation seminars within Europe. He has published more than 40 conference or journal papers in the field of wireless communications and he holds two patents.

Currently Ari Pouttu is the Director of the Centre for Wireless Communications in the University of Oulu.

Biographies

Dr. Yi Qian

Dr. Yi Qian joined National Institute of Standards and Technology in August 2007. He was an Assistant Professor in the Department of Electrical and Computer Engineering, University of Puerto Rico at Mayaguez (UPRM) between July 2003 and July 2007. Prior to joining UPRM in July 2003, he worked for several start-up companies and consulting firms, in the areas of voice over IP, fiber optical switching, internet packet video, network optimizations, and network planning, as a Technical Advisor and a Senior Consultant. He received a Ph.D. degree in Electrical Engineering with a concentration in Telecommunication Networks from Clemson University. His current research interests include network security, network management, network modeling, simulations and performance analysis for next generation wireless networks, wireless sensor networks, broadband satellite networks, optical networks, high-speed networks and internet. He has been on numerous conference technical committees including serving as the General Chair of the International Symposium on Wireless Pervasive Computing 2007, the Technical Program Co-Chair of the IEEE GLOBECOM 2006 – Symposium on Wireless Communications and Networking, and the Technical Program Co-Chair of the Workshop on Information Assurance 2006 and 2007. He is currently serving on the editorial board for Wiley Wireless Communications and Mobile Computing Journal, and he is an Associate Editor for Journal of Security and Communication Networks, and an Associate Editor for Journal of Computer Systems, Networks, and Communications. He is also the guest editor for IEEE Communications Magazine, special issue on Advances in Mobile Multimedia Broadcasting.

Prof. Robert Caiming Qiu

Prof. Robert Caiming Qiu (S'93–M'96–SM'01) received the Ph.D. degree in electrical engineering from Polytechnic University, Brooklyn, NY. He is currently an Associate Professor in the Department of Electrical and Computer Engineering, Center for Manufacturing Research, Tennessee Technological University (TTU), Cookeville. His current interest is in wireless communication and networking systems, in particular Ultrawideband (UWB). He has worked in wireless communications, radio propagation, digital signal processing, EM scattering, composite absorbing materials, RF microelectronics, UWB, underwater acoustics, and fiber optics. He holds over 10 U.S. patents pending in WCDMA and authored over 40 technical papers and 4 book chapters. He contributed to 3GPP and IEEE standards bodies, and delivered invited seminars to institutions including Princeton University and the U.S. Army Research Lab. He received Kinslow Research Award from TTU. Dr. Qiu serves as Associate Editor, IEEE TRANSACTIONSONVEHICULAR TECHNOLOGY, International Journal of Sensor Networks (Inderscience) and Wireless Communication and Mobile Computing (New York: Wiley). He is a Guest Book Editor for Ultra-Wideband (UWB)Wireless Communications (New York: Wiley, 2005), and three special issues on UWB including the IEEE Journal On Selected Areas In Communications, IEEE Transactions On Vehicular Technology. He serves as a Member of TPC for GLOBE-COM, WCNC, and MILCOM.

Biographies

Chris Ramming

Chris Ramming is a program manager in DARPA's Strategic Technology Office. His primary charter is to vastly improve wireless network performance, self-management, and intrinsic security. To this end, he is responsible for three programs with potentially paradigm-shifting consequences: CBMANET (Control-Based Mobile Ad-Hoc Networks), ITMANET (Information Theory for Mobile Ad-Hoc Networks), and DCAMANETS (Defense against Cyberattack in Mobile Ad-Hoc Network Systems). These programs are exploiting and advancing theory to re-invent wireless network architecture for the next generation of ubiquitous computing and communications. Several related projects address network management challenges in planning, configuration, diagnosis, and optimization. Mr. Ramming holds degrees in computer science from Yale (B.A.) and the University of North Carolina, Chapel Hill (M.S.).

Dr. David Rhodes

Dr. David Rhodes received the B.S.E.E degree from Rutgers University in 1980, an M.S.E.E. degree from Princeton University in 1982 and Ph.D. in 1999 also from Princeton. He joined RCA Laboratories/David Sarnoff Research Center in June of 1980, working in the Microwave division. Until March 1997 he was with the Army Research Laboratory (ARL) located at Fort Monmouth, NJ finally as Branch Chief of Solid State Electronics in the Sensors and Electronics Directorate. He was with the U.S. Army's CECOM Research and Development Center (CECOM RDEC) until November 2002. He is now with OpCoast, a company he founded focusing on networking and distributed software and systems. He has written over thirty-five peer-reviewed articles for either journal or

conference publication in a variety of technical areas. He has patents/patents-pending in the areas of semiconductor fabrication, computer memory architecture, networking and modeling. He was chair of IEEE SCC-30, *Analog HDLs*, during 1996. Dr. Rhodes was elected senior member of IEEE in 1998.

Mr. Tom Rittenbach

Mr. Tom Rittenbach is a System Engineer in the CERDEC S&TCD SEAMS Directorate. He has been actively involved in Army Milsatcom since 1987 and Army communications since 1980. His current accomplishments are in development of net-centric Satcom communications systems that service C4 requirements for DOD warfighters.

Prof. Clark Robertson

Prof. Clark Robertson is a Professor of Electrical and Computer Engineering at the Naval Postgraduate School (NPS) in Monterey, California, where he has served since 1989. His teaching and research is in the areas of digital modulation and forward error correction coding, spread spectrum systems, and interference mitigation. Dr. Robertson earned the B.S. degree from Texas Tech University and the M.S. and Ph.D. degrees from the University of Texas at Austin. He has a long and distinguished history of publishing and service with MILCOM, including as a member of the MILCOM Conference Board for 6 years and as Chair of the unclassified technical program for MILCOM 2000.

Biographies

John Rollins

John Rollins is a software architect at Harris Corporation and has expertise in developing large scale distributed systems with remote sensors, a variety of information destinations, and high throughput requirements. John currently is the chief architect for the Enterprise Architecture Center of Excellence and is performing research in Service-Oriented Architectures.

Prof. Harlan B. Russell

Prof. Harlan B. Russell is an Associate Professor in the Department of Electrical and Computer Engineering at Clemson University, South Carolina. His research interests are in distributed protocols for wireless networks. The primary focus is on cross-layer protocols that provide different quality-of-service levels for multimedia traffic. On-going research interests include energy-efficient routing, adaptive-transmission protocols, and transmission scheduling for multiple-hop radio networks. Dr. Russell received his Ph.D. degree in Electrical Engineering from the University of Illinois, Urbana-Champaign in 1993.

Dr. John Salerno

Dr. John Salerno is an Air Force Fellow at the Air Force Research Laboratory, where since 1980 he has established a prodigious record of designing and successfully transitioning innovative solutions from early in-house feasibility demonstrations to fielded operational systems, many of which are supporting customers worldwide today. Dr. Salerno has authored over 40 publications and 10 DoD technical publications, has pioneered 3 Air Force Inventions (2 issued and 1 pending). He serves in advisory positions with 4 international conferences as well as

holding invited membership with the DoD International Collaboration on Communications; OSD Science and Technology Panel on Data Fusion, and the DoD Assessment of Redeployment of Personnel to the Persian Gulf. He currently leads the world-recognized Fusion 2+ group to develop and integrate technologies from across AFRL and other DoD research laboratories to deliver a groundbreaking warfighter capability to collect, interpret, and anticipate adversarial actions/intent.

Leonard Schiavone

Leonard Schiavone is the Director of Technology in Raytheon's Integrated Communications System division based in Marlborough, MA, USA. In this role, he is responsible for Raytheon's technology strategy and their internal research and development programs. Len recently joined Raytheon and prior to that he was with the MITRE Corporation for over 20 years working on a various of communication system development activities. Prior to his MITRE departure, he served as the Systems Engineering lead for the Joint Program Executive Office for Joint Tactical Radio Systems and as the MITRE Project Director for Joint Tactical Radio System activities. He completed undergraduate studies at Worcester Polytechnic Institute ('84, B.S.E.E.) and graduate studies at Northeastern University ('87, M.S.E.E.).

Biographies

Dr. Syed A. Shah

Dr. Syed A. Shah is a Senior Lead Systems Engineer in PEO–Satellites, Teleport and Services (PEO-STTS) at DISA. Dr. Shah, in his current position is responsible for all technical matters to establish, oversee, and improve systems engineering processes; establish synergy and commonality; and drive efficiency across all programs. Prior to this, he was Chief of GIG-Enterprise Wireless Engineering at DISA Center for Engineering where he supervised the strategic development, implementation, and testing of evolving protocols and emerging mobile wireless networking. He also served in key R&D and management positions and provided leadership for VOIP products and multimedia services for the deployed warfighter in tactical theater and for enterprise customers. He has extensive technical experience in military telecommunications, and information systems. As chief architect, he led the architecture and development of high speed, high bandwidth advanced technology networks and services for DOD/DISA.

He has been recognized multiple times with the DISA's R&D Science and Technology award, and received outstanding performance and Special Act awards for personal technical and professional achievements. Dr. Shah has over 30 publications in professional journals to his credit. Dr. Shah received his master's from Ohio State University (1978), Columbus, OH., and doctorate degree from Purdue University (1984), W. Lafayette, IN.

Prof. Nirmala Shenoy

Prof. Nirmala Shenoy received her Ph.D. from the University of Bremen, Germany in Computer Science, a Master's in Engineering in the field of Applied Electronics and a Bachelor's in Engineering in Electronics and Telecommunications from Madras University, India. She is currently Professor in the Networking, Security and Sys. Administration Department and Director, Lab for Wireless Networking and Security at Rochester Institute of Technology. Her research interests are in the area of Internet Quality of service, protocols for wireless ad hoc and sensor networks and mobility models and management wireless networks.

Dr. Mysore Sheshadri

Dr. Mysore Sheshadri joined Harris Government Communications Systems Division recently as a senior antenna systems engineer. Prior to that, he worked at Lockheed Martin Corporation, Newtown, PA, for 13 years as a staff engineer. Dr. Sheshadri has many publications and patents to his credit. His interests include reflector antennas, phased arrays, numerical techniques, dielectric radomes.

Dr. Peter Sholander

Dr. Peter Sholander is a Principal Member of Technical Staff at Sandia National Laboratories. He received his Ph.D. from the Georgia Institute of Technology. His research interests include maritime cargo security, network security, wireless communications, mobile networking, and unattended ground-based sensor systems. Previous employers include Ford and AT&T Bell Labs.

Biographies

Jerome Sonnenberg

Jerome Sonnenberg (IEEE SM) is a Senior Principal Engineer at Harris Government Communications Systems Division. Mr. Sonnenberg received the BS (Physics) from Saint Joseph's University, Philadelphia in 1972 and the M.S.E.E. (Computer Science) from the University of Pennsylvania, Philadelphia in 1977. He has over 35 years of industry experience ranging from legacy Systems Network Architecture protocols to TCP/IP protocol development in military networks. Mr. Sonnenberg has published a number of technical papers on network protocol topics. He has developed network management architectures for tactical networks enhancing link and physical layer interaction with the network layer using protocol extensions that optimize the use of limited radio resources in dynamic, tactical networks. Current research interests include cross-layer optimization in MANETs and the interaction of emerging industry standard waveforms with legacy military waveforms.

Brian Spink

Brian Spink has worked at the Air Force Research Laboratory for the last 27 years. He received his BS degree from Clarkson University in 1980 and M.S. Degree from Syracuse University in 1987. Currently Mr. Spink is the AFRL Commander Representative to the newly formed AFCyber Command (P) located at Barksdale AFB, LA. Mr. Spink has a long history of Satellite, Terrestrial and Airborne Communications research and development. For the last 12 years he has been working in the area of Computer Security in both wired and wireless Networks.

Dr. William Squires

Dr. William Squires is a Senior Manager in Raytheon's Network Centric Systems Marlboro, MA, System Engineering Center with 20 years experience in military SATCOM systems. He has been involved in a variety of EHF Milsatcom programs since 1987 including Air Force MILSTAR, NESP, SMART-T, ACMS, and NMT. Dr. Squires has experience in a number of engineering and management disciplines including: program management, systems engineering, software project management, software engineering, and system integration and test. Most recently he has been risk manager for the DD(X) EXCOMMS Segment and program manager for an optical communications program. Dr. Squires received his Ph.D. in Mathematics from the University of Michigan in 1979.

Lieutenant Colonel David Stroud

Lieutenant Colonel David Stroud is Branch Chief, Future Satellite Communications Branch, USSTRATCOM J843. LTC Stroud was on assignments in Kuwait/Iraq, Saudi Arabia, Germany, and has worked SATCOM programs at HQ Air Force Space Command, Joint Staff J6, and the Office of the National Security Space Architect. His undergraduate degree is from Western Maryland College and graduate degree from Webster University.

Biographies

Dr. Ananthram Swami

Dr. Ananthram Swami received the B.Tech. degree from IIT, Bombay; the M.S. degree from Rice University, Houston; and the Ph.D. degree from the University of Southern California (USC), all in Electrical Engineering. He has held positions with Unocal Corporation, USC, CS-3 and Malgudi Systems. He was a Statistical Consultant to the California Lottery, developed a Matlab-based toolbox for non-Gaussian signal

Processing (HOSAT), and has held visiting faculty positions at INP, Toulouse. He is currently with the U.S. Army Research Laboratory where his work is in the broad area of signal processing, wireless communications and networking, including both sensor networks and MANETs. Dr. Swami is a Fellow of the Army Research Lab. He is an active member of the IEEE Signal Processing and Communications Societies.

Dr. Cam Tran

Dr. Cam Tran is a scientist at the U.S. Navy's Space and Naval Warfare Systems Center (SPAWARSYSCEN) San Diego where he has been on various assignments related to different aspects of C4ISR for over 18 years. His current interests involve spectrum and network management for wireless communications and networking, and simulation interoperability technologies. Cam holds a doctorate degree in Mathematics from the University of California, San Diego (UCSD).

Ms. Phong Tran

Ms. Phong Tran is a Senior Systems Engineer from SAIC. She has over 25 years experience in SATCOM including TSAT, AEHF, MILSTAR, MUOS, UHF DAMA, SCT, and Ku-band commercial systems; and terminal/radio systems. She has supported SPAWAR Systems Center San Diego and USSTRATCOM over 15 years as software engineer, systems engineer, technical lead, Integrated Product Team lead, and Test Director. Ms. Tran received a B.S. and an M.S. from University of Texas at El Paso.

Prof. Matthew C. Valenti

Prof. Matthew C. Valenti received a B.S. and Ph.D. from Virginia Tech, both in Electrical Engineering. Until completing his master's degree at the Johns Hopkins University in 1995, he was an electronics engineer at the United States Naval Research Laboratory, Washington, DC. Since completing his Ph.D. in 1999, he has been with the Lane Department of Computer Science and Electrical Engineering at West Virginia University, where he is currently an Associate Professor. He teaches and conducts research in the areas of Digital Communication Theory, Wireless Communication Systems, Coding Theory, and Digital Signal Processing.

Biographies

Rolando Ventura

Rolando Ventura is a Senior Engineering Manager for the Western Region Engineering Department of Harris Government Communications Systems Division. Rolando has over 23 years of systems engineering and management experience in defense and commercial sectors with a focus on systems level end-to-end design and development. He was a member of the technical staff (MTS) at Hughes Aircraft Company working on mechanical systems in the Radar Systems Group (RSG) focusing on F-14, F-15, F-18, B2 and U2 aircraft. As a project engineer, Rolando led the design, development, testing, and deployment of 5 major systems for various transportable RSG-Reconnaissance Division products in domestic and international locations. Rolando was a project manager at TRW (NGMS) developing ground systems ranging from HMMVW mounted processing systems to mobile command and control systems of tactical high energy lasers. He was SEIT Ground Segment Architect for the Space Based Infrared Systems (SBIRS) – Low, a position which required the integration of ground infrastructure, mission operations, logistics, space to ground communications and user community interests for the Low Earth Orbit satellite constellation. Rolando worked on commercial cellular products for Comarco Wireless Technologies as the Director of Applications Engineering where he established system engineering processes for the design, development, and marketing. Rolando was the APE for CLIP and was the SEIT Lead for TSAT. Rolando is an active member of AIAA, ASME and SCAPR.

Dr. Phil Vigneron

Dr. Phil Vigneron is a research scientist at CRC, and works primarily on physical layer aspects of tactical networks supporting Defence Research and Development Canada. He is involved in standardization activities for VHF and UHF wireless communications in NATO on behalf of Canada.

Dr. Sherry Wang

Dr. Sherry Wang is a Senior Professional Staff with Johns Hopkins University Applied Physics Laboratory (APL) working on the performance issue of tactical wireless mobile networks. She also worked at Bell-Labs and contributed to the performance study of VoIP, media gateway, network security, and UMTS systems. She received her Ph.D. in Electrical Engineering from Georgia Institute of Technology in 2000 and researched on QoS in 3G networks. Her research interests include wireless mobile networking, network security, QoS, and network architecture.

Biographies

Dr. I-Jeng Wang

Dr. I-Jeng Wang is a Principal Professional Staff with the Milton Eisenhower Research Center at the Johns Hopkins University Applied Physics Laboratory (JHU/APL) and a Research Assistant Professor with the JHU CS Department. He received the Ph.D. degree from Purdue University in 1996 in EE. From 1996 to 1997, he was a postdoctoral fellow with the Institute for Systems Research at the University of Maryland, where he conducted research in stochastic control and optimization. Since October 1997, he has been with JHU/APL where he manages and directs internal research in developing scalable modeling, inference, and learning algorithms for solving large-scale DoD problems. He is the Co-PI of a project on mission-oriented resource management for a Total Ship Computing Environment funded by the DARPA IXO ARMS program. He was the PI of a project on adaptive information control to develop efficient resource allocation techniques for dynamic QoS provisioning over distributed and disparate networks, funded by the DARPA AICE program. His current research interests include stochastic control and optimization, wireless networking, and distributed inference and control in sensor networks.

Jon R. Ward

Jon R. Ward received his B.S. degree in Electrical Engineering in 2003 and M.S. degree in Electrical Engineering in 2005 from North Carolina State University in Raleigh, NC. His thesis research focused on interference mitigation of ultra wideband (UWB) networks in multipath channels. He currently works as a communications engineer at The Johns Hopkins University Applied Physics Laboratory (JHU/APL). His areas of interests include

UWB communications, wireless networking, and Electronic Warfare.

Mr. Richard Wexler

Mr. Richard Wexler is the SATCOM lead engineer within the MITRE Corporation's Fort Monmouth office. Mr. Wexler is currently supporting the development of the WIN-T system with focus on the development of WIN-T's transmission architecture and leading the revision of MIL-STD 188-164 to reflect unique SATCOM On-The-Move (SOTM) requirements. Previously he had lead the design and build of a prototype proof-of-concept SOTM terminal under a MITRE Corp. sponsored Mission Oriented Investigation and Experimentation (MOIE) program. Mr. Wexler has also assisted in the development a variety of transportable tri-band SATCOM terminals (e.g., STAR-T, TSS, GMF TACSAT Terminals), the Heavy Terminal (HT) Modernization program, and the Universal Modem System(UMS). He has previously investigated the role of SATCOM for the FCS. He received a B.S. in Electrical Engineering in 1975 from the City College of New York and a M.S. in Management Science in 1980 from Fairleigh Dickinson University. He has previously served as the AFCEA Fort Monmouth Chapter President and remains active in the AFCEA organization. Mr. Wexler has served as both MILCOM session chair/organizer and author for a number of MILCOM conferences.

Biographies

Dr. Tan F. Wong

Dr. Tan F. Wong was born in Hong Kong in 1969. He received the B.Sc. degree (1st Class Honors) from the Department of Electronic Engineering at the Chinese University of Hong Kong in July 1991 and the M.S.E.E. and Ph.D. degrees from the School of Electrical and Computer Engineering at Purdue University in Dec. 1992 and Dec. 1997, respectively. From July 1993 to Jun. 1995, Tan was a research engineer working on the high speed wireless networks project in the Department of Electronics at Macquarie University, Sydney, Australia. From Aug. 1995 to Oct. 1997, he was a research and teaching assistant in the School of Electrical and Computer Engineering at Purdue University. From Nov. 1997 to July 1998, he worked as a post-doctoral research associate at Purdue University. Since Aug. 1998, Tan has been with the University of Florida, where he is currently an Associate Professor of Electrical and Computer Engineering. His main research interests are in the areas of wireless communication and networks, estimation and detection, and adaptive signal processing. Dr. Wong is a senior member of the IEEE. He has served as Editor for Wideband and Multiple Access Wireless Systems for the IEEE Transactions on Communications and as the Editor-in-Chief for the IEEE Transactions on Vehicular Technology.

Dr. Dapeng Oliver Wu

Dr. Dapeng Oliver Wu (S'98--M'04--SM'06) received B.E. in Electrical Engineering from Huazhong University of Science and Technology, Wuhan, China, in 1990, M.E. in Electrical Engineering from Beijing University of Posts and Telecommunications, Beijing, China, in 1997, and Ph.D. in Electrical and Computer Engineering from Carnegie Mellon University, Pittsburgh, PA, in 2003. Since

August 2003, he has been with Electrical and Computer Engineering Department at University of Florida, Gainesville, FL, as an Assistant Professor. His research interests are in the areas of networking, communications, multimedia, signal processing, and information and network security. He received NSF CAREER award in 2007, the IEEE Circuits and Systems for Video Technology (CSVT) Transactions Best Paper Award for Year 2001, and the Best Paper Award in International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine) 2006. Currently, he serves as the Editor-in-Chief of Journal of Advances in Multimedia, and an Associate Editor for IEEE Transactions on Wireless Communications, IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Vehicular Technology, and International Journal of Ad Hoc and Ubiquitous Computing. He is also a guest-editor for IEEE Journal on Selected Areas in Communications (JSAC), Special Issue on Cross-layer Optimized Wireless Multimedia Communications. He has served as Program Chair for IEEE International Conference on Communications (ICC 2008), Signal Processing for Communications Symposium, and as a member of executive committee and/or technical program committee of over 50 conferences. He is Vice Chair of Mobile and wireless multimedia Interest Group (MobIG), Technical Committee on Multimedia Communications, IEEE Communications Society.

Biographies

Dr. Jeffrey S. Wysocarski

Dr. Jeffrey S. Wysocarski received the B.S. Degree from Clarkson University, Potsdam, NY in 1995, and the M.S. and Ph.D. degrees from Clemson University, Clemson, SC in 1999 and 2004, respectively, all in electrical engineering. Since 2004, he has been a member of the Technical Staff in the Advanced Satcom Systems and Operations Group, MIT Lincoln Laboratory, Lexington. Dr. Wysocarski is a member of the IEEE.

Prof. Xiang-Gen Xia

Prof. Xiang-Gen Xia (M'97,S'00) received his B.S. degree in mathematics from Nanjing Normal University, Nanjing, China, and his M.S. degree in mathematics from Nankai University, Tianjin, China, and his Ph.D. degree in Electrical Engineering from the University of Southern California, Los Angeles, in 1983, 1986, and 1992, respectively. He was a Senior/Research Staff Member at Hughes Research Laboratories, Malibu, California, during 1995-1996. In September 1996, he joined the Department of Electrical and Computer Engineering, University of Delaware, Newark, Delaware, where he is Charles Black Evans Professor. His current research interests include space-time coding, MIMO and OFDM systems, and SAR and ISAR imaging. Dr. Xia has 160 refereed journal articles published and accepted, and 7 U.S. patents awarded and is the author of the book *Modulated Coding for Intersymbol Interference Channels* (New York, Marcel Dekker, 2000). He is currently an Associate Editor of the *IEEE Transactions on Wireless Communications*, *IEEE Transactions on Vehicular Technology*, the *IEEE Signal Processing Letters*, and the *Journal of Communications and Networks (JCN)*. He was a guest editor of *Space-Time Coding and Its Applications* in the *EURASIP Journal of Applied Signal*

Processing in 2002. He served as an Associate Editor of the *IEEE Transactions on Signal Processing* during 1996 to 2003, the *IEEE Transactions on Mobile Computing* during 2001 to 2004, and the *EURASIP Journal of Applied Signal Processing* during 2001 to 2004. He is also a Member of the Sensor Array and Multichannel (SAM) Technical Committee in the IEEE Signal Processing Society.

Biographies

Dr. Ken Young

Dr. Ken Young is currently Executive Director for Government Project Development in the Applied Research organization at Telcordia Technologies, where he leads several projects on mobile ad hoc networking technology. He is the Program Manager for the Army Research Laboratory's Communications and Networks Collaborative Technology Alliance. He heads a Telcordia-led team developing advanced mobile technology for WIN-T under CERDEC's Proactive Integrated Link Selection for Network Robustness (PILSNER) program. He led the development and field demonstration of an ad hoc mobility protocol suite under CERDEC's Multi-functional On-the-move Secure Adaptive Integrated Communications (MOSAIC) ATD project. Dr. Young has 27 years experience in government and commercial telecommunications technology. He joined Bell Telephone Laboratories in 1978 where he performed systems engineering studies on digital cross-connect systems and subscriber loop carrier systems. In he led research on high-speed optical and electrical interconnections in advanced transmission and switching systems. He later led a research team developing enabling technologies for gigabit/second local- and wide-area networks, including SONET/ATM network interface prototypes to support national Gigabit Network experiments, (the Nectar and Aurora Gigabit Testbeds). He also led Bellcore's participation in the development of DARPA's Advanced Technology Network (ATDNet). Under a DARPA contract he developed ATM interoperability testing tools and methodologies that were commercialized by Telcordia. He also participated in a DARPA project on a 10 gigabit/sec SONET/ATM self-healing ring demonstration. Dr. Young received his Ph. D. in 1978 from the University of Pennsylvania, where he performed

research on heavy ion-induced nuclear reaction physics. He also received an M. S. in physics from the University of Pennsylvania (1973) and a B. S. in physics from St. Joseph's University (1972). He is a Telcordia Fellow, a Senior Member of the IEEE and a member of the American Physics Society. He has more than 60 research publications.

Dr. Fran Zenzen

Dr. Fran Zenzen is Program Manager at General Dynamics C4 Systems in Scottsdale, AZ working battle management programs. She holds a B.S.E.E. from Lehigh University, an M.S.E.E. from Syracuse University, and an MBA and Ph.D. (Industrial Engineering) from Arizona State University. She is also a Master Six-Sigma Statistical Blackbelt awarded by Motorola Corporation in 1999 Fran is an adjunct professor at ASU in the area of Six-Sigma Blackbelt, Engineering Statistics, and Reliability Engineering. She is an editor for *Quality Engineering*, the current Arizona President of IIE and a member of several other technical societies including IEEE, ASQ, INFORMS, and SWE.

Biographies

Dr. Qinqing Zhang

Dr. Qinqing Zhang (S'95-M'98-S'03) received her B.S. and M.S.E. degrees in electronics engineering from Tsinghua University, Beijing, China, M.S. and Ph.D. degrees in electrical engineering from University of Pennsylvania, Philadelphia, PA, US. She joined the Milton Eisenhower Research Center at the Johns Hopkins University Applied Physics Laboratory (JHU/APL) in May 2007. Prior to that, she was with Bell Labs, Alcatel-Lucent Technologies in New Jersey. She is also an adjunct assistant professor in the department of electrical and system engineering at University of Pennsylvania, Philadelphia. She has 10 years of technical leadership experience in the design and performance analysis of wireline and wireless communication systems and networks, radio resource management, algorithms and protocol designs and traffic engineering. She has published numerous papers in IEEE journals and conferences. She has more than 30 awarded and pending patent applications in the area of radio resource management, media access and radio link control, Ethernet and IP networking. Her current research interests are in mobile ad-hoc networks, network security and assurable communication system and networks. She has been serving in technical program committees of various IEEE conferences, including IEEE Globecom, ICC, WCNC, VTC, MWC and Milcom.

Dr. Zhensheng Zhang

Dr. Zhensheng Zhang received his Ph.D. in electrical engineering from the University of California, Los Angeles. Dr. Zhang has many years experience in design and analysis of network architecture, protocols and control algorithms, with very strong backgrounds in performance analysis, modeling and simulation of the communication networks. He is

currently with San Diego Research Center (SDRC), Principal Scientist, serving as Principal Investigator for several DOD projects. Before joining SDRC, he visited Microsoft Research in the summer of 2002 and worked at Sorrento Networks, Department of System Architecture, for 2 years, responsible for designing the next-generation optical metro networks using the GMPLS control framework. Prior to Sorrento Networks he was with Bell Laboratories, Lucent Technologies, focusing on research and development in wireless networks. Dr. Zhang served as Editor of IEEE Transaction on Wireless Communications between 2002 and 2006. He was the General Chair of Broadband Wireless Networking Symposium, October 2004, served as Guest Editor for the IEEE JSAC special issue on Overlay Networks, 2003 and the Journal of Wireless Networks issue on multimedia wireless networks, August 1996. Dr. Zhang served as Member at Large of the IEEE San Diego section 2004 and as Chair of IEEE Communication Society, San Diego section, 2004-2007.

He has published more than 100 papers in ACM/IEEE Transactions on Networking, IEEE JSAC, IEEE Transactions on Communications, and key ACM/IEEE conferences. He has given many invited talks and tutorials at many universities and conferences. His research interests include wireless ad hoc networks, wireless sensor networks.

Biographies

Dr. Harold Zheng

Dr. Harold Zheng works as Senior Professional Staff at Johns Hopkins University, Applied Physics Laboratory (JHU/APL). He received his Ph.D. degree in Electrical and Computer Engineering from Georgia Institute of Technology. Before he joined JHU/APL, Dr. Zheng worked as a Member of Technical Staff in Bell-Labs, Lucent Technologies at Holmdel, and as a consultant for Army Research Lab at Ft. Monmouth. He has published a number of papers in wireless QoS, network mobility, 3G wireless networks, wireless network security, and video delivery over wireless and IP networks.

Dr. Yahong Rosa Zheng

Dr. Yahong Rosa Zheng received the B.S. degree from the University of Electronic Science and Technology of China, Chengdu, China, in 1987, and the M.S. degree from Tsinghua University, Beijing, China, in 1989, both in electrical engineering. She received the Ph.D. degree from the Department of Systems and Computer Engineering, Carleton University, Ottawa, Canada, in 2002. She was an NSERC Postdoctoral Fellow from Jan. 2003 to April, 2005 at the University of Missouri-Columbia. Currently, she is an assistant professor with the Department of Electrical and Computer Engineering at the University of Missouri-Rolla. Her research interests include array signal processing, wireless communications, and wireless sensor networks. She has served as a Technical Program Committee (TPC) member for IEEE International Sensors Conference 2004, IEEE GlobeCom 2005, and IEEE ICC 2006. She is currently an Associate Editor for IEEE Transactions on Wireless Communications.