

# 2011 INTERNET2 ADVISORY COUNCILS ELECTION CANDIDATE NAMES AND BIOS

## CIO/INSTITUTION AND RESEARCHER CANDIDATES

### AMSAC

#### **Klara Jelinkova**, Associate Vice President and CITO, University of Chicago

As CITO, Klara is responsible for strategic IT issues ranging from policy and resource allocation to protocol and organization. She represents the University's information technology interests regionally and nationally. IT Services, the University's principal information technology organization, reports to the CITO.

Prior to coming to University of Chicago, Klara served as the Assistant VP of Shared Services and Infrastructure at Duke University. Her responsibilities included identity management technologies, collaborative services, research infrastructure support and infrastructure services.

Prior to Duke, Klara spent 10 years at the University of Wisconsin-Madison. Her last position at UW was Assistant Director of Systems Engineering and Senior Strategist for Research Computing. At UW, Klara directed the implementation of enterprise wide infrastructure services and led several process improvement efforts based on the ITIL model. She also helped to frame research computing strategy for the UW central IT organization. Prior to UW Klara worked at several software companies including Software Publishing Corporation.

Klara serves on the Educause Campus CyberInfrastructure Steering Committee, Internet2 Standing Committee on International Strategy and is an active member of several regional and national higher education organizations. She also serves on several industry advisory boards.

### AOAC

#### **Dr. Ray Ford**, Chief Information and Technology Officer (CITO), University of Montana

Ray is currently a Professor of Computer Science at The University of Montana, and since March 2000 has also served as UM's Chief Information and Technology Officer. He holds BS and MS degrees in Math and Computer Science from the University of Missouri - Rolla, and a PhD in Computer Science from the University of Pittsburgh. He has been a computer science faculty member for over 35 years at Augustana College, University of Iowa, University of Kansas, and The University of Montana. He has authored and co-authored numerous professional papers on topics related to programming environments and distributed computing, and has directed more than 30 MS and PhD theses in related areas. As CITO he has been involved in a number of state, regional, and national networking initiatives. He was a founding member of the Northern Tier Networking Consortium and served for 3 years as its Vice-President and President. He is a member of the Board of the Health Information Exchange of Montana, a recipient of a major FCC Rural Health Care Pilot Project award. He is co-leader of a pilot project with the US Forest Service to link selected USFS Research Labs into national R&E networks. He has also been active within Internet2: member of the Network Policy and Planning Advisory Council, member and chair of the Applications, Middleware, and Services Advisory Council, member of the Internet2 Board of Trustees; member of the 2005/06 Campus Expectations Task Force and a co-author of its final report; and co-leader of the 2007/08 strategic planning effort and co-author of the 2008 Strategic Plan.

## **ERAC**

### **Larry Conrad, Vice Chancellor for Information Technology and Chief Information Officer, UNC Chapel Hill**

Mr. Conrad has over 40 years' experience in the field of information technology and has a diverse background in both university and corporate settings, with extensive experience in research, instructional, and enterprise computing, as well as telecommunications.

At Chapel Hill, he oversees the Division of Information Technology Services (ITS) as well as sets IT direction and coordinates infrastructure and service delivery across the university. He is responsible for the following ITS units which support the campus: enterprise applications, research computing, teaching and learning, user support and engagement, infrastructure and operations, communication technologies, and information security. He is presently has executive oversight for implementation of the Peoplesoft Student, Financial, and Human Resources components.

Mr. Conrad has been active for many years in EDUCAUSE and Internet2. He is co-Chair for the joint Educause/Internet2 Higher Education Information Security Council, a member of the joint Educause/Internet2 Network Council, and a member of the Internet2 External Relations Advisory Council. He is also incoming Chair for the MCNC Advisory Council, serves on the Executive Advisory Council for the Raleigh CIO Forum, and on the Governing Body for the Charlotte CIO Executive Summit.

Previously, Mr. Conrad served as the assistant vice president for technology integration and chief information officer at Florida State University. He led the effort to define and build a new high-speed research and education network in Florida known as the Florida LambdaRail and represented the company on the National LambdaRail Board of Directors. He also led the effort to design and build a new statewide student advising system called FACTS and creation of the Florida Center for Advising and Academic Support to operate and support it. He served on the selection, negotiation, steering and budget committees that implemented the PeopleSoft Financial and Human Resources components for the university.

Prior to FSU, Mr. Conrad was at Arizona State University where he served as director of the computer center and director of computing and network consulting services. He spent the first 15 years of his professional life in various private sector IT roles.

Mr. Conrad has a master's degree in computer science from Arizona State University and a bachelor's degree in computer science from Iowa State University.

## **RAC**

### **Dr. Marc Hoit, Vice Chancellor for Information Technology, North Carolina State University**

Mr. Hoit started as the Vice Chancellor for Information Technology at North Carolina State University in Raleigh in September 2008. Since arriving he has worked to develop a Strategic Operating Plan and launched a number of key foundational projects that will improve efficiency and effectiveness of IT on campus. He previously held numerous administrative positions at the University of Florida including; Interim CIO, Director of Student PeopleSoft Implementation, the Associate Dean for Academic Affairs Administration and the Associate Dean for Research in the College of Engineering at the University of Florida. He is also a Professor in the Civil, Construction and Environmental Engineering Department. Mr. Hoit received his BS from Purdue University and his MS and PhD from University of California, Berkeley. He is the Principal Investigator for the development of DIGGS, an international XML schema for transferring transportation information. His current structural engineering research involves the computer program, FB-MultiPier, which analyzes bridge pier, superstructure and pile foundations subjected to dynamic loading.

## INDUSTRY CANDIDATES

### AMSAC

#### **Craig Cupach**, Director of Sales, Level 3's Federal Markets Group

Mr. Cupach oversees partnerships with research and education institutions and regional federal government agencies.

Mr. Cupach has in-depth knowledge of the R&E and regional federal communities after serving as sales director for four years. Mr. Cupach has been with Level 3 for a total of seven years. He currently oversees a team spread across the country to conveniently meet regional federal needs.

Mr. Cupach has more than 15 years of domestic and international telecommunications experience. Prior to his tenure at Level 3, he gained critical broadband data and voice solutions knowledge for R&E, federal, state, and commercial markets at AT&T and Qwest.

Mr. Cupach holds a degree in business management from Capital University in Columbus, Ohio where he was a member of the collegiate wrestling team. He currently lives in Cleveland, Ohio and is a member of Tremont West Community Development Center. Mr. Cupach is an avid runner and just completed his second marathon.

### AOAC

#### **Andrew Dugan**, Senior Vice President, Architecture and Engineering, Level 3 Communications

Mr. Dugan leads the division that is responsible for developing long-term strategy, technology evaluation and selection for the equipment used in Level 3's transport, data, voice, and video networks. Andrew has 20 years of experience in building telecommunications networks, switching platforms and services platforms. Prior to joining Level 3, Andrew worked for MCIWorldcom designing and building network, voice services platforms and architecting next generation switching networks. Prior to MCIWorldcom, Andrew worked on building switching systems for Lucent Technologies.

Mr. Dugan manages many of the industry's most notable network architects and developers, responsible for innovations in many of the most important areas of IP-based communications. He also worked with the team that helped to develop MPLS and deploy the first large scale network and deployed the first DWDM network based upon Photonic Integrated Circuits. Due in part to Mr. Dugan's leadership, Level 3 stands as an acknowledged leader in the communications industry and was inducted into the Government's permanent collection as a Computerworld Government Laureate for leadership in the information revolution: "The world's first upgradable international fiber-optic network to be completely optimized for internet protocol technology is helping to stimulate the biggest change in communications technology in 100 years."

**UNIVERSITY OF MICHIGAN; Master of Science, Computer Engineering, 1990**

**UNIVERSITY OF COLORADO; Bachelor of Science, Computer Science/Electrical Engineering, 1988**

### ERAC

#### **Dr. Robert F. Brammer**, Vice President for Advanced Technology and Chief Technology Officer (CTO), Northrop Grumman's Information Systems (NGIS) sector.

This sector employs approximately 25,000 with revenues of nearly \$10B. He is responsible for the overall technology strategy and Independent Research and Development (IRAD) programs, technology and research partnerships, technical talent development, and intellectual property management. Current major NGIS technology investment areas include advanced wireless, satellite,

and optical networks, information operations and security engineering, command and control systems, human factors in system design, large-scale information and knowledge management, high performance computing and networking applications, weather and climate modeling, public health, bioinformatics, geospatial technology, enterprise systems and managed services, robotics, service oriented architectures, and software and enterprise architecture. These investment projects include major collaborations with leading technology companies and research universities. One of these collaborations is the Northrop Grumman Cybersecurity Research Consortium. Dr. Brammer created this consortium with Carnegie Mellon, MIT, and Purdue Universities to develop some leading-edge concepts and technologies to address a variety of challenges in cybersecurity.

## **RAC**

### **Dennis Gannon, Director of Applications for the Cloud Computing Futures Group.**

Prior to coming to Microsoft, Gannon was a professor of Computer Science at Indiana University and the Science Director for the Indiana Pervasive Technology Labs and, for seven years, Chair of the Department of Computer Science. His research interests include large-scale cyberinfrastructure, programming systems and tools, distributed computing, computer networks, parallel programming, computational science, problem solving environments and performance analysis of Grid and MPP systems. Gannon led the DARPA HPC++ project and was one of the architects of the Department of Energy SciDAC Common Software Component Architecture (CCA). He was a partner in the NSF Computational Cosmology Grand Challenge project, the NSF Linked Environments for Atmospheric Discovery and the NCSA Alliance. He served on the steering committee of the GGF, now the Open Grid Forum and the Executive Steering Committee of the NSF Teragrid where he managed the TeraGrid Science Advisory Board. He was the Program Chair for the IEEE 2002 High Performance Distributed Computing Conference, the General Chair of the 1998 International Symposium on Scientific Object Oriented Programming Environments and the 2000 ACM Java Grande Conference, and Program Chair for the 1997 ACM International Conference on Supercomputing as well as the 1995 IEEE Frontiers of Massively Parallel Processing. Gannon was the Program Chair for the International Grid Conference, Barcelona, 2006 and co-chair of the 2008 IEEE e-Science Conference. While Chair of the Computer Science Department at Indiana University, he led the team that designed the University's new School of Informatics. For that effort Gannon was given the School's Hermes Award in 2006. He has published over 100 refereed articles and co-edited 3 books. Gannon received his Ph.D. in Computer Science from the University of Illinois Urbana-Champaign in 1980 after receiving a Ph.D. in Mathematics from the University of California, Davis.

## **RAC**

### **Debbie Montano, Chief Architect for Government, Education & Medical, Juniper Networks**

Ms. Montano is responsible for driving Juniper solutions and best practices for government, education & medical customers and for fostering relationships with Juniper customers and partners. Ms. Montano has 24 years experience in technology design, development, operations, sales & marketing. Ms. Montano has extensive experience with US and international research and education (R&E), high performance computing and biomedical research organizations, plus knowledge of their infrastructure and networks. As director of advanced internet initiatives at Qwest, from 1998 through 2003, she was instrumental in the development of the nationwide Internet2 R&E backbone, and numerous state and regional networks. Ms. Montano has also held positions at National LambdaRail, Force10 Networks, Kenan Systems and McData. Ms. Montano has a BS in computer science and engineering from MIT and is currently engaged in graduate studies in management science and engineering at Stanford University.

## REGIONAL CANDIDATES

### AMSAC

#### **Amy Philipson, CEO and Executive Director**

**Amy Philipson** is the Director, Video and TV Technologies, and Director, Business and Finance for the university-wide Computing & Communications organization at the University of Washington. As director of Video and TV Technologies she is responsible for the UW's extensive, award winning Television, Video production and major advanced multimedia efforts. She led the successful efforts to establish and manages the UW's two cable channels (UWTV and uw2.tv) in the greater Puget Sound metropolitan area and across the State of Washington, and has built a subscriber base of 2 million (and growing). UWTV programming has received many awards including Emmy nominations, Golden Cine, Best of the Northwest and others.

Ms. Philipson is also the founder and now Executive Director of the national ResearchChannel (aka ResearchTV) consortium, which includes many of the country's leading research universities and also key corporate research partners such as IBM. In addition to providing on-demand programming and distribution of broadcast TV materials via the Internet, as of January 2000 the ResearchChannel has a full time national channel on Echostar's consumer oriented Dish500 Direct Broadcast Satellite system which reaches many millions of citizens across the country. The ResearchChannel pioneered MPEG-2 high quality broadcast TV quality (and above) demand-video distribution services, and catalysed and produced the first real-time, and first live, high definition television transmissions over the internet. These HDTV over IP efforts included a series of record setting demonstrations in which over a billion bits per second of real-time, uncompressed studio-quality HDTV streams were successfully distributed over Internet2-Abilene, DARPA NTON, and in the first live coast to coast HDTV (also at > a gigabit) over DARPA Supernet. In November of 1999 the ResearchChannel andUCAID announced a new working group dedicated to streaming video especially very high quality pushing hard at the further convergence of television, HD multimedia, and the Internet. Ms. Philipson holds BS and MCP degrees from MIT.

### AOAC

#### **Dave Lois, Executive Director, WISCNET**

Leveraging an Electrical and Computer Engineering degree from University of Wisconsin- Madison, Mr. Lois has over 25 years of experience in higher education information technology, including the last 11 years as Executive Director of WiscNet. WiscNet is Wisconsin's pioneering education, research and public service network and operates as a not-for-profit membership cooperative – 450 members strong - serving K-20 education, libraries, government entities, and health care institutions throughout Wisconsin.

Under Mr. Lois' leadership, WiscNet has become a vital member of the national networking community by his service as a founding co-chair and current vice-chair of StateNets, as a past Quilt board member, a recent vice-chair of the Internet2 Architecture and Operations Advisory Council, and involvement in the Northern Tier Network Consortium since its inception. Additionally, WiscNet works diligently to peer with many public and private national networks and provides operational support for the BOREAS-Net regional and Northern Tier - North Dakota networks. In total, we operate 2,600 miles of fiber-based networks in six states within the region.

Within Wisconsin, Mr. Lois helped lead the effort to deploy a dedicated statewide research and education 'dark fiber' network which connects community anchor institutions via fiber-based Community Area Networks (CANs). The role of the CANs is to create a 21<sup>st</sup>-century infrastructure controlled by the community to increase public safety and effectiveness and to partner with the local private sector to create 21st-century jobs and commerce within the communities where people live.

The WiscNet motto is - connecting people and connecting (your) strategies. It is not about the technology. It is about the power of getting people working together and creating services that solve your problems. Mr. Lois created the motto and, more importantly, he makes sure it is part of the DNA, as he believes in it that strongly.

## **AOAC**

### **David Reese, Chief Technology Officer, CENIC**

My current position is with CENIC, the Corporation for Education Networking Initiatives in California, as their Chief Technology Officer. Prior to joining CENIC in this role in 2002 I was with the California State University Office of the Chancellor where I was Director of the CSU's inter-campus networking initiatives. I have been involved with CENIC since its inception over 13 years ago.

As CTO of CENIC I have been engaged in a number of successful initiatives: PacificWave, the first distributed international exchange point, TransitRail (now TR-CPS) a nationwide peering infrastructure aimed at increasing the connectivity of R&E Networks while providing high value to their members, and the integration of the K-12 and Community Colleges into CENIC alongside Higher Ed. CENIC was a leader in the deployment of dark fiber serving Research and Education and creating a multi-tiered infrastructure serving the unique needs of Education in California.

I recently completed a year serving as Chair of the Quilt's Board of Directors and continue to serve on the Executive Committee and Finance Committee. I also served for 12 years as an elected member of the Board of Trustees for the Alta Loma Elementary School District, a K-8 school district serving approximately 8,000 students, where I learned a lot about the unique needs of K-12 schools.

## **AOAC**

### **John Moore, Director of Advanced Services Development, MCNC**

Mr. Moore is operator of the North Carolina Research and Education Network (NCREN), where he is responsible for devising strategy and fostering innovation.

Mr. Moore has been involved with the Research and Education networking community since 2000, starting with his previous position at North Carolina State University, where he focused on network technology testing as Director of the Centaur Lab and the NC Internet2 Technology Evaluation Center (NC-ITEC). Mr. Moore has been a member of the Internet2 Technical Advisory Committee (NTAC) since 2001, and has served as vice chair (2009) and chair (2010).

Mr. Moore has had a keen interest in fostering the use of advanced networking to support science, and he played a founding role in both the National Lambda Rail (NLR) Experiment Support Services group as well as the Internet2 HOPI Testbed Support Center.

Prior to his work at with the R&E community, Mr. Moore spent fifteen years working in the private sector as a networking consultant, development engineer, product planner and standards representative in organizations ranging in size from IBM to his own one man company. John received a BS in Electrical Engineering degree from Case Western Reserve University in 1985.

## **ERAC**

### **Jim Dolgonas, President and CEO, CENIC**

CENIC,s network serves over 10 million Californians, as well as education and research professionals in Nevada and Arizona.

Mr. Dolgonas is managing Director of a corporation that owns fiber infrastructure on the West Coast. He also serves on the StateNet,s steering committee. He is a member of the California Emerging Technology Fund,s Board of Expert advisors and is active in activities within California to improve broadband penetration in the state. He is an active participant in two NSF-funded

international connections grants, providing United States educators and researchers access to researches and research data and instruments throughout the world. He is also responsible for CENIC,s role in a major public/private, BTOP-funded infrastructure project in California. Jim also serves on the Board of Directors of National LambdaRail ([www.nlr.net](http://www.nlr.net)).

Prior to joining CENIC Mr. Dolgonas served in various information technology executive management positions for the University of California, including serving as the Statewide Chief Information Officer.

## **ERAC**

### **John Gillispie**

John Gillispie leads the Missouri Research and Education Network (MOREnet), one of the nation's first and largest research and education networks. Prior to joining MOREnet, Mr. Gillispie served as executive director of the Iowa Communications Network, serving thousands of Iowans with a fiber network and related technical services. Concurrently, Gillispie also held the positions of chief operating officer for the Information Technology Enterprise for the Iowa Department of Administrative Services and chief information officer for Iowa, overseeing daily operations of information technology and shared services throughout state government. Gillispie is a past president of the National Association of State Chief Information Officers (NASCIO), an organization of state chief information officers and information technology executives from state governments across the United States and U.S. territories. Prior to serving citizens in the state of Iowa, Gillispie served in a variety of executive management roles for Williams Communications including Vice President of Infrastructure, Vice President of Network Operations, and Director - Communications Projects. Originally from Chicago, Mr. Gillispie graduated with degrees in Accountancy and Business Administration from Triton College in River Grove, Ill., in 1974, Business Data Processing from Southwest Missouri State University in Springfield, Mo., in 1975 and received his Masters of Business Administration from Oklahoma State University in Stillwater in 1996. Gillispie would bring a strong background in public policy, a wealth of experience at the national level in technology matters, extensive relationships in both the public and private sectors and a strong interest in telecommunications policies and a national and state level. Serving on this Council would provide Gillispie the background and a wealth of information relative to Internet 2 and its external opportunities.

## **RAC**

### **Lonnie Leger**

[2007 – present] Director of Networking for LONI (Louisiana Optical Network Initiative)

[2005 – 2007] Principal Technical Consultant for LONI

[2007 – 2005] Senior Optical Network Engineer for LONI

[2005 – 2003] Technical Architect at Dyntek, Inc.

[1997 – 2003] Principal Consultant at Global Data Systems

[1995 – 1997] Senior Network Analyst at Georgia Gulf Corporation

[1990 – 1995] Communications Engineer at Electronic Data Systems (EDS)

### **Publications most closely associated with proposed project:**

1. Daniel S. Katz, Gabrielle Allen, Ricardo Cortez, Carolina Cruz-Neira, Raju Gottumukkala, Zeno D. Greenwood, Les Guice, Shantenu Jha, Ramesh Kolluru, Tevfik Kosar, Lonnie Leger, Honggao Liu, Charlie McMahon, Jarek Nabrzyski, Bety Rodriguez-Milla, Ed Seidel, Greg Speyrer, Michael Stubblefield, Brian Voss and Scott Whittenburg (2009), "Louisiana: a model for advancing regional e-Research through Cyberinfrastructure." *Philosophical Transactions of The Royal Society*, 367, 1897, 2459-2469 (doi: 10.1098/rsta.2009.0037).

### **Synergistic Activities:**

[2010] Principal Investigator-Project Director, NTIA - BTOP, Infrastructure Funding \$80.5M, Louisiana Broadband Alliance.

[2005 – present] In 2004, the Governor of Louisiana committed \$40 million over 10 years to fund the Louisiana Optical Network Initiative (LONI). Through this initiative, leaders of Louisiana's higher education community have constructed a 10-40 Gb/s optical network connecting all of the research universities across the state and have installed high-performance computers (aggregate 80 TFlops) across this network to support collaborative computational science research. Leger was the inaugural employee for LONI and has been intimately involved in LONI since.

[2009 – present] Leger serves as a board member of The Quilt. The Quilt, a coalition of 30 advanced regional network organizations, is a dynamic forum where leaders from throughout the advanced research and education network community build on the intellectual capital and best practices of network service providers worldwide.

[2009 – present] Leger serves as the co-chairman of RON/Campus Issues for ESCC/Internet2 Joint-Techs. Joint Techs is an international conference of networking professionals that have drawn together advanced networking engineers and featured tutorials, presentations, Birds-of-a-Feather meetings, in-depth technical sessions and demonstrations of state-of-the-art high-performance networking technologies.

[2007] Leger was a guest lecturer for Dr. Seung-Jong Park's graduate course CSC 7601, High Speed Networks

[2000-2003] Leger designed and installed a optical network around the I-90, I-93 and I-95 greater Boston loop.

[2000-2003] Leger sold, designed, built and managed the Louisiana Department of Transportation and Development's 350 miles fiber network.

### **Collaborators & Other Affiliations:**

Dr. Gabrielle Allen, Louisiana State University; Dr. Edward Seidel, Louisiana State University; Dr. Les Guice, Louisiana Tech University; Dr. Steve Landry, University of Louisiana; Dr. Joel Tohline, Louisiana State University; Brian Voss, Louisiana State University; Joel Williams, Louisiana State University; Dr. Daniel Katz, University of Chicago; Dr. Seung-Jong Park, Louisiana State University

## RESEARCH CANDIDATES

### AMSAC

#### **Dr. Michael J. Ackerman**, Assistant Director for High Performance Computing and Communications, NIH

Dr. Ackerman received his Ph.D. from the University of North Carolina, Chapel Hill, in Biomedical Engineering. After graduation he served as a research physiologist in the Hyperbaric Medicine and Physiology Department, Naval Medical Research Institute, where he studied the effects of the hyperbaric environment on neurophysiology and behavior. He later became head of the Institute's Biomedical Engineering and Computing Branch responsible for the application of computers to real time medical data analysis and the control and monitoring of diving systems. Dr. Ackerman came to the National Library of Medicine in 1987. He served as the Chief of the Educational Technology Branch of the Lister Hill National Center for Biomedical Communications, applying computer based interactive technology to medical education, and as the Associate Director for Specialized Information Services responsible for the Library's non-bibliographic databases. He is currently NLM's Assistant Director for High Performance Computing and Communications overseeing the Library's programs in medical imaging, collaborative environments, and next generation networking. He holds academic appointments as an Associate Professor of Computer Medicine at the George Washington University and as an Assistant Professor of Medical Informatics at the Uniformed Services University of the Health Sciences. Dr. Ackerman was elected a Fellow of the American College of Medical Informatics (ACMI) in 1985, a Founding Fellow of the American Institute of Medical and Biological Engineering (AIMBE) in 1992, and a senior member of the Institute of Electrical and Electronic Engineers (IEEE) in 2007. He serves on the editorial boards of TeleMedicine and e-Health, and the Journal of the American Medical Informatics Association and as a member of the Internet2 Applications, Middleware & Services Advisory Council (AMSAC) and the Large Scale Networking (LSN) committee of Federal Networking and Information Technology Research and Development (NITRD) Program. He has published a book and over 200 papers and book chapters. His work on the Visible Human Project has been recognized through numerous awards including the 1998 Johns Hopkins University Ranice W. Crosby Distinguished Achievement Award and the 1996 Satava Award for Medical Applications of Virtual Reality, the 1996 National Institutes of Health Director's Award, and was nominated as a finalist for a 1995 Discover Magazine Award for Technological Innovation in Software and a 1996 Smithsonian Award for Information Technology.

### AOAC

#### **Dr. Kristen Rauschenbach**, Vice President of the Disruptive Information Processing Technologies Business Unit, BBN Technologies

Dr. Rauschenbach is also a Principal Scientist at Raytheon BBN Technologies. Prior to BBN, Kristin was the co-founder and CEO of PhotonEx and was also an Associate Division Head at MIT Lincoln Laboratories. Her expertise is in the area of terrestrial and space-based optical networking including wideband optical network systems and components as well as network management, control, and security. She has worked in both the government and commercial sectors in the area of data communications and telecommunications fiber optic networks. Dr. Rauschenbach was the PI for PHAROS, part of DARPA's next generation core optical network project, CORONET. She is also the Substrate Architect for NSF GENI project. Prior to joining BBN, she co-founded and led a start-up company that built the world's first 40 Gb/s optical transport system and completed a successful field trial at Deutsche Telekom, AG. In her government work, she recently completed a DARPA project on Next Generation Optical Network Technology. She has worked on Airborne Lasercom for TSAT MJPO and OSD NII GIG End-to-End in the area of Network Management. She has also worked with the GIGBE program on terrestrial fiber optics and the NSSO on next generation Transformational Communication Architecture. She holds TS/SCI clearance. She has six patents and over 50 publications.

## **ERAC**

**Milt Halem**, Research Professor, Computer Science and Electrical Engineering Department; Executive Director, Multicore Computational Center  
University of Maryland

Dr. Milton Halem is a Research Professor in the Computer Science and Electrical Engineering Department and Executive Director, Multicore Computational Center of the College of Engineering and Information Technology at the University of Maryland, Baltimore County. His main areas of research interest are computational science, service oriented scientific computing and science information systems, data intensive computing and permanent digital data preservation. In addition, Prof. Halem also holds an Emeritus position as Distinguished Information Scientist in the Earth Sciences Directorate at the NASA Goddard Space Flight Center. Prior to retiring in 2002, Dr. Halem served in the Office of the Director from 1999 to 2002 in the joint capacity as Assistant Director for Information Sciences and Chief Information Officer for the NASA Goddard Space Flight Center. Dr. Halem provided the strategic information science and technology focus and oversight across the entire Center. In this capacity, he represented Information Sciences at all management and flight mission critical programs and projects at the Center. Prior to this position, Dr. Halem served as Chief of the Earth and Space Data Computing from 1984 to 1999 and was responsible for the management and conduct of one of the world's most powerful scientific data intensive supercomputing complexes. Under his leadership, the Division became nationally recognized for its research in high performance computing and modeling, advanced information data systems, scientific visualization, and massive data storage management. He acquired his Bachelor's degree in Mathematics from the City College of New York and a Ph.D. in Mathematics from the Courant Institute of Mathematical Sciences, New York University in 1968. He joined NASA in 1971 as the GARP Project Scientist. He subsequently headed the Goddard Global Modeling and Simulation Branch, which became nationally recognized for Atmospheric and Climate Modeling under his leadership. His personal achievements include more than 100 scientific publications in the areas of atmospheric and oceanographic sciences and computational and information sciences. He is most noted for his groundbreaking research in simulation studies of space observing systems and for development of four dimensional data assimilation for weather and climate prediction. Over the years, his achievements have earned him numerous awards including the NASA Medal for Exceptional Scientific Achievement, the NASA Medal for Outstanding Leadership, and NASA's highest award, the NASA Distinguished Service Medal in 1996. In 1999, Dr. Halem was awarded the honorary Doctor of Law degree from Dalhousie University, in recognition for his contributions to the field of computational science. Dr. Halem is also a noted Fine Arts screenprint maker of space images.

## **RAC**

**Douglas Comer**, Professor of Computer Science, Purdue University

Mr. Comer is an internationally recognized expert on computer networking and the TCP/IP protocols, and has been working with TCP/IP and the Internet since the late 1970s.

Professor Comer is well known for his series of groundbreaking textbooks on computer networks, the Internet, computer operating systems, computer architecture, and network processors. His books have been translated into sixteen languages, and are widely used in both industry and academia around the world. Comer's three-volume series, *Internetworking With TCP/IP*, is often cited as an authoritative reference for the Internet protocols.

For five years, Mr. Comer worked at Cisco Systems, where he served as VP of Research and Research Collaboration. For over twenty years, Professor Comer served as editor-in-chief of the research journal *Software-Practice and Experience*. Comer is a fellow of the ACM and the recipient of numerous teaching awards.