

IBM-UMBC DAY

Friday, April 6, 2018

SPEAKER BIOS

Speaker: Nilanjan Banerjee, Associate Professor, Computer Science & Electrical Engineering, UMBC

Topic: Internet of Things/Cyber-Physical Systems

Nilanjan Banerjee is an Associate Professor at University of Maryland, Baltimore County. He is an expert in mobile and sensor systems with focus on designing end-to-end cyber-physical systems with applications to physical rehabilitation, physiological monitoring, and home energy management systems. He holds a Ph.D. and a M.S. in Computer Science from the University of Massachusetts Amherst and a BTech. (Hons.) from Indian Institute of Technology, Kharagpur.

Speaker: Keith Bowman, Dean, College of Engineering & Information Technology (COEIT), UMBC

Topic: Welcoming Remarks and Farewell and Wrap

Keith J. Bowman has begun his tenure as the new dean of UMBC's College of Engineering and Information Technology (COEIT). He joined UMBC on August 1, 2017, from San Francisco State University in California, where he served as dean of the College of Science and Engineering since 2015.

Bowman holds a Ph.D. in materials science from the University of Michigan, and B.S. and M.S. degrees in materials science from Case Western Reserve University. Prior to his role at SFSU, he held various positions at the Illinois Institute of Technology and Purdue University. At the Illinois Institute of Technology, he was the Duchossois Leadership Professor and chair of mechanical, materials, and aerospace engineering. In Purdue University's School of Materials Engineering, he served as a professor and head of the school. He also held visiting professorships at the Technical University of Darmstadt in Germany and at the University of New South Wales in Australia.

Speaker: Michelle Browdy, IBM Senior Vice President of Legal

Topic: Law, Technology and Public Policy

Michelle Browdy became IBM's Senior Vice President, Legal and Regulatory Affairs, and General Counsel on January 1, 2015. She reports to IBM's Chairman, President and Chief Executive Officer, Ginni Rometty. Michelle is responsible for IBM's global legal, security, privacy and compliance activities and policies, as well as IBM's environmental and government and regulatory affairs functions.

Michelle most recently served as Secretary to IBM's Board of Directors from 2012-2014. Prior to that position, she served for five years as IBM's worldwide head of litigation, overseeing IBM's intellectual

property, antitrust/competition, employment, class action, securities and commercial litigation globally.

Since coming to IBM, Michelle has served as a Board member of the Pro Bono Partnership, Vice President of the Executive Committee of the Yale Law School Association, and was appointed by the Chief Judge of New York State to the Commercial Division Advisory Council in 2013. She is currently a member of the Board of Directors of the U.S. Chamber of Commerce.

Before joining IBM, Michelle was a partner with the law firm Kirkland & Ellis LLP, trying a variety of complex cases across the United States. She has also acted as a Special Assistant Attorney General for the State of Illinois and taught Trial Advocacy as an Adjunct Professor at Northwestern University School of Law.

Michelle received a B.S.E., summa cum laude, from Princeton University; an S.M. in Applied Mathematics from Harvard University; a J.D. from The Yale Law School, where she served as Managing Editor of The Yale Law Journal; and clerked for the Chief Justice of the Indiana Supreme Court. She is admitted to the bar in Illinois and New York State, and is registered to practice before the United States Patent and Trademark Office.

Speaker: Jeff Crume, IBM Distinguished Engineer, IT Security

Topic: Cybersecurity

Jeff Crume is an IBM Distinguished Engineer and IT Security Architect with 29 years experience in the IT industry. He is the author of a book entitled "Inside Internet Security: What Hackers Don't Want You To Know" and has written articles on cryptography, virtual private networking and identity management. He holds Certified Information Systems Security Professional and Information Systems Security Architecture Professional security industry certifications as well as Distinguished Chief IT Architect credentials from The Open Group. Jeff lived in Beijing on assignment in 2006 where he helped architect secure infrastructures for clients in the Greater China geography. He is a member of the IBM Academy of Technology and an IBM Master Inventor. He serves on the NC State University Computer Science Strategic Advisory Board, the "Information Management & Computer Security" research journal editorial board and has worked with clients in 40 countries across 6 continents.

Speaker: Mac Devine, IBM Fellow and VP of IBM Watson and Cloud Platform

Topic: Watson and Cloud

Has 28 years of experience with networking and virtualization. A Master Inventor (2006), IBM Distinguished Engineer (2008), a Member of the IBM Academy of Technology (2009), IBM Fellow (2016). Served 2 years as Chief Architect for System z Enterprise Software. Co-authored Springer's Handbook of Cloud Computing used by colleges and universities. Served 2 years as the CTO for IBM Cloud partnerships and client innovations within IBM Corporate Strategy team. Served 2 years as Director and CTO for Cloud Portfolio within IBM Global Technical Services Served 2 years as VP/CTO for Emerging Technology and Advanced Innovation within the IBM Cloud Division. Led technical due diligence for SoftLayer acquisition which lead to creation of IBM Cloud Services Division.

Currently serves as Vice President and CTO of Solution Architecture Validation and Enablement for Strategic Customer Success, Watson Cloud Division and as the IBM Executive for Clemson and MIT. Mac is a faculty member for the Cloud Expo, Things Expo and IoT LinkedIn Community.

Speaker: Tim Finin, Professor, Computer Science & Electrical Engineering, UMBC

Topic: Watson and Cloud

Tim Finin is the Willard and Lillian Hackerman Chair in Engineering and a Professor of Computer Science and Electrical Engineering at the University of Maryland, Baltimore County (UMBC). He has over 40 years of experience in applications of artificial intelligence to problems in information systems and language understanding. His current research is focused on representing and reasoning with knowledge graphs, analyzing and extracting information from text, and enhancing security and privacy in information systems. He is a fellow of the Association for the Advancement of Artificial Intelligence (AAAI), an IEEE technical achievement award recipient and was selected as the UMBC Presidential Research Professor in 2012.

Finin received an S.B. degree in Electrical Engineering from MIT and a Ph.D. degree in Computer Science from the University of Illinois at Urbana-Champaign. He has held positions at UMBC, Unisys, the University of Pennsylvania, Johns Hopkins University and the MIT AI Laboratory. He is the author of over 400 refereed publications and has received research grants and contracts from a variety of sources. He participated in the DARPA/NSF Knowledge Sharing Effort, helped lead the development of the KQML agent communication language and was a member of the W3C Web Ontology Working Group that standardized the semantic web language OWL.

Speaker: Tim Hahn, IBM Distinguished Engineer, IoT

Topic: Internet of Things/Cyber-Physical Systems

Tim Hahn is a IBM Distinguished Engineer and has been with IBM since 1990. He is the Chief Architect for Internet of Things Security within the IBM Watson Internet of Things division. He is responsible for strategy, architecture, and design for IBM Watson Internet of Things offerings. These offerings, coupled with others from across IBM, enable customers to design, build, experiment, run, manage, and operate solutions involving diverse sensor data coming from connected devices. These solutions leverage IBM's strengths in cloud, cognitive, analytics, mobile, social, and security.

Speaker: Sam Lomonaco, Professor, Computer Science & Electrical Engineering, UMBC

Topic: Quantum Computing

Samuel Lomonaco has been a professor in UMBC's Computer Science and Electrical Engineering Department for more than 25 years, serving as Founding Chair of the Computer Science Department 1985 to 1991. He teaches a wide variety of courses including Algebraic Coding Theory, Cryptology, Quantum Computation, Design & Analysis of Algorithms, Discrete Structures, Symbolic Computation, Automata Theory, Theory of Processes, Numerical Computation. Prior to joining UMBC's faculty, Lomonaco worked in both government and industry carrying out a research program in signal processing and secure communications at such organizations as the Communication Division of the Institute for Defense Analyses, at Army Research Laboratories, and at Texas Instruments.

Lomonaco is actively involved in his research. His research interests and research contributions span a wide range of subjects including quantum algorithms, quantum cryptography, algebraic coding theory, cryptography, algorithms, knot theory, algebraic and differential topology, and symbolic computation. He has published many research papers in refereed journals, and also has published five books, four on Quantum Computation and Quantum Information Science, and one on low dimensional topology.

He holds a Ph.D. in Mathematics from Princeton University.

Speaker: Anupam Joshi, Chair and Professor, Computer Science & Electrical Engineering, UMBC
Topics: Welcoming Remarks and Cybersecurity

Anupam Joshi is the Oros Family Professor and Chair of Computer Science and Electrical Engineering Department at the University of Maryland, Baltimore County (UMBC). He is the Director of UMBC's Center for Cybersecurity, and one of the USM leads for the National Cybersecurity FFRDC. He is a Fellow of IEEE.

Dr. Joshi obtained a B.Tech degree from IIT Delhi in 1989, and a Masters and Ph.D. from Purdue University in 1991 and 1993 respectively. His research interests are in the broad area of networked computing and intelligent systems. His primary focus has been on data management and security/privacy in mobile/pervasive computing environments, and policy-driven approaches to security and privacy. He is also interested in Semantic Web and Data/Text/Web Analytics, especially their applications to (cyber) security. He has published over 225 technical papers with an h-index of 78 and over 21750 citations (per Google Scholar), filed and been granted several patents, and has obtained research support from National Science Foundation (NSF), NASA, Defense Advanced Research Projects Agency (DARPA), US Dept of Defense (DoD), NIST, IBM, Microsoft, Qualcomm, Northrop Grumman, and Lockheed Martin amongst others.

Speaker: Dave McQueeney, IBM VP of Corporate Technology and Community and Global University Programs
Topic: Welcoming Remarks

Dave McQueeney is currently the Vice President, Corporate Technology, IBM Corporation. In this role he facilitates the evaluation of a broad range of technologies and priorities that are essential for IBM's future growth and leadership and manages several programs aimed at developing technical talent and leadership across the company. Dave is also responsible for the global university programs for IBM and is Vice Chair of the IBM Academy of Technology.

Dave's background covers a wide range of disciplines ranging from solid state Physics, to high-speed interconnect design, to distributed software development tools, to participation in a startup software company in Scientific Data Analysis, to Government-specific industry solutions. Dave has spent about half of his career as a researcher and research executive, and half in IBM's customer-facing units including Global Services, Sales and Distribution and Software Group. Dave has been the CTO for IBM's Federal business, the Global Government Solutions General Manager and leader of the IBM Federal Systems Integration services unit.

Throughout his career, Dave has driven strong connections between IBM Research and IBM's clients, as well as the other units of IBM. Dave was recognized by Consulting Magazine as one of the top 25 consultants for 2002, citing his work to make the innovations of IBM Research directly available to customers via IBM's Global Business Services unit.

Dave has held a number of other significant positions in IBM Research, including Director of the IBM Zurich Research Laboratory, Vice President of Communication Technology, Vice President of Technical Strategy, Vice President of Software, and Vice President of Cloud Computing and Next Generation Systems.

He joined IBM in the Research Division in 1988. He holds an M.S. and Ph.D. in Solid-State Physics from Cornell University, and an A.B. in Physics from Dartmouth College.

Dave is a member of the US Air Force Scientific Advisory Board, appointed in 2014.

Speaker: Todd Pittman, Professor and Graduate Program Director, Physics

Topic: Quantum Computing

Dr. Todd B. Pittman received a B.S. in physics from Bucknell University in 1990, and a Ph.D. in physics from UMBC in 1996. Pittman was a research scientist at the Johns Hopkins University Applied Physics Laboratory from 1996-2006, and joined the faculty of the UMBC Physics Department in 2006. His research interests are in the areas of experimental quantum information processing, quantum optics, and nonlinear optics.

Speaker: Andy Rindos, IBM Head, RTP Center for Advanced Studies (CAS)

Topic: Welcoming Remarks

Andy Rindos is the head of the Research Triangle Park (RTP) Center for Advanced Studies (CAS), which coordinates university relations for the IBM community in North Carolina. He is also the co-leader of the IBM Cloud Academy, and is working very closely with universities all across the world interested in deploying cloud computing. Most recently, Andy was the World Wide CAS Leader, coordinating the activities of 29 centers across the globe. Previously, Andy has headed Tivoli performance, as well as the Web Sphere Technology Institute. Andy is an IBM Senior Technical Staff Member (STSM), an executive technical resource, as well as an adjunct professor at NC State. He joined IBM in 1988, after receiving his PhD in Electrical Engineering (Control Theory) from the University of Maryland (College Park). Prior to IBM, he was a neurophysiologist at the National Institutes of Health (NIH) in Bethesda, MD.

Speaker: Karl Steiner, UMBC

Topic: Keynote Introduction

Dr. Karl V. Steiner serves as the Vice President for Research and holds the academic rank of Professor in the Department of Mechanical Engineering and an affiliate appointment as Professor in

the Department of Computer Science and Electrical Engineering at the University of Maryland, Baltimore County (UMBC).

Dr. Steiner joined UMBC in September 2013, continuing a successful research and administrative career at the University of Delaware (UD), where he ascended to the position of Senior Associate Provost for Research Development, and held academic appointments as Professor in the Department of Electrical and Computer Engineering and in the Biomedical Engineering Program.

Dr. Steiner received his Doctorate in Engineering in Mechanical Engineering from the Institute for Composite Materials (www.ivw.uni-kl.de) at the University of Kaiserslautern in Germany, his Master's degree in Electrical & Computer Engineering from the University of Delaware (www.udel.edu) and completed his Engineering Diploma in Electrical Engineering and Information Technologies at the Technical University Braunschweig/Wolfenbüttel - now known as Ostfalia - in Germany (www.ostfalia.de).

Speaker: Roman Vaculin, IBM Research, Blockchain

Topic: Blockchain

I am a research staff member & manager at IBM Research where I lead a multidisciplinary team of researchers and software engineers focusing on research in areas of blockchain solutions applied across industries. I received my PhD at the Faculty of Mathematics and Physics at Charles University, Prague. I spent two years at Carnegie Mellon University as a Fulbright scholar where I worked in the DARPA Integrated Learning project.

My broad research interests are in the areas that are an intersection of distributed systems and advanced analytics, including blockchain technology, social network analysis, collaborative, data-centric workflow, business process management, service-oriented and distributed systems, semantic and social web. At IBM I made contributions to several areas including data-centric business processes, social media, digital marketing and financial services analytics. My work has impacted products such as IBM Case Manager, IBM Social Media Analytics and IBM Client Insight for Wealth Management.

Speaker: Andrew Wack, IBM Q Platform Software Architect, Quantum

Topic: Quantum Computing

As the IBM-Q Platform Software Architect, Andrew is responsible for the design of the software infrastructure for IBM's commercial quantum computing offerings. These offerings give clients access to the first commercial available, and industry leading general-purpose quantum systems, enabling them develop algorithms and applications that will move them into the next era of computing, tackling problems that classical computers struggle to solve.

Prior to joining IBM's Quantum Computing group, he was the Cluster Test Architect for the IBM System p family of computers, with expertise that encompassed the entire horizon of high performance computing: SANs, parallel file systems, parallel computation, cluster system management, server hardware and high-performance communication interconnects. He played a key role in architecting tests for some of the world's largest supercomputers, including ASCI Purple,

BlueGene, Roadrunner, and PERCS. and in the process created innovative test techniques enabling large scale testing with dramatically reduced costs, better test coverage, and improved time to market.

Andrew holds a BS in mathematics from Ursinus College, and MS and PhD degrees in computer science from the University of Delaware.

Speaker: Yelena Yesha, Distinguished Professor, Computer Science & Electrical Engineering, UMBC

Topics: Welcoming Remarks and Watson and Cloud

Yelena Yesha has been teaching in UMBC's Computer Science and Electrical Engineering Department for more than 20 years. She is the UMBC Site director of the Center for Hybrid Multicore Productivity Research, a cooperative research consortium for addressing the productivity, performance, and scalability issues in meeting the insatiable computational demands of its sponsors applications through the continuous evolution of multicore architectures and open source tools.

From 1994 to 1999, she served as the Director of the Center of Excellence in Space Data and Information Sciences at NASA. Her research interests are in in the areas of distributed databases, distributed systems, mobile computing, digital libraries, electronic commerce, and trusted information systems. She has written 8 books and over 100 refereed articles in the field.

In 2011, Yesha received the IBM CAS Faculty Fellow of the Year award. She holds Ph.D.'s in both Computer Science and Information Science from Ohio State University.