Workshop on Cloud Computing & Storage Systems

Presented by the NSF Sponsored - Center for Research on Intelligent Storage (CRIS)
Thursday May 4th, 2017  8:00 a.m. – 5:00 p.m.

UMN Digital Technology Center – Room 402 Walter Library

Program Agenda:

08:00  Continental Breakfast - Networking
08:30  Introductions and Welcome                               Dr. David Du, Qwest Chair
        Professor, Computer Science and Engineering, CRIS Director
08:45  Digital Storage Technology Roadmaps &                   Dr. Tom Coughlin, Coughlin
        Implications for Cloud Computing                           Associates
09:35  Magnetic Memory Trends and Challenges                   Dr. Randall Victora, ECE
        Department Head; Center for Micromagnetics and Information Technology
10:30  Coffee Break – Networking
11:00  HPC/Distributed Systems Trends/Challenges for Cloud Computing  Dr. Jon Weissman, Professor of Computer Science
11:50  Lunch/Panel Discussion: Cloud – Evolution or Revolution for Storage Systems?   CRIS Industry Advisory Board Members
1:15   Erasure Codes for Distributed Storage Systems            Soheil Mohajer, Assistant Professor ECE
2:00   Salesforce Cloud Infrastructure and Challenges          Jim Walsh, Salesforce SVP Infrastructure Engineering
2:45   Midwest Big Data Hub                                     Dr. Melissa Cragin, Executive Director
3:30   Coffee Break – Networking
4:00   Hyper-converged infrastructure for Cloud Computing – Trends/Challenges   TBD
4:45   Summary and Wrap Up                                      Dr. David Du and Dave Aune
Speaker Biographies

Tom Coughlin

For over 20 years a dedicated group of digital storage technologist experts have created the bi-annual INEMI Mass Storage Technology Roadmap Report. This report examines critical requirements for digital storage technology, including hard disk drives, optical discs, magnetic tape and flash memory. Digital storage technology is undergoing unprecedented changes to meet the needs of growing digital content to support the growth of the Internet of Things, higher resolution content, machine intelligence and the resulting increase in data in big data centers (the cloud). Find out about critical developments and roadmaps for all the important digital storage technologies in use today and how they are enabling user applications and the growth of cloud storage.

Biography:

Tom Coughlin, President, Coughlin Associates is a widely respected digital storage analyst as well as business and technology consultant. He has over 35 years in the data storage industry with multiple engineering and management positions at high profile companies.

Dr. Coughlin has many publications and six patents to his credit. Tom is also the author of Digital Storage in Consumer Electronics: The Essential Guide, which was published by Newnes Press. Coughlin Associates provides market and technology analysis as well as Data Storage Technical and Business Consulting services. Tom publishes the Digital Storage Technology Newsletter, the Media and Entertainment Storage Report, the Emerging Non-Volatile Memory Report and other industry reports. Tom is also a regular contributor on digital storage for Forbes.com and other blogs.

Tom is active with SMPTE, SNIA, the IEEE (he is past Director for IEEE Region 6 and active in the Consumer Electronics Society where he is chairman of the Future Directions Committee) and other professional organizations. Tom is the founder and organizer of the Annual Storage Visions Conference (www.storagevisions.com), as well as the Creative Storage Conference (www.creativestorage.org). He is the general chairman of the annual Flash Memory Summit. He is a Senior member of the IEEE, and a member of the Consultants Network of Silicon Valley (CNSV). For more information on Tom Coughlin and his publications go to www.tomcoughlin.com.
Randall Victora

Randall Victora is Professor and Head of Electrical and Computer Engineering at the University of Minnesota. He has served as the director of the Center of Micromagnetics and Information Technologies (MINT) since 2003. He received B.S. degrees in physics and mathematics from MIT in 1980 and the PhD in physics from UC Berkeley in 1985. He was a research scientist at Kodak Research Laboratories from 1985 to 1998, before joining the University. His contributions to magnetic data storage include the invention of exchange coupled composite media, which substantially increased recording density and is widely used commercially throughout the hard disk drive industry. He has received numerous awards for his work including the IEEE Magnetics Society Achievement Award, the highest award in magnetics. Professor Victora is a Fellow of the American Physical Society and of the IEEE.

Jon Weissman

Jon B. Weissman is a Professor of Computer Science at the University of Minnesota where he leads the Distributed Computing Systems Group. His research interests are in distributed systems, cloud/edge computing, high performance computing, and storage systems.

Soheil Mohajer

Jim Walsh

Jim Walsh, SVP of Infrastructure Engineering at Salesforce, is responsible for the storage platforms and services that power the Salesforce cloud. His team is in the process of launching a number of new distributed storage services to power Salesforce growth and innovation. He is also Salesforce Site Director for the Bellevue office.

Jim was previously at Microsoft for 23 years, has founded/co-founded four startups, holds 27 patents, and has launched a number of cloud-scale projects including Bing Image Search, and Cosmos -- Microsoft's exabyte-scale big data platform behind Azure.
Melissa Craig

Melissa Cragin is Executive Director of the Midwest Big Data Hub, based in the National Center for Supercomputing Applications (NCSA) at the University of Illinois at Urbana-Champaign (UIUC). Prior to joining NCSA, Melissa spent four years in the Office of the Assistant Director, Directorate of Biological Sciences at the National Science Foundation (NSF), serving first as an AAAS Science & Technology Policy Fellow and most recently as Staff Associate, where she guided the development of data policy and accelerated community engagement on research data management and public access. Previous to her work with the federal government, Melissa was on the faculty of the Graduate School of Library and Information Science at the University of Illinois, where she led the Data Curation Education Program and conducted research in the Center for Informatics Research in Science and Scholarship. She has a PhD from UIUC, an MLIS from Rutgers University, and an M.Ed. from Rhode Island College.

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