Symposium Speakers – Smart Data

Paul Emerson

General Manager of Kilby Labs

Texas Instruments

Sensor Systems Create Smarter Data

Paul Emerson is currently the General Manager of Kilby Labs Dallas which is a part of Texas Instruments CTO organization. Prior to managing the lab, Paul spent three years managing HVAL's (High Volume Analog and Logic) New Business Proving Grounds where he led a team focused on new business and technology development. Paul's career at TI started in 1996 and he has served as analog design engineer, engineering manager, product line manager and business unit manager all for the Storage Products Group (SPG). Paul was elected to the TI Technical ladder in 1999 and promoted to Senior Member, Technical Staff in 2003. He is the inventor or co-inventor of nine patents in HDD (Hard Disk Drive) read/write preamplifier circuit design. Prior to joining TI Paul worked as an analog design engineer at Hughes Aircraft Company in El Segundo, California.

Abstract:

Sensors have become a critical part of how we work, live, and play. This presentation will focus on how sensors have changed our lives as well as a vision for how they will enable further advancements benefiting people, industries, and societies. New transducers, low power signal processing, energy harvesting, and communications will enable new sensor systems in the future to provide smarter data with very low energy consumption. Smart sensors and "big data" will work together to unlock the full potential of these new technologies.

Dr. Vincent S. Tseng

Distinguished Professor

National Cheng Kung University, Taiwan

Health Risk Prediction via Mining Big Health Data

Dr. Vincent S. Tseng is a Distinguished Professor at Department of Computer Science and Information Engineering in National Cheng Kung University (NCKU), Taiwan. Currently he also serves as the chair for IEEE CIS Tainan Chapter. He served as the president of Taiwanese Association for Artificial Intelligence during 2011-2012 and the director for Institute of Medical Informatics of NCKU during 2008-2011. He has published more than 280 research papers in referred journals/conferences as well as 15 patents in the field of data mining and big data. He has been on the editorial board of a number of journals including *IEEE Transactions on Knowledge and Data Engineering*, *IEEE Journal on Biomedical and Health Informatics*, *ACM Transactions on Knowledge Discovery from Data*, etc.

Abstract:

Health Risk Assessment (HRA) is an important topic in healthcare domains. Modeling and prediction of health risks using data mining techniques open a new door to effective and automatic *HRA*. This talk presents our recent developments in modeling and prediction of health risks on chronic diseases via mining big health data that include composite data sources like personal health records, life style and even environmental information. Experimental results on real datasets concerning various chronic diseases and the implemented systems will be illustrated to show the promising potential of big data mining for HRA. Some experiences and insights gained from large-scale healthcare projects will also be investigated.

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Gregory P. Tevis

Principal

Deloitte Consulting

Big Data and Application Areas

Gregory P. Tevis is a Principal in Deloitte's Strategy and Operations practice. His focus is in corporate and competitive strategy within Technology, Media and Telecommunications, advising executive teams on identification and execution of organic / inorganic growth strategies. Prior to consulting, Greg was a telecommunications network engineer, designing and selling data network solutions for Fortune 100 companies. His educational background includes a BE, with a double major in Biomedical and Electrical Engineering, and an MBA, with a concentration in Strategy.

Abstract:
Big data is on the radar screen of most executive teams today but there lacks a linkage between understanding the space and how a company might feasibly use their data effectively to improve internal operations or monetize externally. This presentation will provide an overview of the big data space, the application areas people are making money today and what creates the value of specific data elements.

Doug Starr

Consulting Systems Architect

Cisco Systems, Worldwide Sales Group

Connecting the Internet of Things

Doug Starr, Consulting Systems Architect, works at Cisco Systems, Inc. on the Enterprise Networking Architecture team. These solutions include routing, switching, mobility, and IoT line of ruggedized products for several vertical markets such as Energy, Transportation, Oil&Gas and Manufacturing. Over the years he has supported the Channel Partners, Systems Integrators and Service Provider market segments. Prior to Cisco Doug was a Product Manager and Senior Engineer with Ericsson Inc. supporting IP and mobile connected transport and optical systems.

Abstract:
The Internet of Things is the intelligent connectivity of physical devices driving massive gains in efficiency, business growth, and quality of life. By connecting everyday objects and networking them together, we benefit from their ability to combine simple data to produce usable intelligence. IoT is the result of a long line of technology and business transitions that have been taking place over the past several years. Sensors and Devices: billions of previously unconnected objects are becoming connected, forming a network of sensors and other devices. While each of these "things" generate data, the fact that they are networked together enables that data to be combined with other data points to produce usable intelligence. In addition, organizations are looking for greater linkages to drive business processes and business outcomes