

## Conference Program

# ITERA 2019

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THE 17th ANNUAL CONFERENCE ON TELECOMMUNICATIONS & INFORMATION TECHNOLOGY

April 13 – 15, 2019  
Hyatt Regency  
Indianapolis, Indiana

### SATURDAY, APRIL 13, 2019

**12:00 – 1:00 PM**      **Check-in and Registration**

**1:00 – 1:15 PM**      **Welcoming Comments**

Raymond Hansen, President, ITERA, Wentworth Institute of Technology  
Michael Ramage, Chairman of the Board, ITERA, Murray State University

**1:15 – 2:15 PM**      **Keynote Speaker**

Karen Mangia – V.P. Customer and Market Insights, Salesforce  
*The Fourth Industrial Revolution Overview, Outlook, and Opportunities*

**2:15 – 3:00 PM**      **Paper Session I      Internet of Things Analytics**

*Some IoT Device Categories and Appropriate Information Analytic Techniques*  
Dr. Frank Groom – Ball State University  
*Deployment of the Data Analytics Infrastructure for an IoT testbed*  
Sanjana Rajagopala – Syracuse University

**Special Session I      Business Model Innovation**

*Product Design and Business Model Innovation: Unleashing the Powers of a Good Idea*  
Dr. Richard Gershon – Western Michigan University

**3:00 – 3:15 PM**      **Break**

**3:15 – 4:00 PM**      **Paper Session II      Digital Forensics**

*Applying an Agile Approach to Cloud Non-Functional Requirements*  
Rebecca Hammons – Ball State University  
*Central Office Re-architected as a Datacenter (CORD)*  
Suraj Suresh Nair, Shraddha S. Birare – Southern Methodist University

**Special Session II      Open Source Industry/Academic Alliance**

*The Mob Rules – Building the Open Source Security Community*  
Prof. Raymond A. Hansen – Wentworth Institute of Technology

**4:00 – 4:45 PM**

**Paper Session III      Social Media & Online Interaction**

*Performance and Cost Evaluation of VoIP Security Techniques for Operations on IPv4 and IPv6 Networks*

Dr. Levi Perigo – University of Colorado - Boulder

*A Survey on Wireless Sensor Network for the Internet of Things*

Xulong Peng – Murray State University

**Special Session III      Innovation in the Classroom**

*Truth and Consequences: The Teaching Experience*

Dr. Ray Steele, Dr. Ron Kovac, Dr. Steve Jones, Dr. Dennis Trinkle – Ball State University

**4:45 – 5:30 PM**

**Birds of a Feather I      Fostering Industrial Partnerships in the Classroom**

**6:30 – 7:30 PM**

**Research Reception**

Sponsored by Murray State University, Center for Telecommunications Systems Management

**SUNDAY, APRIL 14, 2019**

**8:00 – 8:45 AM**

**Continental Breakfast**

**9:00 – 9:15 AM**

**Welcome & Announcements**

**9:15 – 10:15 AM**

**Innovative Course Award**

*TLEN 5100 – Next Generation Networks – University of Colorado - Boulder*

Dr. Levi Perigo

**10:15 – 11:00 AM**

**Paper Session IV      From BI to AI**

*Some Structural Components of Artificial Intelligence*

Dr. Frank Groom – Ball State University

*Business Intelligence: A Look into Its Uses as a Fraud Detection System for the Overall Protection and Benefit of the End User*

Josh Covert, Jerry DeHondt – Ball State University

**Special Session V**

**Cybersecurity Community-Building**

*A Learner's Permit Guide to NIST Cybersecurity Framework*

Dr. Kelley Misata – Sightline Security, Open Information Security Foundation

**11:00 – 11:15 AM**

**Break**

**11:15 – 12:00 PM**

**Paper Session V – Evolution of Smart Cities**

*Are Smart Cities Smart? An Analysis on the Return on Investment of Smart Technologies*

Ha T. Kiew – Ball State University

*Real-time, low cost pedestrian and biking activity sensing in rural area*

Dr. Julio Arauz – Ohio University

**Special Session V**

**Engagement in Introductory Networking Courses**

*Cisco Packet Tracer Offers Engagement in Data Communications Networking Course*

Dr. Jim Jewett – James Madison University

**12:00 – 1:15 PM**

**Lunch**

**1:30– 3:15 PM**

**ITERA 2019 Student Case Study Competition**

Ball State University  
James Madison University  
Murray State University  
Ohio University

**Birds of a Feather II – Partnership Opportunities for Research**

**3:15 – 4:00 PM**

**Paper Session VI      Innovation of Infrastructure**

***Basics of Machine Learning***

Dr. Frank Groom – Ball State University

***OpenStack Private Cloud Setup based on Virtual Machines***

Ankita Kalita, Harshawardhan Ravindra Belsare – Syracuse University

**Special Session VI      Integrating Technology in the Classroom**

***Cybersecurity with Palo Alto Networks' Cybersecurity Academy Partners***

Dr. Steve Jones – Ball State University

**4:00 – 4:45 PM**

**Special Session VII      Technology Innovation**

***Innovation in a Time of Over-Promise***

Dr. Ray Steele – Ball State University

**Special Session VIII      Digital Forensics Roadmap**

***The State of Network Forensics & The Path Forward***

Prof Raymond Hansen – Wentworth Institute of Technology

**4:45 – 5:00 PM**

**Break**

**5:00 – 6:00 PM**

**ITERA Member Meeting – ITERA Update and Introduction of New Officers**

Dr. Michael Ramage, Chairman of the Board, ITERA, Murray State University

Prof. Raymond Hansen, President, ITERA, Wentworth Institute of Technology

Dr. Scott Kingsley, Vice President, ITERA, Southern Methodist University

**6:30 – 8:00 PM**

**Dinner & Awards Banquet**

**MONDAY, APRIL 15, 2019**

**8:00 – 8:45 AM**      **Continental Breakfast**

**9:00 – 9:45 AM**      **Special Session IX      Innovation in the Classroom**

*Strategies for Teaching Inclusive Design in a Telecommunications Course*

Dr. Eduardo Luis Orozco – Universidad Nacional de Ingenieria - Nicaragua

**Special Session X      Looking Towards the Future**

*The Chairs' Roundtable on Program Futures*

Dr. Ray Steele – Ball State University

Dr. Michael Ramage – Murray State University

**9:45 – 10:30 AM**      **Katherine B. Snow Research Award Nominees**

*Micro-economic Analysis of Peer-Producing Containerized Virtual Network Functions*

Dr. Levi Perigo – University of Colorado – Boulder

*Native Cloud Implementations*

Sanchit S. Pathak – Southern Methodist University

**10:30 – 10:45 AM**      **Break**

**10:45 – 11:30 AM**      **Keynote – ITERA 2019 Researcher of the Year**

Dr. Sukumaran Nair – Southern Methodist University

**11:30 – 11:45 AM**      **Final Remarks and Conference Close**