

# 30<sup>TH</sup> NSF I/UCRC for Intelligent Maintenance Systems Industry Advisory Board Meeting



TUESDAY // DECEMBER 8, 2015

## Industry Forum on CPS for Future Industrial Cyber Twin Systems & Industrial Internet

Industry leaders will share on-going efforts and best practices, as well as specific gaps and needs, in developing CPS for future cyber twin systems and industrial internet.

**7:45 AM** Registration & Breakfast

**8:15 AM** Introduction to the Workshop

**8:30 AM** Host Welcome: John Ginder, Manager, Advanced Operational Analytics, Ford Global Data Insight and Analytics

**8:45 AM** Forum Presentations Section I

- » TBD
- » Sudarsan Rachuri, NIST

**9:30 AM** Keynote: Paul Ballew, Chief Data and Analytics Officer, Ford Motor Company

**10:00 AM** Break

**10:10 AM** Forum Presentations Section II

- » Zhijun Tang (Zwick), Manager of Data Analytics, CRT Eaton
- » GE
- » Cosen Bandsaws - Machine Cyber Interface with Industrial Case Study
- » Yilu Zhang, Ph.D., Manager, Vehicle Health Management Vehicle Systems Research Group, General Motors R&D

**11:30 AM** Panel Q&A Session

**NOON** Lunch



EVENT HOST



EVENT SPONSORS



# 30<sup>TH</sup> NSF I/UCRC for Intelligent Maintenance Systems Industry Advisory Board Meeting



TUESDAY // DECEMBER 8, 2015

## IMS Center Industry Advisory Board Meeting

- 1:00 PM** Host Welcome, Chairman Address & Attendee Introduction
- 1:30 PM** IMS Directors - Jay Lee, Jun Ni, Jag Sarangapani & Dragan Djurdjanovic
- 1:45 PM** Technical Presentations // University of Cincinnati
  - » Prognostics & Health Management of Engineering Systems Using Minimal-Sensing Techniques - Hossein Davari
  - » An Integrated Health Monitoring & Compensation System for Improved Efficiency and Productivity of Machining Processes (I) - Behrad Bagheri
- 2:25 PM** Technical Presentations // University of Michigan
  - » An Integrated Health Monitoring and Compensation System for Improved Efficiency and Productivity of Machining Processes (II) - Huanyi Shui
  - » Cyber Physical System Application in Ship Fuel Consumption Optimization - Yangbing Lou
- 3:05 PM** Break
- 3:15 PM** Technical Presentations // Missouri University of Science & Technology
  - » Cyber Fault Diagnosis and Resilience Control for Industrial Networked Systems - Shanshan Bi
  - » Model-based Fault Diagnosis and Resilience Scheme for Industrial Systems - Jia Cai
- 3:55 PM** Technical Presentations // University of Texas at Austin
  - » Extraction of Useful Information in Modern Manufacturing Processes - Asad Al Haq
  - » Cyber Physical System For Monitoring Neuromuscular Skeletal System Performance On A Human Body - Yuyang Xie
- 4:35 PM** Poster Session & Demonstrations
- 5:30 PM** Adjourn
- 6:30 PM** Dinner



### LIFE FORMS

Please be sure to submit your completed LIFE Forms as your feedback is essential for insuring that the work conducted by the Center is of the highest quality and relevant to the Center and its members.



### POSTER SESSION

During the poster session attendees can interact directly with the IMS Center's researchers and view demonstrations that show IMS Center methodologies and technologies in action.

# 30<sup>TH</sup> NSF I/UCRC for Intelligent Maintenance Systems Industry Advisory Board Meeting



WEDNESDAY // DECEMBER 9, 2015

## IMS Center Industry Advisory Board Meeting



### LIFE FORMS

Please be sure to submit your completed LIFE Forms as your feedback is essential for insuring that the work conducted by the Center is of the highest quality and relevant to the Center and its members.

**8:00 AM** Light Breakfast

**8:30 AM** Updates on Selected Projects

- » Cyber Physical Systems-Enabled Prognostics for Fleet-based Systems: Case Study in Control Valves - Aaron Shelly (UC)
- » Hybrid Prognostics Approach for Remaining Useful Life Prediction of Engineering Systems - Suhak Lee (UM)
- » Industrial Monitoring & Prognostics Using RFID Sensor Networks - Haifeng Niu (MST)
- » Advanced sensing and data analytics for monitoring of a human body - Luke Nicolini (UTA)

**9:10 AM** New Member Presentations

- » SANY

**9:30 AM** Special Invited Presentations

- » NSF Manufacturing Foresights - Sridhar Kota
- » NIST Manufacturing PHM Update - Brian Weiss, NIST

**10:10 AM** LIFE Form Feedback Session

**NOON** Lunch

**1:00 PM** Closed Door Session

**3:00 PM** Adjourn