

Center for Intelligent Maintenance Systems  
**10<sup>th</sup> Industrial Advisory Board Meeting**  
**Thursday December 1<sup>st</sup>**

7:30	<b>Registration and Breakfast</b>
8:00	<b>Host Welcome</b> – Toyota Senior Vice President: Steve St Angelo <b>Remarks by:</b> Dean Roy EckKart, College of engineering, University of Cincinnati <b>Directors' Remarks:</b> Professors Jay Lee, Jun Ni, IMS Co-directors
8:10	<b>IAB Chairman's Address and Introduction of Attendees</b>
8:25	<b>Remarks by the NSF Program Director</b>
8:35	<b>Introduction to the Multi-Campus IMS Center</b> – Professor Jay Lee, IMS Director
8:50	<b>Technical Session</b> <ul style="list-style-type: none"> <li>• <b>Watchdog Agent™ research overview</b> – Dr. Dragan Djurdjanovic</li> <li>• <b>Industrial networks and health monitoring</b> – Yong Lei, Dr. Leandro Barajas (GM)</li> <li>• <b>Sensor degradation</b> – <ul style="list-style-type: none"> <li>- <b>Methodology: Tools for sensor performance assessment</b> – Li Jiang</li> <li>- <b>Testbed validation: Toyota proximity sensor testbed project</b> – Ashwin Balasubramanya</li> </ul> </li> <li>• <b>Quality function deployment (QFD) based Watchdog Agent™ tool selection</b> – Dr. Xiaoqin Ma</li> <li>• <b>Development of a reconfigurable Watchdog Agent™ hardware platform</b> – Prof. Yongchang Du</li> </ul>
10:15	<b>Break</b>
10:30	<b>Briefing on Member Company-Supported Projects</b> <ul style="list-style-type: none"> <li>• <b>A novel tool for anomaly detection</b> – Dr. Ken Marko (ETAS), Jianbo Liu</li> <li>• <b>Tools for bearing failure prognosis – Toyota testbed</b> – Mark Rucker (Toyota), Hyunsu Kim</li> <li>• <b>Data-driven modeling of surge map for centrifugal air compressors</b> – Prof. Yaoyu Li</li> <li>• <b>Robot predictive maintenance</b> – Bryan Watts (Toyota), Abbey Yee</li> </ul>
11:30	<b>Member Initiated Projects</b> <ul style="list-style-type: none"> <li>• <b>Smart monitoring and intelligent maintenance of Komatsu mining equipment and diesel engines</b> – Takahiro Ueda (Komatsu)</li> <li>• <b>Smart machine tool predictive maintenance testbed</b> – Dr. Anil Srivastava (TechSolve)</li> </ul>
12:00	<b>New NSF Funded Projects</b> <ul style="list-style-type: none"> <li>• <b>Maintenance of complex system using cumulative damage model and distributed multi-agent decision-making</b> – Dr. Xiaoqin Ma, Pranav Kumar</li> <li>• <b>NSF TIE project with Auburn University: Predictive monitoring and failure prevention of vehicle electronic components and sensor systems</b> – Prof. Haitao Liao</li> </ul>
12:30	<b>Lunch - Video tour of Toyota</b>

1:30	<b>Updates of Other Collaborative Projects</b> <ul style="list-style-type: none"> <li>• SRC Project - Intelligent maintenance for next-generation high-yield fab – Yang Liu, Pranav Kumar</li> <li>• Collaborative project with the Technical University of Berlin: Embedded life cycle unit for prognostics of mechanical systems – Rifet Muminovic</li> <li>• Collaborative project with the University of Toronto: A hybrid platform for diagnostics, prognostics and predictive maintenance – Prof. Kondo Adjallah (UTT)</li> </ul>
2:00	<b>Solicitation of New Projects and Open Discussions:</b> issues and new opportunities for new IMS projects
3:00	<b>Poster and Demonstration Session</b>
5:00	<b>New company presentation</b> <ul style="list-style-type: none"> <li>• GEAE, Boeing, Caterpillar, Festo, Chevron, BaoSteel, Kistler</li> </ul>
5:30	<b>Break</b>
6:00	<b>Reception with cash bar, Dinner to follow (Speaker TBD)</b>

## Friday December 2<sup>nd</sup>

7:30	<b>Breakfast</b>	
8:00	<b>LIFE Forms Feedback Session</b>	
9:30	<b>New IMS Satellite Site at Univ. of Missouri-Rolla Briefing</b>	
10:00	<b>Closed Door Session – <i>members only</i></b> <ul style="list-style-type: none"> <li>• Multi-campus IMS Operations (Inter-Institution Agreement, IP,..)</li> <li>• Approval of IAB 9 Minutes</li> <li>• Election of IAB Chairman</li> <li>• Financial/Operational Report</li> <li>• Annual Member Survey-Ron Beck</li> <li>• New Business</li> <li>• Choose IAB 11 date</li> </ul>	<b>This session is open only to IMS Members and selected guests as approved by IAB Chairman and Co-Directors IN ADVANCE OF MEETING.</b>
12:00	<b>Lunch &amp; Networking Time (boxed lunches)</b>	
12:30	<b>Adjourn</b>	
1:00 - 5:00	<b>Individual Company Discussions with IMS Center Directors and Researchers and Industry forum with Toyota engineers</b>	