

# Automotive CPS Workshops

The goal of this workshop series is to continue to define and refine the technology needs and gaps for deeply-embedded software-intensive electronic control systems that interact deeply with the physical world in ways that have stringent reliability, availability, and safety requirements

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Submitted by [Katie Dey](#) on Fri, 02/25/2011 - 10:11am. Contributors:  
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The current trend in the automotive industry is the expanded use of embedded electronics connected to physical sensors and actuators in an effort to increase the functionality, robustness, and safety of new vehicles. Automotive safety, in an effort to prevent crashes and to protect the occupants in emergency situations, provides an ideal application for emerging innovations in Cyber-Physical Systems (CPS).



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Submitted by [Katie Dey](#) on Fri, 02/25/2011 - 10:30am. Contributor:  
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Integrated Vehicle Health Management (IVHM) covers frameworks for detecting, diagnosing, and mitigating faults in hardware and structures in aerospace systems. Software Health Management (SHM) applies the goals of IVHM to software-intensive systems to detect software faults in real-time and to mitigate them. In this position paper, we describe the needs and challenges of SHM in automotive systems.



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