

Seminar Announcement

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National Science Foundation



Friday, October 30, 2015
Green Hall, Room 0120
1:30 PM

Cyber-Physical Systems: Past, Present, and Future Perspectives

Abstract: In this talk I will present perspectives on the Cyber Physical Systems Program at NSF. CPS is a cross-cutting program at NSF including the CISE (Computer Information Science and Engineering) and ENG (Engineering) directorates. Additionally, in recent years, the CPS program has expanded to include the participation of other federal agencies, including the U.S. Department of Homeland Security, U.S. Department of Transportation, NASA, and National Institutes of Health. The CPS program was initiated by NSF in 2009 and has continually evolved and grown. Today, the program includes more than 350 PIs and co-PIs spread across more than 35 states, and constitutes more than \$250 million in federal investment in fundamental R&D.

This talk will describe research thrusts in FY15 and a perspective on future research challenges as well as thoughts on progress we have made. I will highlight opportunities in emerging areas including Smart and Connected Communities (SCC) which is the focus of a recent and active Dear Colleague Letter (NSF 15-120). My talk will also describe current thrusts in the security of CPS as well as the emerging Internet of Things (IoT). Finally, I will also provide some insights into program development at NSF and the activities of a Program Director.

Bio: Dr. David Corman is the Program Director leading the Cyber Physical Systems Program for the National Science Foundation, and he was appointed as a Research Associate Professor in the Preston M. Green Department of Electrical & Systems Engineering at Washington University in St. Louis, on March 25, 2015. Dr. Corman obtained a dual BS degree in System Science and Mathematics and Applied Mathematics and Computer Science from Washington University in 1977. He then obtained a dual MS degree in SSM and Mechanical Engineering from Washington University in 1978. He then went to the University of Maryland – College Park and obtained a PhD in Electrical Engineering in 1983. While at Maryland, he also worked at the Johns Hopkins Applied Physics Laboratory. From 1984 to 2013 he worked for McDonnell Douglas / Boeing in a variety of positions and was elected a Boeing Technical Fellow in 1999. Dr. Corman's current research interests are in the field of Cyber Physical Systems (CPS), security for CPS, unmanned systems, and manufacturing.