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**Lifetime Achievement
Keynote No. WED-PM2**



Mehrdad Saif
University of Windsor

Time: 15:10 – 16:10
Wednesday June 6, 2018
Chair: Bahram Shafai, USA
Venue: Stevenson Ballroom A

Techniques in Diagnostics and Prognostics with Applications

ABSTRACT: In this talk we will discuss the problem of process monitoring, fault detection and isolation, and fault prognosis in dynamical systems. We shall introduce both model based as well as data driven techniques to fault diagnosis and prognosis. We shall also discuss a number of application domains where these techniques have been used. Finally, we shall outline future directions and application of these techniques in cyber physical systems (CPS).

Bio: Mehrdad Saif Mehrdad Saif received the B.S., M.S., and D.Eng. degrees in electrical engineering from Cleveland State University, Cleveland, OH, USA, in 1982, 1984, and 1987, respectively.

During his graduate studies, he was involved with research projects sponsored by the NASA Lewis (now Glenn) Research Center, as well as the Cleveland Advanced Manufacturing Program (CAMP). In 1987, he joined the School of Engineering Science, Simon Fraser University (SFU), in Burnaby, British Columbia. From 2002 to 2011, he was the Director of the School of Engineering Science and oversaw a major expansion of that school during his term. In 2004, he articulated the vision of starting the mechatronic systems engineering program at SFU's Surrey campus. He planned and rolled out the program at both graduate and undergraduate levels in 2007. He has been the Dean of the Faculty of Engineering, University of Windsor, Windsor, ON, Canada, since July 2011. He has overseen the expansion of Faculty of Engineering programs into such areas as aerospace engineering, engineering management, Bachelor of Engineering technology, mechatronics, and others. From 1993 to 1994, he was a Visiting Scholar with the General Motors North American Operation R&D Center, Warren, MI, USA, where he was a member of the Powertrain Control Group, Electrical and Electronics Research Department and worked on engine control and on-board engine diagnostic problems.

Saif has authored or co-authored more than 280-refereed journal and conference papers plus an edited book in these areas. He is a Consultant to a number of industries and agencies such as GM, NASA, B.C. Hydro, Ontario Council of Graduate Studies, and others. His research interests include systems and control; estimation and observer theory; model-based fault diagnostics; condition monitoring and diagnostics; and application of these areas to automotive, power, autonomous systems, and other complex engineering systems.

Dr. Saif is a Fellow of Canadian Academy of Engineering (CAE), as well as the Institution of Engineering and Technology (IET). He is also a Registered Professional Engineer in the Province of Ontario, Canada. He served two terms (1995 and 1997) as the Chairman of the Vancouver Section, IEEE Control Systems Society. He is a member of the Editorial Board of IEEE ACCESS, IEEE Systems Journal