University of Connecticut

ME Special Seminar
MECHANICAL ENGINEERING

www.engr.uconn.edu

Friday, January 27 • 2:30 PM – UTEB, Rm. 476

Interoperability for Computational Design

Morad Behandish
Postdoctoral Associate,
International Computer Science Institute (ICSI)
Affiliated with UC Berkeley

Abstract: A common informal definition of interoperability refers to the ability of a system to communicate and work with other products or systems, present or future, without any restricted access or implementation. It subsumes the problems of data sharing, exchange, and translation, as well as systems integration.
Limited or lacking interoperability has emerged as a central unsolved technical problem in research, development, maintenance, scalability, and security of engineering systems, with crippling effects on further advances in conceptual design, simulation, synthesis, optimization, manufacturing planning, and productivity gains. In addition, it has become a major economic problem within the past two decades, costing the US manufacturing industry billions of dollars every year.
In this talk I will present a generic framework to enable semantic interoperability of modern information-intensive design engineering systems that are heterogeneous (in scope, domain and functionality), distributed (in space-time), multi-scale/multi-physical, and interactive.

Bio Sketch: Morad Behandish is a postdoctoral research fellow in the International Computer Science Institute (ICSI) affiliated with UC Berkeley. He earned his Ph.D. in Mechanical Engineering (ME) along with a Master's degree in Computer Science and Engineering (CSE) from the University of Connecticut in 2016. His main research interests over the past 10 years have been geometric modeling, computing, and reasoning, with applications in CAD/CAM, kinematic synthesis, assembly automation, digital prototyping, and protein engineering. His recent research accomplishments have been recognized by three consecutive Best Paper Awards in ASME IDETC/CIE'2014 and 2015, and SIAM GD/SPM'2015 international conferences, and an annual Research Competition Award along with a pre-doctoral fellowship at the ME department of UConn in 2015. Besides fundamental research activities, Morad has been keen in technology entrepreneurship, for which he received the Auran J. Fox Award (1st place winner) in the Innovation Quest (iQ)™ competition in 2014. Since then, he mentors both undergraduate and graduate students in UConn's iQ™ program and InQbator™, with the purpose of assisting his colleagues in taking academic ideas to the market. He also received the John Lof Leadership Award in 2015 from UConn's School of Engineering as the President of Student Association of Graduate Engineers (SAGE) for continuous contribution to the social and professional development of graduate engineering students.

For additional information, please contact Prof. Ying Li at (860) 486-7110, yingli@engr.uconn.edu or
Laurie Hockla at (860) 486-2189, hockla@engr.uconn.edu