

Monday - June 5, 2017 8:20Am – 9:05Am Ronald Tutor Campus Center Ballroom (RTCC)

Title - *“Integrating Operations and Information Technology (OT/IT) Systems and the Practice of Smart Manufacturing”*

Speaker: Dr. Jim Davis, Vice Provost, IT and CTO at UCLA

Abstract: Smart Manufacturing (SM) is the technology practice of applying advanced sensors, controls, platforms and modeling not only as advanced technologies but as integrated operations and information (OT/IT) technology systems. SM Technology practice is aligned with the opportunity/business oriented practice of end-to-end use of real-time, networked, data based intelligence for enterprise integration of dynamic market demands, high precision/qualified products, and enterprise and ecosystem optimization. Business and technology practice also combine to accelerate transformational use of data, extensive application of enterprise manufacturing intelligence, provider and practitioner market changes and adoption of advanced technologies to radically improve the precision, performance and efficiency of U.S. manufacturing. Increased economic, energy, and material productivity, zero incidents, reduced industry energy usage, and environmental sustainability all become competitive advantages. The Clean Energy Smart Manufacturing Innovation Institute (CESMII) is the 9th U.S. institute under the White House-led "Manufacturing USA" initiative.



Biosketch:

Jim co-founded the Smart Manufacturing Leadership Coalition (SMLC) that was recently selected to lead DOE's Clean Energy Smart Manufacturing Innovation Institute (CESMII), the 9th Manufacturing USA Institute and the 3rd DOE institute to be awarded.

Jim is Vice Provost, IT and CTO at UCLA with broad responsibilities focused on the investment and deployment of information technology in the university's academic research, education, and public service mission. He has accountability for university-wide planning and strategic investment in computational research, research informatics, educational technologies, mobility applications, research and education data strategies, privacy/security and internal and external community partnerships. Jim oversees UCLA's Institute for Digital Research and Education (IDRE).

Jim is also on UCLA's Department of Chemical and Biomolecular Engineering where he has done research and consulted extensively on AI, machine learning, intelligent systems, monitoring and control, and data/modeling systems across diverse industries including chemicals, refining, paper, packaging, metals and glass. Jim has work experience with Amoco Chemicals.

Tuesday - June 6, 2017

8:15Am – 9:00Am

RTCC Ballroom

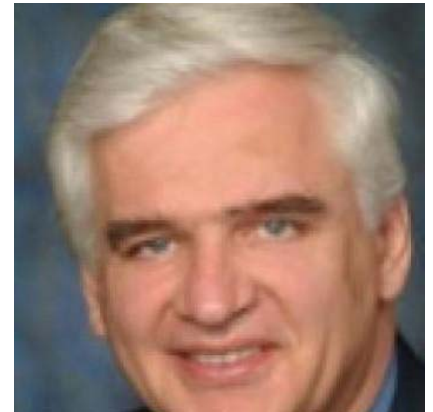
Title – “*Thin-Film Processing Beyond Semiconductor Fabrication*”

Speaker - Friedrich Prinz, the Finmeccanica Professor in the School of Engineering at Stanford University, Professor of Materials Science and Engineering, Professor of Mechanical Engineering and Senior Fellow at the Precourt Institute for Energy

Abstract: A number of processes developed by the Semiconductor Industry during the last few decades may enable substantial performance enhancements for renewable energy conversion devices. One example is Chemical Vapor Deposition, in particular, Atomic Layer Deposition (ALD). ALD allows for the realization of catalyst structures with unprecedented performance. Beyond catalysis, ALD coating is gaining acceptance as a protector of active cathode particles for next generation batteries. In addition, thin film deposition techniques may further enhance the performance of solar cell devices while improving their economy. This talk will outline how semiconducting processes may ultimately have a significant impact on industries, far beyond the scope of their original applications.

Biosketch:

Fritz Prinz is the Finmeccanica Professor in the School of Engineering at Stanford University, Professor of Materials Science and Engineering, Professor of Mechanical Engineering and Senior Fellow at the Precourt Institute for Energy. He also serves as the Director of the Nanoscale Prototyping Laboratory at Stanford. A solid-state physicist by training, Prinz leads a group of doctoral students who are addressing fundamental issues on energy conversion and storage at the nanoscale. In his Laboratory, prototype fuel cells, solar cells and batteries are used to test new concepts and novel material structures using atomic layer deposition, scanning tunneling microscopy and other technologies. Prinz is also interested in learning from nature, particularly understanding the electron transport chain in plant cells. The Prinz group, in collaboration with biologist Arthur Grossman, were the first to extract electrons directly from plant cells subjected to light stimulus. Before coming to Stanford in 1994, he was on the faculty at Carnegie Mellon University. Prinz earned a PhD in physics at the University of Vienna in Austria.



Keynote Speech

Wednesday - June 7, 2017 8:15Am – 9:00Am Ronald Tutor Campus Center Ballroom (RTCC)

Title - *James Webb Space Telescope Talk*

Speaker - Scott P. Willoughby is the vice president and program manager for the James Webb Space Telescope (JWST) program at Northrop Grumman (www.northropgrumman.com). The program is currently on contract for the design, development and delivery of the Observatory to NASA's Goddard Space Flight Center.

Abstract: Northrop Grumman is proud to lead the industry team building NASA's James Webb Space Telescope, which will unleash a new dawn of discovery when it launches in 2018! Scott Willoughby, vice president and program manager, James Webb Space Telescope, will discuss the incredible manufacturing behind this revolutionary observatory, which is the largest telescope ever built for space. The Webb Telescope is the scientific successor to the Hubble Space Telescope, and it will look back 13.5 billion years, providing images of the first galaxies formed and seeing unexplored planets around distant stars. The breakthrough technology developed for the Webb Telescope will expand our understanding of the universe, rewrite textbooks and inspire a future generation of engineers and scientists.



Biosketch:

Prior to serving as program manager for the James Webb Space Telescope, Scott Willoughby served as the P858 Program Manager in Advanced Concepts, Technology and Emerging Systems Division. His primary responsibilities were to drive process improvements and delivery of this critical and strategic program. He oversaw program management including financial management, capital, human resources, customer and subcontractor interfaces and all levels of contract management. Prior to that, Willoughby was the Program Manager for the Advanced Extremely High Frequency (AEHF) Program, where he led the team on early deliveries to Lockheed Martin for two AEHF payloads (Flight 1 and Flight 2) and positioned the program for a subsequent early delivery of Flight 3. In July 2009, AEHF was recognized by the Aerospace Systems President's Award for Customer Satisfaction related to these three early deliveries. Additionally, Willoughby was responsible for the Milstar program which included payload support for a constellation of five operational satellites. He also served as the Advanced EHF Deputy Program Manager for Flight 1 Payload production and delivery. Willoughby had overall responsibility and complete authority for day-to-day technical and schedule activities associated with completing the Flight 1 AEHF Payload hardware and software manufacturing, production, testing, integration and delivery. He interfaced extensively with the in-house core process owners and external customers in this role. Willoughby joined TRW in 1989 as a member of the technical staff. He received a bachelor's degree, summa cum laude, in Electrical Engineering from Lehigh University in 1989 and a master's degree in Communication Systems from the University of Southern California in 1991. He is also a graduate of the UCLA Executive Program at the Anderson School.