

When: Thursday Sep. 17th,
2:30pm - 3:30pm

Where: online via zoom

Free Registration [here](#)

This talk is organized by
The Department of
Electromechanical
Engineering Technology,
College of Engineering,
California State
Polytechnic University,
Pomona.

Organizer's Contact:
Dr. Farbod Khoshnoud
fkhoshnoud@cpp.edu

Mechatronics, Instrumentation and Design

**A distinguished invited talk delivered by
Professor Clarence W. de Silva**

Thursday Sep. 17th, 2:30-3:30pm

[Registration here](#)

Distinguished Invited Talk: Mechatronics, Instrumentation and Design

Clarence W. de Silva, Professor of Mechanical Engineering, The University of British Columbia,
Vancouver, Canada

Abstract: This talk concerns the development of mechatronic systems. Starting with a brief introduction to its origin, the talk will establish the current definition of Mechatronics, which focuses on the development of electromechanical products by means of a synergistic and integrated approach encompassing mechanics, electronics, controls and computer engineering. Then the speaker will make a case for the extension of this definition to include multi-physics, unified and systematic approach leading to a unique/optimal result. Highlighting that instrumentation is a typical activity that is a subset of the design process of an engineering system, the talk will present examples where some aspects of design are a necessary prerequisite in the instrumentation process itself. The talk will conclude with propositions for “mechatronic” design and “mechatronic” instrumentation while indicating the underlying advantages.

About the distinguished speaker: Clarence W. de Silva is a Fellow of: IEEE, ASME, Canadian Academy of Engineering, and Royal Society of Canada. He received the higher doctorate (Sc.D.) this year from University of Cambridge, UK, Ph.D. degrees from Massachusetts Institute of Technology (1978); and University of Cambridge (1998); and a honorary D.Eng. degree from University of Waterloo, Canada (2008). He has been a Professor of Mechanical Engineering and Senior Canada Research Chair and NSERC-BC Packers Chair in Industrial Automation, at the University of British Columbia, Vancouver, Canada since 1988. He has authored 25 books and over 570 papers, half of which are in journals. His recent books published by Taylor & Francis/CRC are: Modeling of Dynamic Systems—with Engineering Applications (2018); Sensor Systems (2017); Sensors and Actuators—Engineering System Instrumentation, 2nd edition (2016); Mechanics of Materials (2014); Mechatronics—A Foundation Course (2010); Modeling and Control of Engineering Systems (2009); VIBRATION—Fundamentals and Practice, 2nd Ed. (2007); by Addison Wesley: Soft Computing and Intelligent Systems Design—Theory, Tools, and Applications (with F. Karray, 2004); and by Springer: Force and Position Control of Mechatronic Systems—Design and Applications in Medical Devices (with Lee, Liang, and Tan).