

Seminar Series

**The Exhilarating Journey from Industrial Electronics to
Industrial Informatics and Mechatronics Education**

by

Dr. Okyay Kaynak

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Date: August 25, 2009 (Tuesday)

Time: 3:15pm (Tea Reception at 3:00pm)

Venue: B6619, 6/F, Academic Building

ABSTRACT

During the last 2-3 decades, our routines of daily lives have very much been influenced and changed greatly by information technology. The area of industrial automation and control has had its share of the changes too. After an overview to these developments, this presentation will discuss the evolution of the manufacturing paradigms, especially the changes observed in the manufacturing industry during the last decade. In the closing parts of the presentation, the state-of-the-art reached in industrial informatics will be discussed with examples and a perspective on the future will be presented, pointing out the challenges that the manufacturing industry will have to face by the end of the next decade.

The talk will also include a discussion on the challenges the engineers of the 21st century face and Mechatronics as the best practice to handle the difficulties posed by the current changes in industry. It will be argued that different educational philosophies need to be adopted, with a paradigm change from "just-in-case teaching" to "just-in-time learning."

BIOGRAPHY

Okyay Kaynak received the B.Sc. degree with first class honors and Ph.D. degrees in electronic and electrical engineering from the University of Birmingham, UK, in 1969 and 1972 respectively.

From 1972 to 1979, he held various positions within the industry that included 3.5 years in Saudi Arabia, working as a project engineer. In 1979, he joined the Department of Electrical and Electronics Engineering, Bogazici University, Istanbul, Turkey, where he is presently a Full Professor. He has served as the Chairman of the Computer Engineering and the Electrical and Electronic Engineering Departments and as the Director of Biomedical Engineering Institute at this university. Currently, he is the UNESCO Chair on Mechatronics and the Director of Mechatronics Research and Application Centre. He has hold long-term (near to or more than a year) Visiting Professor/Scholar positions at various institutions in Japan, Germany, U.S. and Singapore. His current research interests are in the fields of intelligent control and mechatronics. He has authored three books and edited five and authored or coauthored more than 300 papers that have appeared in various journals, books and conference proceedings.

Dr. Kaynak is a fellow of IEEE. He is or has served on the Editorial or Advisory Boards of a number of scholarly journals. Currently he is a Co-Editor-in-Chief of the IEEE Transactions on Industrial Electronics and an Associate Editor of IEEE Sensors Journal and IEEE/ASME Trans. on Mechatronics.

Dr. Kaynak is active in internationally organizations, has served on many committees of IEEE and was the president of IEEE Industrial Electronics Society during 2002-2003 and Vice-President (for Conferences) of Computational Intelligence Society during 2004-2005.

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All are welcome!