



Juan M. Martín-Sánchez (F' 09) obtained the title of Industrial Engineer in 1970, and Doctor Industrial Engineer in 1974, both from the Polytechnic University of Catalunya (UPC). From 1971 to 1976, his research activities were continued at Grenoble and Toulouse Universities in France, at the Massachusetts Institute of Technology and the Charles Stark Draper Laboratory in the United States, and the University of Alberta in Canada. In 1976, he filed the first patent for predictive and adaptive predictive control, and subsequently he obtained 3 additional international patents for both control methodologies.

In 1986, he founded the company SCAP Europa which went on to carry out more than 150 industrial applications of the adaptive predictive control methodology between 1986 and 1998. In 1999 Martín-Sánchez founded the company Adaptive Predictive Expert Control ADEX S.L., of which he is currently the President. This company develops optimization projects based on adaptive predictive expert control in industrial areas such as chemical, petrochemical, energy, cement, metallurgy, naval, aerospace, environment and climatization.

He has authored more than 100 publications and three books on adaptive predictive control, has given plenary sessions at important international conferences, seminars and congresses, and has been a member of the editorial board of the International Journal of Control. He has been a professor at the UPC, the University of Alberta and the Universidad Politécnica de Madrid. In addition to his role as President at ADEX, S.L., he is also currently a full professor at the Universidad Nacional de Educación a Distancia (UNED) in Madrid (Open University of Spain).

Between January 2004 and January 2009, he has been President of the IEEE Joint Spanish Chapter of the Industrial Applications Society (IAS) and the Control Systems Society (CCS). In 2005 and 2007 under his Presidency, the Chapter organized two Seminars of Advanced Industrial Control Applications (SAICA). These events took place with great success in the “Fundación Gómez-Pardo” in Madrid. In January 2009, Dr. Martín-Sánchez was elevated to the grade of IEEE Fellow for his “Contributions to the Adaptive Predictive Control methodologies”.

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Lecture Topics

- a) Industrial Adaptive Control.
- b) Stability Theory of Adaptive Predictive Control
- c) Adaptive Predictive Expert Control: Methodology, Design and Applications.
- d) Optimized Adaptive Control of industrial processes focusing on those applications in which energy savings, reduced emissions and improved efficiency add significant value.