

EE Department Seminar

May 3, 2010, Monday, 3 p.m.

Yorgo I Stefanopulos Meeting Lounge (KB 217)

Optimization of Symptomatic Therapy in Parkinson's Disease

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A third-order nonlinear mathematical model of the dose-effect relationship of levodopa, one of the most common drugs used for the symptomatic therapy of Parkinson's disease, is derived with the aid of a visual-tracking-based method which allows the measurement of some Parkinsonian symptoms quantitatively and objectively. The parameters of this model are identified for each patient separately. The model is then used to optimise the drug regimen for each patient individually. Clinical results are discussed.

Selim Hacisalihzade received his bachelor, master and doctoral degrees all in electrical engineering from the Swiss Federal Institute of Technology (ETH) in Zurich. After lecturing at his alma mater and the University of California at Berkeley for several years, followed by a National Research Council Fellowship at NASA Ames Research Centre in California, he switched to the industry where he held various R&D and management positions for many years. His research interests have mostly been in the field of biomedical applications of automatic control. During his MBA studies at the International Institute of Management Development (IMD) in Lausanne he developed a new taste for the application of control engineering methods in economic and financial areas. He still benefits from his experience and know-how in these areas, managing investment portfolios for wealthy customers in his current company, Hacisalihzade Wealth Management (HWM).