SEMINÁRIO

30 de Maio de 2008

(Departamento de Matemática, sala Sousa Pinto, 11:30-12:30)

Título: Optimal Control and Applications in Operations Research.

Orador: Alan Zinober, University of Sheffiel.

Resumo: The historical background to modern optimal control theory will be outlined, starting from Newton's Problem, the brachystochrone problem (Johann Bernoulli 1697) and the Calculus of Variations. Further developments led after a few centuries to Pontryagin's Maximum Principle in 1961 and important further results in differential geometry techniques after 1980. This research has allowed the development of modern optimal control theory that has spanned broad areas such as flight control, robotic processes, financial planning and many applications in operations research. Some interesting applications in the area of operations research and management science will be briefly described, e.g. a straightforward optimal financial spending problem, an optimal piecewise revenue production allocation problem, the optimal presentation of a lecture using slides, and the optimal crackdown of illicit drug markets.

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