



DOTTORATO DI RICERCA IN INGEGNERIA
ELETTRONICA, INFORMATICA ED ELETTRICA



DIPARTIMENTO DI INFORMATICA E SISTEMISTICA

AVVISO DI SEMINARIO

Search Times in Uncertain Environments

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Imperial College, London

22 luglio 2010, ore 11.00

**Aula Seminari – Dipartimento di Elettronica, Piano D
Via Ferrata 1 – Pavia**

Abstract - Search with mobile robots, searching very large networked data bases with software robots, the travel of particles or of biological agents in random media in search of a specific docking location, packets that travel in large wireless networks, all share similar characteristics of uncertainty. Using Brownian motion, we will compute travel times of such "searchers" that have a limited life span and that are prone to loss or destruction, and derive the expected travel time for a search to be successful. Also, an N-dimensional Brownian motion will yield the time it takes to find the object being searched when N-searchers are sent out simultaneously to accelerate the search process.

Biography - Erol Gelenbe is the Professor in the Dennis Gabor Chair at Imperial College. He graduated with an Electrical Engineering degree from the Middle East Technical University in Ankara, Turkey, and received the Master's and PhD from the Polytechnic Institute of New York University (also known as Brooklyn Poly). He is a Fellow of IEEE and ACM, and won the ACM SIGMETRICS Award in 2008 for his work on computer and network performance modelling and analysis. He has been elected as Foreign Member of the Hungarian Academy of Sciences in May 2010 for outstanding work on memory management, paging systems, random access communications, as well as contributions to neuronal networks and learning algorithms. He has also just been awarded Brooklyn Poly's Distinguished Alumnus Award for outstanding leadership and technical achievements. Erol is a Member of the French National Academy of Engineering (Academie des Technologies) and Titular Member of the Turkish Academy of Sciences, and was recognised with governmental honours from France and Italy, and Honoris Causa doctorates from the University of Liege (Belgium), the University of Roma II (Italy), and Bogazici University (Istanbul, Turkey). His research is currently funded by EPSRC and the EU FP7 Programme, and he constantly collaborates with industry in projects and as a consultant. In the early 1980's his research group at INRIA designed and commercialised the widely used software package QNAP2. Erol serves as the Editor-in-Chief of The Computer Journal (British Computer Society), and on several other editorial boards.

I dottorandi e tutti gli interessati sono cordialmente invitati.

L'organizzatore

Prof. M. Calzarossa

Il coordinatore del dottorato

Prof. V. Degiorgio