

SCHOOL OF ADVANCED STUDIES - 2011 PhD Research Topics

Area of Studies

SCIENCE AND TECHNOLOGY

Curriculum:	INFORMATION SCIENCE AND COMPLEX SYSTEM
Programme:	Information science
Supervisor: Prof. Flavio Corradini	Formal Methods
Supervisor: Prof. Emanuela Merelli	Agent-based Modelling and Simulation
Supervisors: Prof Alberto Polzonetti	Computer Networks and Distributed Systems
Supervisors: Prof. Alberto Polzonetti	E-Government Services
Supervisor: Prof A.Polini	Complex Software System Engineering
Supervisor: Prof L.Pasini	Construction of traffic system simulators based on queuing network with multiclass customers and application in the following fields: traffic in telecommunication & computing networks, vehicular traffic in urban and metropolitan systems.
Programme:	Mathematics
Supervisor: Prof. Carlo Toffalori	Algebra and Mathematical Logic, their applications to classical and quantum information
Supervisors: Prof. Maria Simonetta Bernabei, Dr. Horst Thaler	Probabilistic and statistical methods in information theory. Stochastic processes and their applications in quantum physics.
Supervisor: Prof. Renato De Leone	Systems modeling, Decision science, Logistics, Transportation and distribution problems, Optimization
Supervisor: Prof. Luciano Misici	Mathematical models and numerical methods
Supervisor: Prof Stefano Isola	Dynamical sources in Information Theory; measures of complexity by algebraic, asymptotic and probabilistic techniques

Supervisor: Prof Fabio Giannoni	Nonlinear Analysis and General Relativity: application of techniques of Nonlinear Analysis to the study of qualitative behaviour of the solutions of the Einstein Field Equations with particular attention to the gravitational collapse
Supervisor: Prof Roberto Giambò	Relativistic continuum models: timelike singularities and critical behaviour. Cosmological models: high order gravity theories.
Supervisor: Prof. Giovanni Giachetta	Geometric methods in classical field theory
Programme:	Control Systems
Supervisors: Prof M.L.Corradini	Nonlinear Control Systems: Robust stabilization of linear/nonlinear control systems in the presence of non-smooth nonlinearities. Switching Control Techniques. Robust Control Techniques
Supervisors: Prof M.L.Corradini	Modelling and control of active car suspensions by networked control techniques.