

ID

TM42_DIP_SSST

Teach Mob – Visiting Professors ***Academic year 2015/2016***

2nd term
COURSE TITLE Game Theory
Scientific area Mathematics, with applications to natural and social sciences
Department of Mathematics “Giuseppe Peano”
Language used to teach ENGLISH
Course summary The theory of games, as developed by von Neumann, Nash and others represents a mathematical framework for strategic decision-making in an interactive environment. It has important applications to many disciplines, and has been motivated by competition and conflict in sport, business, economics, politics and war studies.
Learning objectives Students following this course shall acquire deep concepts and key results in Game Theory which have important applications in natural and social sciences. The emphasis will be on examples of two-person games, with proofs available via supporting material consisting of lecture notes and problem sheets.
Tutorship activities During the period of the course, the Visiting Professor shall be available to meet students, doctoral candidates, and young researchers pursuing study or research in the field of Mathematics and Strategic Sciences to provide advice and mentoring. For this purpose the presence of the Visiting Professor may be required both at the Department of Mathematics and at the Scuola di Studi Superiori F. Rossi dell’Università di Torino.
Lab activities During the period of stay at the University of Torino the Visiting Professor shall organize Lab activities using software (Matlab, Maple, or Mathematica) to programme matrix games and to test various algorithms for their optimal solution. These activities are important in order to learn how to build mathematical models to find the solutions of problems coming from natural and social sciences. This activity will be jointly organised with the Scuola di Studi Superiori F. Rossi dell’Università di Torino.
Other activities besides the course: Research seminars for PhD students of Mathematics. Seminars designed to illustrate the interface between pure and applied mathematical topics, such as: <ul style="list-style-type: none"> • Optimal strategies and convexity • The Shapley-Snow algorithm • Nash equilibria and fixed point theorems

Visiting Professor Profile Full professor of mathematics, ideally with: <ul style="list-style-type: none"> • native English and some knowledge of Italian,

- internationally-recognized research in any branch of mathematics,
- a successful track record of PhD supervision.

Experience of:

- instruction in different universities worldwide,
- lecturing at both undergraduate and graduate level,
- students majoring in non-mathematical subjects,
- giving individual tutorials and small-class teaching.

Contact person at the Department

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