

OPEN E.S.R. POSITION

Universitat Autònoma de Barcelona

The position is funded by the Marie Curie ITN MAnET "*Metric Analysis for Emerging Technologies*"

<http://manet.dm.unibo.it/index.php>

The selected candidate will work at the UAB node of the network, and take active part in all the events organized by the network.

Duration: 3 years

Starting date: September 2014

Detailed salary: living allowance (37126 €/year) + mobility allowance (between 8200 and 11700 €/year depending on personal situation). These quantities include the following contributions: health system contribution, unemployment contribution, union contribution, indemnization contribution, illness leave contribution, formation contribution, income tax.

Requisites:

- **Academic requisites:** applicants need to prove they have less than 4 years (full time) of research experience; it is also required to have a Master degree.
- **Mobility requisites:** applicants should demonstrate they have not been living in Spain for longer than 12 months during the last 3 years.
- **More info:** eligible researchers, pages 14-15 of http://ec.europa.eu/research/mariecurieactions/documents/about-mca/actions/itn/itn_2013_-_gfa_-_final_version_corrected_30.07.12_en.pdf

Recommended formation: Any knowledge in some of the following areas might be of interest in the selection process: mathematical analysis, geometric analysis, partial differential equations, optimal mass transport, geometric measure theory, geometric function theory, machine learning, optimization, programming.

Host research group: mathematical analysis group (UAB), in collaboration with TSS

Job description: The selected researcher will prepare his/her Ph.D. Thesis on
"Urban traffic problems in optimal mass transportation"

The thesis will have a theoretic part and an applied part. The link between them is the so-called "Wardrop Equilibrium". The project will be developed in close collaboration between public and private institutions:

- the Department of Mathematics at Universitat Autònoma de Barcelona (UAB) <http://uab.cat/matematiques/>
- Transport Simulation Systems (TSS) <http://www.aimsun.com/wp/>

Among the topics to be developed during the thesis preparation,

- UAB: optimal mass transportation, partial differential equations, mathematical analysis, geometric measure theory, geometric function theory
- TSS: optimization, machine learning, origin-destination problems, traffic modelling

The selected candidate will also take active part in all the events of the MAnET network.

Deadline for applications: may 30th, 2014

How to apply: Send an email to departament@mat.uab.cat with the following documents:

- PDF copy of the applicant's curriculum vitae
- PDF copy of the applicant's identity document (with photo)
- short presentation letter (including research interests, short description of the master thesis, etc)
- the name and email address of 2 reference persons

More info: <http://manet.dm.unibo.it/recruitment>