



Geometry, Mechanics and Control Network Infosheet

August 2011

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GMC Network Infosheet

August 2011

NETWORK'S ACTIVITIES

Geometry of Mechanics, Field Theory and Control: a Workshop celebrating the 65th birthday of M. C. Muñoz-Lecanda

Technical University of Catalonia, Barcelona, Spain.
December 19-20, 2011.

VI International Young Researchers Workshop on Geometry, Mechanics and Control.

Coimbra, Portugal. January 9-13, 2012.

Speakers:

Tomoki Ohsawa (University of California, San Diego, USA): Hamilton-Jacobi theory.

Mario Sigalotti (INRIA, France): Quantum control.

Ivan Struchiner (Utrecht University, The Netherlands): Lie algebroids and groupoids.

Registration deadline: December 10, 2011.

Abstract submission deadline: November 10, 2011.

To register please send an e-mail to yrwgmc@mat.uc.pt

First Name:

Family Name:

Institution:

Country:

Date of birth:

E-mail address:

* I wish to give a 30-min talk: Yes/No. If yes, give a title and abstract.

* I wish to present a poster: Yes/No. If yes, give a title and abstract.

JOB OFFERS, FELLOWSHIPS AND AWARDS

Undergraduate research offers

Scholarships for graduate or undergraduate students of Mathematics.

The IUMA (Zaragoza) announces four scholarships to start in research for recent graduates or students who will complete the final Degree year the coming course.

The grant will cover the period between October 1 and December 31, 2011. Each grant amounts to 1000 euro per month.

Deadline: September 9, 2011 (1:00 pm).

More information: <http://www.rsme.es/comis/prof/iumabecas.pdf>

Collaborations scholarships.

Spanish Ministry of Education announces collaboration scholarships to start in research for students who will complete the second cycle studies or final year Degree the coming course.

Call: BOE 07/06/2011

<http://www.boe.es/boe/dias/2011/07/06/pdfs/BOE-A-2011-11628.pdf>

Deadline: October 14, 2011.

More information: <http://www.educacion.gob.es/horizontales/servicios/becas-ayudas-subsenciones/para-estudiar/grado/beca-colaboracion.html>

Ph D offers

Open Positions for PhD students in the Doctoral Program "Computational Mathematics" at JKU Linz.

Starting funding period: October 2011.

More details can be found at

<https://www.dk-compmath.jku.at/application>

Graduate Student Fellowship in Mathematics.

The IMUB and the UB Mathematics Faculty offer two researches grants for graduate students wishing to start a doctoral thesis in Mathematics at the University of Barcelona.

The grant will cover the period between October 1, 2011 and May 31, 2012, with a possible extension until September 30, 2012. Each grant amounts to 900 euro (gross) per month

Closing date: September 1 to 15, 2011.

More information:

<http://blocomat.ub.edu/2011/07/07/limub-convoca-dues-beques-diniciacio-a-la-recerca-en-matematiques/>

Grant for short stays FPI-Micinn 2011.

Deadline: September 14, 2011.

<http://www.micinn.es/portal/site/MICINN/menuitem.791459a43fdf738d70fd325001432ea0/?vgnextoid=e991f3c4d2dff210VgnVCM1000001d04140aRCRD&vgnnextchannel=8da5b9746e160210VgnVCM1000001034e20aRCRD&vgnnextfmt=formato2&id3=83e6b37d04d41310VgnVCM1000001d04140a>

PhD position in neural robot control.

Jacobs University Bremen.

Deadline for applications: September 30, 2011.

<http://www.euro-math-soc.eu/node/1679>

SADCO call for applications to PhD

The newly started project Marie Curie Initial Training Network "Sensitivity Analysis for Deterministic Controller Design" – SADCO (see the WEB site <http://itn-sadco.inria.fr/>), funded by the European Union, offers several very well paid PhD and post-doc positions as well as funding for scientific activities. Good students are encouraged to submit their

Postdoctoral fellowships

2 Postdoc Positions in Applied Mathematics.

Weierstrass Institute. Berlin

The WIAS invites applications for two research positions which are associated with the ERC Advanced Grant "Analysis of Multiscale Systems Driven by Functionals" (<http://www.wias-berlin.de/people/mielke/erc/>). Necessary prerequisites for employment are a PhD in mathematics with concentration in applied analysis and sound knowledge in nonlinear partial differential equations, functional analysis, or nonconvex calculus of variations. Moreover, deeper knowledge in at least one of the following areas is desired: infinite-dimensional evolutionary and gradient systems, analysis of reaction-diffusion systems, optoelectronics, continuum mechanics, multiscale modeling (homogenization, Gamma convergence).

Deadline for applications: September 15, 2011.

<http://ec.europa.eu/euraxess/index.cfm/jobs/jobDetails/33744916>

2 Postdoc Fellowships at CIRM. Fondazione Bruno Kessler

The CIRM opens the application for an annual postdoc

candidature on several topics related to control theory and games. There is a new call for applications for candidates starting their activity on **September-October 2011.**

According with the EU rules, the hired person is supposed to spend, within the three years of the position, six months in the "secondment" institution, which is indicated in the call for applications:

The salary for a PhD student, for example, consists of two parts: one is fixed (33,000 Euros per year); whereas the other is automatically computed according to some parameters (country, age, status...). The total amount should be in average at least 40,000 Euros per year, before taxes.

Deadline for application depending on the position

PhD research fellowship in Geometric Numerical Integration.

Norwegian University of Science and Technology (NTNU), Trondheim, Noruega

This PhD fellowship will consider topics in Geometric integration and control theory for nonholonomic mechanical systems.

The project is related to activities of the Special interest Group in motion control by geometric computational and modeling methods at the Faculty of Information Technology, Mathematics and Electrical Engineering at the Norwegian University of Science and Technology (NTNU), Trondheim, Norway.

For further information about the research topics see: http://wiki.math.ntnu.no/genuin/sig_geometric_control

position and a triennial one for researchers in the field of Mathematics. Each fellowship amount to Euro 23.500 gross per year.

Deadline for applications: September 20, 2011.

<http://cirm.fbk.eu/en/node/124>

Post doc position in neural robot control.

Jacobs University Bremen.

Deadline for applications: September 30, 2011.

<http://www.euro-math-soc.eu/node/1679>

Postdoctoral fellowships by SADCO network (Sensitivity Analysis for Deterministic Controller Design).

Different locations in Europe: Paris, Louvain, Bayreuth, Padova, Rome, Porto, London.

Research topics: Control theory, stabilization and optimization of nonlinear systems, Hamilton-Jacobi theory, differential games, perturbed systems, numerical analysis.

Latest deadline: October 31, 2011.

<http://itn-sadco.inria.fr/available-positions>

Postdoc Position at LAAS-CNRS, Univ. Toulouse, France.

We are seeking candidates for a one-year post-doctoral position at LAAS-CNRS, University of Toulouse, France, within an ongoing project focusing on semidefinite programming and algebraic geometry for polynomial optimal control. The project may focus on software implementation (under our existing Matlab Toolbox GloptiPoly for solving generalized problems of moments), transfer of knowledge to the French aerospace industry (contracts with EADS Astrium and the French space agency CNES), or more fundamental research activities covering real algebraic geometry (polynomial equations and inequalities), functional analysis (theory of moments), mathematical programming (convex optimization over the cone of positive semidefinite matrices), and nonlinear dynamical systems control. A strong background in Applied mathematics is required. Some knowledge of systems control is welcome.

Interested candidates please send your detailed curriculum vitae to Didier Henrion, <http://homepages.laas.fr/henrion>

2 Postdoctoral Fellowships- Applied Mathematics and Computational Sciences.

Offers for visiting and senior researcher

Grants for stays of foreign teachers and researchers under a sabbatical year in Spanish Centers.

Closing date: September 21, 2011

<http://www.educacion.gob.es/educacion/universidades/convocatorias/titulados-doctores-profesores/estancias-profesores-extranjeros-centros-espanoles/modalidad-a.html>

2 Full-time Tenure-track Positions in Applied Mathematics.

University of Maryland Eastern Shore Princess Anne, MD, USA. Position Start Date: August 2011

Closing date: Open until filled.

[http://sciences.academickeys.com/seeker_job_display.php?dothis=display&job\[IDX\]=28101-SC110131w-8e&oid=790411](http://sciences.academickeys.com/seeker_job_display.php?dothis=display&job[IDX]=28101-SC110131w-8e&oid=790411)

Visiting Research at IMI. Call 2011.

Instituto de Matemática Interdisciplinar
Universidad Complutense de Madrid, Spain.

This call aims to enhance cooperation between IMI researchers and high level researchers and promising young students carrying out their activity in other scientific institutions, in Spain or abroad. During their stays, visitors will collaborate with host IMI Program activities. The following modalities will be considered:

- a) Senior Visiting Researchers
- b) Postdoctoral stays
- c) Predoc Internships
- d) Exploratory meetings

The call will be open permanently. Evaluation and awarding is expected to be made on a monthly basis.

More information:

http://www.mat.ucm.es/IMI/ProgramaVisitantesIMI2011/Call_IMIVisitingResearchers_2011.pdf

Call for Visiting Professors at CIRM.

King Abdullah University of Science and Technology
Thuwal, Jeddah
Saudi Arabia.

Deadline: Open until filled.

[http://sciences.academickeys.com/seeker_job_display.php?dothis=display&job\[IDX\]=30638-SC110902b-6e&oid=798206](http://sciences.academickeys.com/seeker_job_display.php?dothis=display&job[IDX]=30638-SC110902b-6e&oid=798206)

Pegasus Fellowships in Flanders

The Research Foundation - Flanders has launched a new research program under the name 'Pegasus Marie Curie Fellowships' (see [here](#)). Its goal is to provide non-Belgian postdoctoral researchers the opportunity to spend either 1 or 3 postdoc years at a Flemish University (salary + research budget included). In the first round of applications (deadline of February 1, 2012) there are 30 long and 10 short positions available. One possible host is the [Research Group on Differential Geometry and Mechanics](#) within the Department of Mathematics at [Ghent University](#). Interested candidates are kindly requested to contact either Frans Cantrijn (frans.cantrijn@ugent.be) or Tom Mestdag (tom.mestdag@ugent.be) with a short research proposal.

Fondazione Bruno Kessler.

CIRM Visiting Scholars will perform mathematical research in cooperation with scientists and researchers of Trento University or, more generally, of the Trento area, holding some research seminars; CIRM Visiting Professors will hold short Ph.D. courses, or 'Summer Courses', or series of seminars. It is foreseen that the selection process for Visiting Professors-Scholars take place through either

1. individual application, or
2. Invitation by a professor of Trento University or by a member of the Advisory Board.

<http://cirm.fbk.eu/en/Visiting+Professors>

Research in Pairs Program: Centro Internazionale per la Ricerca Matematica Fondazione Bruno Kessler.

This type of program is similar to the one of the Mathematisches Forschungsinstitut Oberwolfach, and foresees the presence of two or three partners from Universities located in different towns, who intend to work on a definite research project and for a well specified period of time (ranging from one to six weeks). Applicant partners must submit a scientific project in the field of mathematics, with a detailed research program, resulting in one or more scientific publications on journals of excellent mathematical level; the support of the CIRM will then be acknowledged in the resulting publications. Participants in the RIP Program will also give occasional research seminar talks at the CIRM or at the University of Trento, but will enjoy freedom in the pursuit of their scientific goals. Applications where one or more of the partners are Italians will of course be welcome.

<http://cirm.fbk.eu/en/node/122>

Awards

Ramanujan Prize for Young Mathematicians from Developing Countries.

Deadline: October 30, 2011

<http://prizes.ictp.it/prizes/Ramanujan/>

Candidate proposals for EMS awards.

Deadline: November 1, 2011.

http://www.euro-math-soc.eu/ems_prizes.html

Candidate proposals for Otto Award.

Deadline: December 31, 2011

http://www.euro-math-soc.eu/otto_neugebauer_prize.html

Felix Klein Award 2012

Deadline: December 31, 2011

http://www.euro-math-soc.eu/felix_klein_prize.html

"Ciencia en Acción" Competition

<http://www.cienciaenaccion.org/>

Financial support for research projects and conferences

Marie Curie Career Integration Grants (GIG).

Deadlines: September 6, 2011 at 17:00 (Brussels local time)

More information:

http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=usersite.FP7DetailsCallPage&call_id=379

CIRM call for conferences.

Call to submit a proposal and organize a conference in Mathematics, with the support and co-financed by the CIRM, for the year 2012.

Deadline: September 15, 2011.

<http://cirm.fbk.eu/en/node/120>

2013 ICPAM-CIMPA research schools call for projects.

Deadlines complete proposal: October 1, 2011.

More information:

<http://www.cimpa-icpam.org/spip.php?article124>

Financial support for organization of conferences by Spanish Ministry of Science and Innovation.

Application time: July 1- October 25, 2011.

http://www.boe.es/diario_boe/txt.php?id=BOE-A-2010-19639

Complementary actions for non-guided fundamental research projects.

National Program for Fundamental Research Project

Application time: July 1- October 25, 2011.

More information:

<http://www.micinn.es/portal/site/MICINN/menuitem.dbc68b34d11ccb5d52ffeb801432ea0/?vgnextoid=f02093ee6b80d210VgnVCM1000001d04140aRCRD&vgnnextchannel=3acb282978ea0210VgnVCM1000001034e20a>

RCRD

Call for CRM Research programmes

http://www.crm.cat/CALLS/CALLS_RESEARCH_PROGRAMS/Call_Research_Program_1314.htm

Deadline: November 18, 2011.

Planet earth (MPE2013)

<http://www.mpe2013.org>

<http://www.crm.cat/eng/activityapplications.htm>

Deadline: November 18, 2011.

National R & D Internationalisation Program.

This program includes several sub programmes: EUROINVESTIGACIÓN (EUROCORES and YIP projects), international projects, promoting international scientific cooperation, specialisation in International Organisations, actions relating to international scientific infrastructures.

Deadline depending of the subprogramme.

http://www.micinn.es/portal/site/MICINN/menuitem.d20caeda35a0c5dc7c68b11001432ea0/?vgnextoid=71f256bc1aea0210VgnVCM1000001034e20aRCRD&lang_c_hoosen=en

Initial Training Networks (ITN)

Deadline: January 12, 2012.

<http://ec.europa.eu/research/participants/portal/appmanager/participants/portal>

International Research Staff Exchange Scheme (IRSES)

Deadline: January 18, 2012.

<http://ec.europa.eu/research/participants/portal/appmanager/participants/portal>

INTERESTING NEWS AND PUBLICATIONS

International Mathematical Union Newsletter.

<http://www.mathunion.org/imu-net>

The IRSES Network 'GEOMECH'.

GEOMECH is an IRSES network sponsored within the 7th EU Framework Program and is coordinated by Ghent University. It includes partners from Argentina,

Belgium, Czech Republic, Japan, Spain and the USA and it aims to facilitate research exchange visits between these partners. More information on the network can be found on the website <http://www.geomechnetwork.ugent.be/> the website will also serve as the forum where the network's activities and outcomes will be disseminated.

Mathematics in Europe
<http://www.mathematics-in-europe.eu/>

Matemáticas y sus fronteras
<http://weblogs.madrimasd.org/matematicas/>
Those interested in publishing something, contact with Manuel de León mdeleon.dos@gmail.com

Journal of Geometric Mechanics (JGM)
Volume: 3, Number: 2 June 2011

Network's members preprints and papers

B. Cappelletti Montano, A. De Nicola, I. Yudin:
Topology of 3-cosymplectic manifolds.
arXiv:1108.1810v1 [math.DG]

<http://aims sciences.org/journals/contentsListnew.jsp?pubID=453>

Free access to Ph.D. dissertations all around the world.
<http://www.ndltd.org/find>

Professional network for scientists.
<http://www.researchgate.net/>

M.de León, F. Jimenez, D. Matín de Diego: Lagrangian submanifold, hamiltonian dynamics and constrained variational calculus: continuous and discrete settings.
arXiv: 1108.5570 [math. PH]

Network's collaborators preprints and papers

A.Pelayo, T. S. Ratiu, S. Vu Ngoc: Symplectic bifurcation theory for integrable systems.
arXiv:1108.0328v1 [math.DS]

F. Diacu: Relative equilibria in the 3-dimensional curved n-body problem.
arXiv:1108.1229v1 [math.DS]

C. Duval, M. J. Gotay: Quantization via deformation of prequantization.
arXiv:1108.1385v1 [math-ph]

F. Hante, M. Sigalotti, M. Tucsnak: On conditions for asymptotic stability of dissipative infinite-dimensional systems with intermittent damping.
arXiv:1108.4327v1 [math.OC]

J. Grabowski: Modular classes of skew algebroid relations.
arXiv:1108.2366v1 [math.DG]

OTHER CONFERENCES

Thematic Program on Discrete Geometry and Applications.
July-December 2011. Fields Institute, Toronto, ON, Canada.
<http://www.fields.utoronto.ca/programs/scientific/11-12/discretegeom/index.html>

LIZZI (INFN, Naples)
Part 1: September 20-22, 2011. UPC, Barcelona Spain.
Part 2: September 27-29, ICMAT, Madrid, Spain.
<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnczZW1pbmFyaXRIZW5kZWdlb21ldHJpYXxneDo1NzVmYjMzMjMwYWE5ZGVk&pli=1>

SADCO summer school.
September 5-9, 2011. Imperial College, London, UK.
<http://itn-sadco.inria.fr/events-meetings/network-wide-activities/summer-school-2011>

Joint Mathematical Conference of the Austrian Mathematical Society at the Donau-Universität Krems, together with the Catalan, Czech, Slovak and Slovenian Mathematical Societies.
September 25-28, 2011. Krems, Austria.
<http://www.dmg.tuwien.ac.at/OMG/OMG-Tagung/>

VI International Meeting on Lorentzian Geometry.
September 6-9, 2011. Granada, Spain.
<http://gigda.ugr.es/gelogra/>

Primer Encuentro de Jóvenes Investigadores en Matemáticas (PEJIM).
September 28-30, 2011. La Laguna, Spain.

Satellite Meeting Unravelling and Controlling Discrete Dynamical Systems.
September 12-16, 2011. Vienna, Austria.
<http://www.disdysys.ugent.be/>

Conference on Geometric Structures in Mathematical Physics.
September 19-26, 2011. Albena, Bulgaria.
<http://www.fmi.uni-sofia.bg/ivanovsp/MathPhys2011.html>

Special Year on Symplectic Dynamics.
October 10, 2011-March 2012, Institute for Advanced Study, Princeton, USA.
<http://www.math.ias.edu/sp/symplectic-dynamics>

Lecture series on Physical applications of Noncommutative Geometry by Prof. Fedele

RSME-EMS Mathematical Weekend.
October 7-9, 2011. Bilbao, Spain.
It includes four special sessions: Groups and Representations, Symplectic Geometry, PDEs in Mechanics and Physics, and Functional Analysis Methods in Quantum Information.

<http://www.ehu.es/emswweekend>

International Conference Kolmogorov Readings: General control problems and their applications (GCP - 2011)

October 10-14, 2011. Tambov, Russia.

<http://www.tambovopu2011.narod.ru/>

Workshop on Algebra Geometry Mathematical Physics.

October 24-26, 2011. Mulhouse, France.

Registration deadline: September 30, 2011.

<http://www.agmp.eu/mul11/>

SIAM Conference on Geometric and Physical Modeling (GD/SPM11).

October 24-27, 2011. Orlando, Florida, USA.

Registration deadline: September 26, 2011.

<http://www.siam.org/meetings/gdspm11/>

1st "Gone Fishing" meeting on Poisson geometry.

October 29-30, 2011. Mathematics Department of Washington University in St. Louis, MO, USA.

If you wish to attend or give a talk, send an e-mail to xtang@math.wustl.edu by August 31, 2011.

<http://www.math.wustl.edu/~xtang/gone-fishing>

50th IEEE Conference on Decision and Control and European Control Conference.

December 12-15, 2011. Orlando, Florida.

<http://control.disp.uniroma2.it/cdcecc2011>

Focus Program on Geometry, Mechanics and

Dynamics, the Legacy of Jerry Marsden.

July 2012. Fields Institute, Toronto, Canada.

<http://www.fields.utoronto.ca/programs/scientific/12-13/Marsden/index.html>

The 9th AIMS Conference on Dynamical Systems, Differential Equations and Applications.

July 1-5, 2012, Orlando, Florida, USA.

<http://aimsciences.org/conferences/2012/index.html>

As in the previous edition there will be a special session on Geometric Mechanics, organized by Frans Cantrijn, Manuel de Leon and Tom Mestdag. This session has a double goal: to promote the AIMS [Journal of Geometric Mechanics](#) by bringing together excellent researchers in the field and to provide a scientific platform for the international partners within the 'Geometric Mechanics' network (a network within Marie Curie's International Research Staff Exchange Scheme (IRSES) in the 7th European Framework Program). Anyone interested in participating in the session is cordially invited to register and to submit an abstract to session ss24 at the [webpage](#) of the conference, before March 15, 2012.

6th European Congress of Mathematics.

July, 2-7, 2012. Kraków. Poland

<http://www.6ecm.pl/en/home>

EECI Graduate School on Control

<http://www.eeci-institute.eu/GSC2012>

NOTE: if you want to include information in this infosheet, please send it to gmcnet@ull.es