

# Geometry, Mechanics and Control Network Infosheet

July 2019

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# GMC Network Infosheet

July 2019

### Network's activities

# 14th International Young Researchers Workshop on Geometry, Mechanics and Control.

16-18 December 2019, Göttingen, Germany. https://www.uni-goettingen.de/en/607463.html

# **Outstanding events**

# Summer Schoool and Workshop Wisla 19.

19–29 August 2019, Wisla, Poland.

http://www.baltinmat.com/

# XXVIII International Fall Workshop on Geometry and Physics.

2–6 September 2019, Madrid, Spain.

https://www.icmat.es/congresos/2019/IFWGP/

### Women in Geometry and Topology.

25–27 September 2019, Barcelona, Spain.

http://tinyurl.com/yywkgo48

# Other conferences

### Workshop on New Geometry of Quantum Dynamics.

12-16 August 2019, Montreal, Canada.

 $\label{lem:http://www.fields.utoronto.ca/activities/19-20/quantum-dynamics$ 

### Mathematical Results in Quantum Physics.

12–16 August 2019, Aarhus, Denmark.

http://conferences.au.dk/qmath14/

### Topology, Geometry, and Dynamics: Rokhlin-100.

19–23 August 2019, Saint-Peterburg, Russia.

http://www.pdmi.ras.ru/EIMI/2019/tgd/index.html

# 24th International Summer School on Global Analysis and its Applications.

19-23 August 2019, Levoca, Slovakia.

http://www.lepageri.eu/summer-school

### Holomorphic Differentials in Mathematics and Physics.

19-23 August 2019, Berkeley, United States.

http://www.msri.org/workshops/895

#### Groups and Geometries.

25-30 August 2019, Banff, Canada.

https://www.birs.ca/events/2019/5-day-workshops/19w5046

# Supersymmetries and Quantum Symmetries.

26-31 August 2019, Yerevan, Armenia.

http://theor.jinr.ru/sqs19/

# 7th International Workshop on New Challenges in Quantum Mechanics: Integrability and Supersymmetry.

1-7 September 2019, Benasque, Spain.

http://benasque.org/2019qmis/

# Differential Geometry and its Applications.

2--6 September 2019, Hradec Králové, Czech Republic.

http://dga2019.uhk.cz/

### Conference on Geometry and Physics.

2-6 September 2019, Bucharest, Romania. http://events.theory.nipne.ro/gap/index.php/conference

### Geometry and Strings 2019.

3-6 September 2019, Oxford, United Kingdom. https://sites.google.com/view/geometryandstrings2019/home

# 11th IFAC Symposium on Nonlinear Control Systems.

4-6 September 2019, Vienna, Austria. http://www.mechatronicsnolcos2019.org/

# Summer School on Control Theory in Mechanics.

8-14 September 2019, Quiberon, France. http://tcm.ida.upmc.fr/

### Many-body Quantum Systems.

8-14 September 2019, Oberwolfach, Germany. https://www.mfo.de/www/schedule/2019/all

# Joint Seminar on Geometric Analysis.

13-14 September 2019, Luminy, France. https://conferences.cirm-math.fr/2345.html

### Large Scale Stochastic Dynamics.

15-21 September 2019, Oberwolfach, Germany. https://www.mfo.de/occasion/1938/www\_view

### Quantum Flag Manifolds in Prague.

16-20 September 2019, Prague, Czech Republic. https://tinyurl.com/y273rfel

# International conference on Geometric Analysis.

22-28 September 2019, Novosibirsk, Russia. https://tinyurl.com/yyscze4c

# Challenges in Theoretical High-Energy Physics.

23–27 September 2019, Stockholm, Sweden.

https://tinyurl.com/y5dw8e5c

# Problems of Theoretical and Mathematical Physics.

24-26 September 2019, Kyiv, Ukraine.

https://bogolyubov2019.bitp.kiev.ua/

# Dirac operators in differential geometry and global analysis.

6-12 October 2019, Bedlewo, Poland.

http://http://wmii.uwm.edu.pl/dirac/

# 4th IEEE Colombian Conference on Automatic Control.

15–18 October 2019, Medellin, Colombia.

http://www.ieeeccac2019.com/

### Dynamics, Geometry and Combinatorics.

21–25 October 2019, Lausanne, Switzerland.

https://bernoulli.epfl.ch/events/1489

# Modern Problems of Mathematics and Mechanics.

23–25 October 2019, Baku, Azerbaijan.

https://imm60.imm.az/

# Algebraic and Geometrical Methods in String Theory.

28 October–8 November 2019, San Martín, Argentina.

http://icas.unsam.edu.ar/hub/cimpa2019/

# Dirac operators on domains with magnetic fields.

28 October-8 November 2019, Luminy, France. https://conferences.cirm-math.fr/2240.html

# Workshop on Contact and Poisson Geometry.

31 October–2 November 2019, Timisoara, Romania

https://sites.google.com/view/wcpg

# Workshop on Differential Geometry and Nonassociative Algebras.

12–15 November 2019, Luminy, France.

https://conferences.cirm-math.fr/2076.html

# Workshop on Higher Structures in Geometry and Physics.

18–22 November 2019, Montreal, Canada.

https://tinyurl.com/y6rvpcpb

### 58th Conference on Decision and Control.

11-13 December 2019, Nice, France.

http://cdc2019.ieeecss.org/index.php

#### Geometry from the Quantum.

13-17 Januay 2020, Santa Barbara, USA. https://www.kitp.ucsb.edu/activities/qgravi ty-c20

# 9th International Conference on Quantum Simulation and Quantum Walks.

20-24 Januay 2020, Marseille, France.

https://conferences.cirm-math.fr/2161.html

# Job offers, fellowships and supports

### Ph.D. offers

## PhD position in probability / statistical mechanics.

Universite de Fribourg, Fribourg, Switzerland Closing date: 1 September 2019.

http://homeweb.unifr.ch/manolesc/Pub/Affice% 20dotorat%20phd.pdf

# Ph.D. positions in Applied Mathematics.

Department of Mathematics, FAU Erlangen, Erlangen, Germany

Closing date: 30 September 2019. https://tinyurl.com/yy4rp67j

#### PhD Position.

University of Fribourg, Fribourg, Switzerland Closing date: 30 September 2019.

https://euro-math-soc.eu/system/files/job-an nouncements/PhD-UniFr-WengerGroup.pdf

#### 12 PhD Positions in Climate Forecasting.

Centre de Recerca Matemàtica Closing date: 8 October 2019.

https://www.mathjobs.org/jobs/jobs/13814

### Doctoral Researcher in optimal transport.

Department of Mathematics, Technische Universität München

Closing date: 31 December 2019.

https://euro-math-soc.eu/system/files/job-an

nouncements/Schmitzer\_Doc.pdf

# PhD positions in mathematics.

University of Luxembourg, Luxembourg

Closing date: 1 March 2020.

http://recruitment.uni.lu/en/details.html?nPo

stingId=25556&nPostingTargetId=41799

### PhD positions.

TU Delft, Delft, The Netherlands Closing date: Open until filled. https://tinyurl.com/yyzhqhfr

# Doctoral candidate (PhD student) in the Systems Control Group.

University of Luxembourg, Luxembourg

Closing date: Open until filled. https://tinyurl.com/y6731flx

### Open PhD Positions in Geometry.

Max Planck Institute For Informatics, Saarbrücken, Germany

Closing date: Open until filled.

http://euro-math-soc.eu/job/open-phd-positi

on-0

# Doctoral candidate in applied algebraic geometry.

Aalto University, Espoo, Finland Closing date: Open until filled. https://tinyurl.com/y298aqpp

### Postdoctoral fellowships

### Post-doctoral researcher in Geometry.

Instituto de MatemÃatica e EstatÃnstica, Universidade de Sao Paulo, Sao Paulo, Brazil Closing date: 9 August 2019.

https://euro-math-soc.eu/system/files/job-an nouncements/ChamadaENG\_0.pdf

# Postdoc in Probability / Statistical mechanics.

University of Fribourg, Fribourg, Switzerland Closing date: 1 September 2019.

http://euro-math-soc.eu/job/postdoc-probabil ity-statistical-mechanics

# Marie Sklodowska-Curie Individual Fellow-

European Commission

Closing date: 11 September 2019. https://tinyurl.com/y362e3tg

### Postdoc positions in Applied Mathematics.

Department of Mathematics, FAU Erlangen Closing date: 30 September 2019.

https://tinyurl.com/yy4rp67j

### Postdoctoral positions in geometry.

Heidelberg University, Germany

#### Closing date: Open until filled.

https://www.mathjobs.org/jobs/jobs/12713

# Postdoctoral fellowships in algebraic geometry and mathematical sciences.

Harvard University, Massachusetts, United States

Closing date: Open until filled. http://cmsa.fas.harvard.edu/jobs/

### Postdoctoral positions in Mathematics.

Einstein Institute of Mathematics, Jerusalem, Israel

Closing date: Open until filled.

https://mathematics.huji.ac.il/book/facultypositions-0

### Research scientist in Mathematics.

Massachusetts Institute of Technology, Massachusetts, United States

Closing date: Open until filled.

https://simonscollab.icerm.brown.edu/open-po sitions/

### Humboldt research fellowship for postdoctoral researchers.

Alexander von Humboldt Foundation

Closing date: Open.

https://www.humboldt-foundation.de/web/humbol dt-fellowship-postdoc.html

#### Lisa Meitner program.

FWF Austrian Science Fund, Vienna, Austria Closing date: Open.

https://www.fwf.ac.at/en/research-funding/ap plication/

## Funded postdoctoral fellowship.

University of Reading, United Kingdom

Closing date: Open.

https://www.reading.ac.uk/maths-and-stats/Jo bsAndFellowships/maths-fellowships.aspx

### Offers for researchers

### Professorship in Pure Mathematics.

Georg-August University Gottingen, Gottingen, Germany

Closing date: 5 August 2019.

https://www.uni-goettingen.de/en/608689.html

### Assistant Professor in Mathematics.

TU Delft, Delft, Netherlands Closing date: 15 August 2019.

https://euro-math-soc.eu/job/assistant-prof

essor-tenure-track-mathematics

### Tenure Track in Mathematical Sciences.

Bentley University, Massachusetts, United States

Closing date: 15 August 2019.

https://www.mathjobs.org/jobs/jobs/12307

### ERC-POC Proof of Concept Grant.

European Commission

Closing date: 19 September 2019.

https://tinyurl.com/ybjgm36k

### Several Tenure Track positions.

TU Delft, Delft, The Netherlands

Closing date: Open until filled.

https://www.tudelft.nl/en/3me/departments/de lft-center-for-systems-and-control/about-dc

sc/vacancies/

### Assistant professor in Mathematics.

Deusto University, Bilbao, Spain Closing date: Open until filled.

https://deusto.talentclue.com/es/node/38171378/

4590/modal

# Mathematics adjunct instructors.

Portland State University, Oregon, United States

Closing date: Open until filled.

https://jobs.hrc.pdx.edu/postings/26062

### Tenure track position in geometry.

McMaster University, Ontario, Canada

Closing date: Open until filled.

https://www.mathjobs.org/jobs/jobs/12720

### Tenure track positions in Mathematics.

University of Texas at Dallas, United States Closing date: Open until filled.

https://jobs.utdallas.edu/postings/11339

### Assistant professor in Mathematics.

Embry-Riddle Aeronautical University at

Prescott, Arizona, United States Closing date: Open until filled.

https://www.mathjobs.org/jobs/jobs/13189

### SAMSI visiting research fellows.

Statistical and Applied Mathematical Sciences Institute, USA.

Applications from junior and senior researchers. Closing date: Open.

https://www.samsi.info/participating/visiting-research-fellows/

# Research in pairs in the Mathematisches Forschunginstitut Oberwolfach.

Oberwolfach, Germany.

Between 2 and 4 people, from 2 weeks to 3 months.

Closing date: Six months before planned stay. http://www.mfo.de/for-guest-researchers/appl y-for-a-stay/apply-for-research-in-pairs

### Focused research groups in Banff, Canada.

Banff International Researh Station, Canada. Up to 8 researchers for periods of 1 to 2 weeks. Closing date: A minimum of 4 months before the proposed start of the event.

http://www.birs.ca/programs/general-program-descriptions

### Research in Teams in Banff, Canada.

Banff International Researh Station, Canada. Teams of 2 to 4 researchers for 1 to 2 weeks. Closing date: A minimum of 4 months before the proposed start of the event.

http://www.birs.ca/programs/general-program-descriptions

# Centre International de Rencontres Mathematiques (CIRM).

CIRM, Marseille, France.

2 to 3 researchers for 1 to 2 weeks.

Closing date: Open all year.

https://www.cirm-math.com/research-in-pairs.html

### Visiting the ICMAT.

Instituto de Ciencias Matemáticas, Madrid, Spain.

Researchers for a period 1 to 12 months.

Closing date: 2 months before the start of the desired stay.

http://www.icmat.es/people/visitFac

# Research in pairs program: Centro Internazionale per la Ricerca Matematica.

Fondazione Bruno Kessler, Trento, Italy.

2-3 people from 1 to 6 weeks.

Closing date: Open.

http://cirm.fbk.eu/research-pairs

### Visiting scholar opportunity in Cambridge.

 ${\bf University\ of\ Cambridge,\ United\ Kingdom}.$ 

Scholars and fellows for development of research, teaching and collaboration.

Closing date: Open.

https://www.educ.cam.ac.uk/about/visitingscholars/

## Small team visiting the Centre de Recerca Matemàtica.

CRM, Catalonia, Spain.

Any time between 6 and 12 months before the start of the desired stay.

Closing date: Open.

http://www.crm.cat/en/Host/VisitingCRM/Pages/ResearchPairs.aspx

# Visiting research fellow in Kent State University.

Mathematics Department-KSU, Ohio, USA.

Visiting for scholar researchers.

Closing date: Open.

http://www.kent.edu/globaleducation/visiting-scholars

### Financial support for research projects and conferences

# Call for projects EMALCAS (School of Mathematics) 2020.

Mathematical Union of Latin America and the Caribbean (UMALCA), Chile.

Deadline: 15 August 2019.

http://www.umalca.org/2019/06/llamado-emalcas-2020/

# Call for projects CIMPA Schools 2021.

Centre International de Mathématiques Pures et

Appliquées, France.

Deadline: 9 September 2019. https://www.cimpa.info/node/41

# Marie Sklodowska-Curie Co-Funding of regional, national and international programmes.

European Commission.

Deadline: 26 September 2019. https://tinyurl.com/y9nh7ybt

### Thematic Programs at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

Deadline: October 15, December 1st and March 1st. Three years ahead.

http://tinyurl.com/msri-progprop

### Hot Topics Workshop at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

Deadline: October 15, December 1st and March

http://tinyurl.com/msri-htw

### Summer Graduate Schools at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

Deadline: October 15, December 1st and March

http://tinyurl.com/msri-sgs

### Support for workshop organization.

Banff International Research Station.

Deadline: No precise deadline.

http://www.birs.ca/programs/general-program-

descriptions

Propose a workshop in the Mathematisches Forschunginstitut Oberwolfach.

Oberwolfach, Germany.

Deadline: Open.

https://www.mfo.de/scientific-programme/meetings/workshop

# Mathematical and physical sciences funding.

National Science Foundation, United States of America.

Deadline: No precise deadline.

https://www.nsf.gov/funding/pgm\_list.jsp?org=

### Hosting a workshop at AIMS South Africa.

Contributions for workshops about AIMS's research focus areas.

Deadline: No precise deadline. https://tinyurl.com/y8p3t34j

# International Mathematical Union-Conference support program.

For conferences in developing or economically disadvantaged countries.

Deadline: Several calls.

http://www.mathunion.org/cdc/grants/conference-support-program/

# Preprints and papers

## Network's members

Florio M. Ciaglia, Alberto Ibort, Jürgen Jost and Giuseppe Marmo: *Manifolds of classical probability distributions and quantum density operators in infinite dimensions*.

1907.00732

[math-ph, math.MP]

Francisco Martín Cabrera: Harmonic almost contact metric manifolds revisited.

1907.02325

[math.DG]

Jordi Gaset, Xavier Gràcia, Miguel C. Muñoz-Lecanda, Xavier Rivas and Narciso Román-Roy: New contributions to the Hamiltonian and Lagrangian contact formalisms for dissipative mechanical systems and their symmetries.

1907.02947 (version 2)

[math-ph, hep-th, math.MP]

Florio M. Ciaglia, Alberto Ibort and Giuseppe

Marmo: Schwinger's Picture of Quantum Mechanics II: Algebras and Observables.

1907.03883

[math-ph, math.MP]

Modesto Salgado and Silvia Vilariño: Tulczyjew's derivations and intrinsic field equations in classical field theories.

1907.05667

[math-ph, math.MP]

Fabio Di Cosmo, Alberto Ibort and Giuseppe Marmo: *Groupoids and Coherent states*.

1907.09010

[quant-ph, math-ph, math.MP]

Stephane Geudens and Marco Zambon: Coisotropic submanifolds in b-symplectic geometry.

1907.09251

[math.SG]

Hiroaki Yoshimura and François Gay-Balmaz: Dirac structures and port-Lagrangian systems in thermodynamics.

1907.00373

[math-ph, math.MP]

E. Celeghini, M. Gadella and M. A. del Olmo: Groups, Special Functions and Rigged Hilbert Spaces.

1907.01281

[math-ph, math.MP, quant-ph]

Katarzyna Grabowska and Janusz Grabowski: Solvable Lie algebras of vector fields and a Lie's conjecture.

1907.02925

[math.DG, math-ph, math.GR, math.MP]

Petre Birtea, Ioan Casu and Dan Comanescu: Characterization of the critical points for the free energy of a Cosserat problem.

1907.04726

[math-ph, math.MP, math.OC]

Maximilian Engel, Christian Kuehn, Matteo Petrera and Yuri Suris: Discretized Fast-Slow Systems with Canard Points in Two Dimensions.

1907.06574

[math.DS]

1907.06624

[math-ph, math.MP, quant-ph]

Felipe Rodrigues de Almeida, Aleksandr Pinzul and Allen Stern: Non-commutative  $AdS_2/CFT_1$  duality: the case of massive and interacting scalar fields.

1907.07298

[hep-th, gr-qc, math-ph, math.MP]

Karl-Hermann Neeb and Gestur Olafsson: Symmetric spaces with dissecting involutions.

1907.07740 [math.DG]

Tomoki Ohsawa: Collective Heavy Top Dynamics. 1907.07819

[math-ph, math.MP, math.SG, nlin.SI]

Francesco Bonechi, Alberto S. Cattaneo, Jian Qiu and Maxim Zabzine: Equivariant Batalin-Vilkovisky formalism.

1907.07995

[hep-th, math-ph, math.MP, math.QA]

R. Camassa, G. Falqui, G. Ortenzi and M. Pedroni: On the geometry of extended self-similar solutions of the Airy Shallow Water Equations. 1907.10920

[math-ph, math.MP, nlin.SI]

Niclas Kruff, Jaume Llibre, Chara Pantazi and Sebastian Walcher: *Invariant algebraic surfaces* of polynomial vector fields in dimension three.

1907.12536 [math.DS]

### Network's news

### PhD Thesis.

 $Discrete\ Mechanics\ for\ Forced\ and\ Constrained$ 

Systems.

Author: Rodrigo T. Sato Martín de Almagro.

Advisor: David Martín de Diego.

Date: July 2019.

https://www.icmat.es/Thesis/2019/Tesis\_Rodri

go\_Sato.pdf

# Links of interest

# The Geometry, Mechanics and Control Network.

International, spanish based research network. http://gmcnet.webs.ull.es/

Journal of Geometric Mechanics (JGM).

Volume 11, Issue 2, 2019.

https://aimsciences.org/journal/1941-4889/2019/11/2

# International Mathematical Union-Net 95. May 2019.

https://www.mathunion.org/fileadmin/IMU/Organization/imu-net/pdfs/2019/IMU-Net-95.pdf

#### ICMAT Newsletter.

18th number. First semester 2019.

https://www.icmat.es/outreach/newsletter/num18

#### New AIMS Journal.

New open access journal.

http://www.aimspress.com/journal/Math

### Euraxess Spain.

Researchers in motion.

https://www.euraxess.es/spain/science-spain

# European Research Council.

Supporting top researchers from anywhere https://erc.europa.eu/

# International Cooperation "Open to the World".

Research and Innovation, European Commission https://tinyurl.com/y46tkeeq

# International Center of Pure and Applied Mathematics (CIMPA).

https://www.cimpa.info/

# ${\bf Reports@SCM\ journal.}$

http://revistes.iec.cat/index.php/reports/

#### Mathematics in Europe.

http://www.mathematics-in-europe.eu/

### Jobs for Mathematicians.

https://www.mathjobs.org/jobs

# Academic positions in Spain, France and Belgium.

Mathematics and Physics related areas. http://postes.smai.emath.fr/postdoc/

# Academic jobs in Mathematics in Europe.

http://academicpositions.eu/

# Academic jobs in Mathematics in the UK. http://www.jobs.ac.uk/categories/postdoc-jobs

# Academic jobs in Mathematics worldwide. https://www.postdocjobs.com/

#### Academic jobs in Mathematics in Spain.

http://www.madrimasd.org/madrid-ciencia-tecn ologia/convocatorias

#### Academic jobs in Mathematics.

http://www.indeed.com/q-Postdoctoral-jobs.htm

# SIAM Activity Group on Control and Systems Theory Prize.

https://tinyurl.com/ydcpznv7

# SIAM Activity Group on Control and Systems Theory Best SICON Paper Prize.

https://tinyurl.com/ycjpzvz6

# International Mathematical Union Awards and Prizes.

https://www.mathunion.org/imu-awards/imu-awards-prizes-and-special-lecture

# Other Prizes of International Mathematical Union.

https://www.mathunion.org/imu-awards/other-prizes

# American Mathematical Society Prizes and Awards.

https://www.ams.org/profession/prizes-awards/prizes

# Mathematical Association of America Awards.

https://www.maa.org/programs-and-communities/member-communities/maa-awards/writing-awards

# Association for Women in Mathematics Awards.

https://awm-math.org/awards/

# Royal Society of London Premier Medals and Awards.

https://royalsociety.org/grants-schemes-awards/awards/premier-awards/

#### London Mathematical Society Prizes.

https://www.lms.ac.uk/prizes

#### The Shaw Prize.

http://www.shawprize.org/en/shaw.php?tmp=2&twoid=77

### European Mathematical Society Prizes.

http://euro-math-soc.eu/prizes-european-math ematical-society

#### Fermat Prize.

https://www.math.univ-toulouse.fr/spip.php?rubrique107&lang=en

# Society for Industrial and Applied Mathematics Prizes.

https://www.siam.org/prizes/

### Noether Lectures Award.

https://sites.google.com/site/awmmath/programs/noether-lectures

The Royal Society Grants.

https://royalsociety.org/grants/

The Royal Society's medals and award. https://royalsociety.org/grants-schemes-awards/awards/nominations/

NOTE: If you want to include information in this info-sheet, please send it to gmcactivities@gmail.com