

Geometry,
Mechanics
and Control
Network
Infosheet

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### Network's activities

XIV International Summer School on Geometry, Mechanics and Control.

6-10 July 2020, Burgos, Spain.

Special Session "Geometry, Mechanics, Control and its Interactions" at VI Latin American Congress of Mathematicians (CLAM 2020).

20-24 July 2020, Montevideo, Uruguay.

### **Outstanding events**

Special Session "Geometric Mechanics, Dynamics and Control" in honor of Anthony Bloch (XIII AIMS Conference on Dynamical Systems).

6-9 June 2020, Atlanta, USA.

"Geometry, Mechanics, and Dynamics". Conference in Honor of the 70th Birthday of Tudor Ratiu.

20–24 July 2020, Lausanne, Switzerland.

25th International Summer School on Global Analysis and Applications (interesting courses).

16-22 August 2020, Shenyang, China.

#### Other conferences

Dynamical aspects of pseudo-Riemannian geometry. 2–6 March 2020, Braga, Portugal.

International Conference on Physics.

9-10 March 2020, Rome, Italy.

Tensor categories and topological quantum field theories.

16–20 March 2020, Berkeley, USA.

Geometric Variational Problems.

23–27 March 2020, Ulm, Germany.

New Perspectives on Sys Mirror Symmetry.

30 March-1st April 2020, London, England.

High Dimensional Hamilton-Jacobi Methods in Control and Differential Games.

30 March-3st April 2020, Los Angeles, USA.

Workshop on Supergeometry and Bracket Structures in Mathematics and Physics. 30 March-3st April 2020, Toronto, Canada.

Workshop on classical and quantum aspects of symplectic geometry.

6-9 April 2020, Nantes, France.

Integrable Systems and Group Actions. 23–26 April 2020, Savannah, USA.

Conference on Geometry and Topology. 1–3 May 2020, USA.

Regularity theory for elliptic and parabolic systems and problems in continuum mechanics.

6–9 May 2020, Telč, Czech Republic.

Quantum Topology and Geometry.

11 – 15 May 2020, Luminy, France.

Poisson meeting in La Rochelle.

14 – 15 May 2020, La Rochele, France.

Geometry and Dynamics of Foliations.

18–22 May 2020, Luminy, France.

Geometry and Polish groups.

18–22 May 2020, Luminy, France.

Intensive Period on Poisson Geometry and Mathematical Physics.

18 May-17 July 2020, Fisciano, Italy.

2nd World Wide Congregation on Physics. 25–26 May, 2020, Rome, Italy.

GAP XVII - Deformations and higher structures.

25–29 May, 2020, Vancouver, Canada.

Interactions of Gauge Theory with Contact and Symplectic Topology in Dimensions 3 and 4.

7-12 June 2020, Banff, Canada.

22th International Conference on Geometry, Integrability and Quantization.

8-13 June 2020, Varna, Bulgaria.

Third School and Workshop Mathematical Challenges in Quantum Mechanics.

8–13 June 2020, Como, Italy.

6th International Conference on Physics.

15-16 June 2020, Barcelona, Spain.

Dynamics, SCV and CR Geometry.

15–19 June 2020, Nice, France.

Geometric Flows.

15–26 June 2020, Athens, Greece.

IX School on Geometry and Physics.

22–26 June 2020, Białowieża, Poland.

Foliation Theory and Complex Geometry.

22-26 June 2020, Luminy, France.

Digital Geometry and Discrete Variational Calculus.

22-26 June 2020, Luminy, France.

XXXIX Workshop on Geometric Methods in Physics.

28 June–04 July 2020, Białowieża, Poland.

Geometry Festival.

29 June-03 July 2020, Veszprém, Hungary.

Advanced Variational Methods for Solid Mechanics.

29 June-03 July 2020, Trieste, Italy.

Pseudo-Hermitian Hamiltonians in Quantum Physics.

29 June-03 July 2020, Santa Fe, United States.

CIMPA-IASBS Research School on Spectra in Riemannian and Symplectic Geome-

4-15 July 2020, Zanjan, Iran.

8th European Congress of Mathematics.

5-11 July 2020, Portoroz, Slovenia.

Poisson 2020 Summer School.

6-10 July 2020, Fisciano, Italy.

Poisson 2020 Conference.

12-17 July 2020, Napoli, Italy.

21st IFAC World Congress on Automatic Control.

12–17 July 2020, Berlin, Germany.

Poisson 2020 International Conference.

13-17 July 2020, Napoli, Italy.

Integrable Systems in Geometry and Mathematical Physics.

13-17 July 2020, Trieste, Italy.

## The 33rd International Colloquium on Group Theoretical Methods in Physics.

13-17 July 2020, Cotonou, Benin.

### International Meeting on Fluid Dynamics and Fluid Mechanics.

22–23 July 2020, Vancouver, Canada.

#### Calculus of Variations.

2–8 August 2020, Oberwolfach, Germany.

### Workshop on Classical and Quantum Integrable Systems.

2-8 August 2020, Sochi, Russia.

# 7th International Conference on Applied Physics and Space Science.

17-18 August 2020, Paris, France.

#### Dynamics Days Europe - XL.

24–28 August 2020, Nice, France.

# The 7th International Conference on Control and Optimization with Industrial Applications.

26–28 August 2020, Baku, Azerbaijan.

#### Nijenhuis Geometry.

31 August – 11 September 2020, Luminy, France.

### Job offers, fellowships and supports

#### Master Scholarships

#### M.Sc. in Physics Scholarships.

Universidad de Valladolid, Valladolid, Spain

Closing date: 10 March 2020.

#### Ph.D. offers

# PhD positions in mathematics of Shape Learning.

Chalmers University of Technology, Gothenburg, Sweden

Closing date: 6 March 2020.

#### Doctoral student in Mathematics.

Chalmers University of Technology, Gothenburg, Sweden

Closing date: 6 March 2020.

#### PhD in several complex variables.

Chalmers University of Technology, Gothenburg, Sweden

Closing date: 10 March 2020.

# Doctoral students in distributed hybrid control systems.

Chalmers University of Technology, Gothenburg, Sweden

Closing date: 31 March 2020.

#### Doctoral student in mathematics.

KTH, Stockholm, Sweden Closing date: 23 April 2020.

### IMU Breakout Graduate Fellowship Program.

Research centers in a developing country

Closing date: 31 May 2020.

#### PhD in Control Theory.

 ${\it Ecole \ des \ Mines \ de \ Saint-Etienne, Saint-Etienne,}$ 

Closing date: 30 June 2020.

#### PhD positions.

TU Delft, Delft, The Netherlands Closing date: Open until filled.

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

University of Luxembourg, Luxembourg

Closing date: Open until filled.

#### Open PhD Positions in Geometry.

Max Planck Institute For Informatics, Saarbrücken, Germany

Closing date: Open until filled.

# Doctoral candidate in applied algebraic geometry.

Aalto University, Espoo, Finland Closing date: Open until filled.

#### Postdoctoral fellowships

### Postdoc in Algberaic Geometry.

Loughborough University, Loughborough, United Kingdom

Closing date: 10 March 2020.

#### Post-doctoral assistant.

Ghent University, Gent, Belgium Closing date: 31 March 2020.

#### Postdoctoral Research Positions.

 ${\bf Sobolev\ Institute\ of\ Mathematics,\ Novosibirsk,}$ 

Russia

Closing date: 12 April 2020.

#### Postdoctoral positions in geometry.

Heidelberg University, Germany Closing date: Open until filled.

### Postdoctoral fellowships in algebraic geometry and mathematical sciences.

Harvard University, Massachusetts, United States

Closing date: Open until filled.

#### Postdoctoral positions in Mathematics.

Einstein Institute of Mathematics, Jerusalem, Is-

rael

Closing date: Open until filled.

#### Research scientist in Mathematics.

Massachusetts Institute of Technology, Massachusetts, United States

Closing date: Open until filled.

### Humboldt research fellowship for postdoctoral researchers.

Alexander von Humboldt Foundation

Closing date: Open.

#### Lisa Meitner program.

FWF Austrian Science Fund, Vienna, Austria

Closing date: Open.

#### Funded postdoctoral fellowship.

University of Reading, United Kingdom

Closing date: Open.

#### Offers for researchers

#### Lecturer in Mathematics.

15 April 2020

Closing date: University of Gothenburg, Gothen-

burg, Sweden.

#### Research Professor in Mathematics.

Beijing Institute of Mathematical Sciences and

Applications, Beijing, China Closing date: Open until filled.

#### Differential geometry expert.

Barcelona, Spain.

Mail to: mcastellano@talentocientifico.com.

Closing date: Open until filled.

#### Several Tenure Track positions.

TU Delft, Delft, The Netherlands Closing date: Open until filled.

Assistant professor in Mathematics.

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

#### Mathematics adjunct instructors.

Portland State University, Oregon, United States

Closing date: Open until filled.

#### Tenure track position in geometry.

McMaster University, Ontario, Canada

Closing date: Open until filled.

#### Tenure track positions in Mathematics.

University of Texas at Dallas, United States

Closing date: Open until filled.

#### Assistant professor in Mathematics.

Embry-Riddle Aeronautical University at

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

#### Offers for visiting researchers

### SAMSI visiting research fellows.

Statistical and Applied Mathematical Sciences Institute, USA.

Applications from junior and senior researchers.

Closing date: Open.

# Simons Visiting Professors at Mathematisches Forschunginstitut Oberwolfach.

Oberwolfach, Germany.

Junior or senior scientists from outside Europe.

Closing date: Open.

## Research in pairs at Mathematisches Forschunginstitut Oberwolfach.

Oberwolfach, Germany.

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

Closing date: Six months before planned stay.

#### Focused research groups in Banff, Canada.

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

#### Research in Teams in Banff, Canada.

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

# Centre International de Rencontres Mathematiques (CIRM).

CIRM, Marseille, France.

2 to 3 researchers for 1 to 2 weeks.

Closing date: Open all year.

# 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.

#### Visiting scholar opportunity in Cambridge.

University of Cambridge, United Kingdom.

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

Closing date: Open.

### Small team visiting the Centre de Recerca Matemàtica.

CRM, Catalonia, Spain.

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

Closing date: Open.

# Visiting research fellow in Kent State University.

Mathematics Department-KSU, Ohio, USA.

Visiting for scholar researchers.

Closing date: Open.

### Financial support for research projects and conferences

#### Thematic Programs at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

#### Hot Topics Workshop at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

Deadline: March 1st, October 15 and December 1st.

#### Summer Graduate Schools at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

Deadline: March 1st, October 15 and December 1st.

# Short-term exchanges of research and business staff - Research and Innovation Staff Exchange (RISE) 2020.

European Commission, Marie Skłodowska-Curie Actions.

Deadline: April, 28.

### CIMPA Courses program.

Geographic areas of activities of CIMPA (Africa, Central or South America, Asia).

Deadline: Open all year.

#### Support for workshop organization.

Banff International Research Station.

Deadline: No precise deadline.

# Proposal of a workshop in the Mathematisches Forschunginstitut Oberwolfach.

Oberwolfach, Germany.

Deadline: Open.

### Mathematical and physical sciences funding.

National Science Foundation, United States of America.

Deadline: No precise deadline.

#### Hosting a workshop at AIMS South Africa.

Contributions for workshops about AIMS's research focus areas.

Deadline: No precise deadline.

# International Mathematical Union - Conference support program.

For conferences in developing or economically disadvantaged countries.

Deadline: Several calls.

### Interesting news and publications

#### **Paper**

Jordi Gaset, Xavier Gràcia, Miguel C. Muñoz-Lecanda, Xavier Rivas and Narciso Román-Roy: A contact geometry framework for field theories with dissipation.

Annals of Physics

 $[MSC:\ 53C15,\ 53D10,\ 58A10,\ 70S05,\ 70S10,$ 

35R01

### **Preprints**

#### Network's members

Ogul Esen, Manuel de León, Cristina Sardón and Marcin Zając: Cauchy data space and multisymplectic formulation of conformal classical field theories.

2002.03913

[math-ph, math.MP]

Álvaro Pelayo: Symplectic invariants of semitoric systems and the inverse problem for quantum systems.

2002.05306

[math.SG, math-ph, math.MP, math.SP]

Manuel F. Rañada: Complex functions and geometric structures associated to the superintegrable Kepler-related family of systems endowed with  $generalized\ Runge-Lenz\ integrals\ of\ motion.$ 

2002.08767

[math-ph, math.MP]

Florio M. Ciaglia, Fabio Di Cosmo, Alberto Ibort and Giuseppe Marmo: Schwinger's picture of Quantum Mechanics.

2002.09326

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

Jordi Gaset, Xavier Gràcia, Miguel C. Muñoz-Lecanda, Xavier Rivas and Narciso Román-Roy: A k-contact Lagrangian formulation for nonconservative field theories.

2002.10458

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

#### Network's collaborators

Yi Lin and Reyer Sjamaar: A Thom isomorphism in foliated de Rham theory.

2001.11848 (version 2)

[math.DG]

Aleksy Tralle and Vicente Muñoz: On the classification of Smale-Barden manifolds with Sasakian structures.

2002.00457

[math.DG, math.AG]

Tobias Diez and Tudor S. Ratiu: Group-valued momentum maps for actions of automorphism groups.

2002.01273

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

Rodolfo Reyes-Báez, Arjan van der Schaft, Bayu Jayawardhana and Le Pan: A family of virtual contraction based controllers for tracking of flexible-joints port-Hamiltonian robots: theory and experiments.

2002.01542

[eess.SY, cs.RO, cs.SY, math.OC]

Florio M. Ciaglia, Fabio Di Cosmo, Armando Figueroa, Giuseppe Marmo and Luca Schiavone: Geometry from divergence functions and complex structures.

2002.02891

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

Simonetta Abenda and Petr G. Grinevich: Amalgamation in totally non-negative Grassmannians and real regular KP divisors on M-curves.

2002.04865

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

Xiao Han and Giovanni Landi: On the gauge group of Galois objects.

2002.06097

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

Ihab Haidar, Yacine Chitour, Paolo Mason and Mario Sigalotti: Lyapunov characterization

 $of \ uniform \ exponential \ stability \ for \ nonlinear \\ in finite-dimensional \ systems.$ 

2002.06822 [math.OC]

Katarzyna Grabowska, Janusz Grabowski and Zohreh Ravanpak: Transitive nilpotent Lie algebras of vector fields and their Tanaka prolongations.

2002.07176 (version 3) [math.DG, math-ph, math.MP]

A. V. Borisov and A. V. Tsiganov: On rheonomic nonholonomic deformations of the Euler

equations proposed by Bilimovich.

2002.07670

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

Panagiotis Batakidis and Fani Petalidou: Atiyah class of a Manin pair.

2002.10175 [math.DG]

N. A. Gromov, I. V. Kostyakov and V. V. Kuratov: Nonrelativistic quantum particles on the Minkowski plane.

2002.11990

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

### Links of interest

Geometry, Mechanics and Control Network

Journal of Geometric Mechanics - March 2020, Vol 12, Issue 1

International Mathematical Union (IMU) Newsletter - January 2020, Net 99

Instituto de Ciencias Matemáticas (ICMAT) Newsletter - First semester 2020, Number 19

**European Mathematical Society** 

Royal Spanish Mathematical Society (RSME)

Open Access American Institute of Mathematical Sciences (AIMS) Journal

**Euraxess Spain** 

European Research Council

International Cooperation "Open to the World"

International Center of Pure and Applied Mathematics (CIMPA)

Mathematics in Spain

Open Access Mathematics Journals

Open Access Physics Journals

Societat Catalana de Matemàtiques (SCM) journal on Mathematics

Mathematics in Europe

Jobs for Mathematicians

Academic positions in Spain, France and Belgium

Academic jobs in Mathematics in Europe

Academic jobs in Mathematics in the UK

Academic jobs in Mathematics worldwide

Academic jobs in Mathematics in Spain

Academic jobs in Mathematics

SIAM Activity Group on Control and Systems Theory Prize

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

International Mathematical Union Awards and Prizes

Other Prizes of International Mathematical Union

American Mathematical Society Prizes and Awards

Mathematical Association of America Awards

Association for Women in Mathematics Awards

IEEE Control Systems Society Awards

Royal Society of London Premier Medals and Awards

Society for Industrial and Applied Mathematics Prizes

London Mathematical Society Prizes

Noether Lectures Award

The Shaw Prize

European Mathematical Society Prizes

The Royal Society Grants

Fermat Prize

The Royal Society's medals and award

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