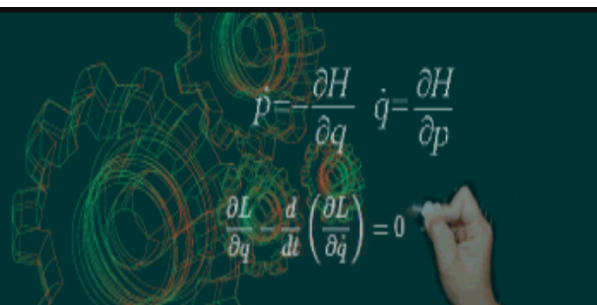




# GMC Network



## *Geometry, Mechanics and Control Network Infosheet*

December 2020

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## **Outstanding event**

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**Winter School and Workshop Wisla 20-21 (Online).**  
25 January–5 February 2021, Warsaw, Poland.

## **Virtual seminars**

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**Online Seminar on Geometry, Dynamics and Mechanics.**  
A series of online seminars on these topics.

**Online Seminar on Geometric Mechanics and Control.**  
Instituto de Ciencias Matemáticas' seminars on these topics.

**ICMAT Geometry Seminar.**

Instituto de Ciencias Matemáticas' seminars on algebraic and differential geometry.

**Colloquium on Geometry and Physics.**

Online colloquium about interface of the two fields.

**One World IAMP Mathematical Physics Seminar.**

Seminar of International Association of Mathematical Physics.

**Virtual Seminar on Geometry with Symmetries.**

On the topic of Lie group actions in Riemannian geometry.

**Seminário de Geometria Diferencial.**

Virtual seminar aims to establish contact with several research groups and mathematicians in Latin America.

**Utrecht Geometry Centre Seminar.**

Mathematical Institute, Utrecht University.

**Differential Geometry Seminar Torino.**

CRM-Montreal, Princeton/IAS, Tel Aviv, and Paris Seminar.

**Symplectic zoominar.**

Online Seminar organized by University of Torino.

**Geometry and Topology Online.**

Warwick Mathematics Institute.

**Regensburg Low-Dimensional Geometry and Topology Seminar.**

About arithmetic geometry and global analysis.

## Conferences

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**Geometry, Dynamics and Spectrum of Operators on Discrete Spaces.**

3–9 January 2021, Oberwolfach, Germany.

**International Conference on Computational Mathematics and Applied Physics.**

4–5 January 2021, Tokyo, Japan.

**Topics at the Interface of Low Dimensional Group Actions and Geometric Structures.**

4–15 January 2021, Singapore.

**Joint Mathematics Meetings of AMS and MAA (Virtually).**

6–9 January 2021, Washington, USA.

**Real and complex geometry of Hamiltonian reductions.**

6–10 January 2021, Luminy, France.

**Challenges and Recent Advances in Mathematical Physics (online).**

20–22 January 2021, Bristol, United Kingdom.

**Symplectic topology of cotangent bundles.**

25–29 January 2021, Luminy, France.

**Moduli problems beyond geometric invariant theory.**

25–29 January 2021, San Jose, USA.

**Geometry, Analysis, and Quantum Physics of Monopoles.**

31 January–5 February 2021, Banff, Canada.

**Dynamic Control and Optimization.**

3–5 February 2021, Aveiro, Portugal.

**Geometry, Topology and their Applications in Control System Design.**

21–26 February 2021, Banff, Canada.

**Quantum Field Theories and Quantum Topology Beyond Semisimplicity.**

14–19 March 2021, Banff, Canada.

**Conformal symplectic structures, contact topology, and foliations.**

15–19 March 2021, San Jose, USA.

**Geometric Numerical Integration.**

28 March–3 April 2021, Oberwolfach, Germany.

**Digital Geometry and Discrete Variational Calculus.**

29 March–2 April 2021, Luminy, France.

**CIMPA School on Optimal Control and Applications in Engineering.**

29 March–8 April 2021, Arba Minch, Ethiopia.

**International Conference on Mathematical Methods in Physics.**

5 – 9 April 2021, Marrakech, Morocco.

**Spring School on Symplectic and Contact Topology.**

19 –23 April 2021, Luminy, France.

**CIMPA School on Complex Analysis, Geometry and Dynamics.**

19 April–1 May 2021, Urgench, Uzbekistan.

**GAP XVII - Deformations and higher structures.**

17–21 May, 2021, Vancouver, Canada.

**CIMPA School on Structures Symplectiques en Mathématiques, Physique et Applications au Contrôle.**

1–12 June 2021, Casablanca, Morocco.

**Computational Aspects of Discrete Subgroups of Lie Groups.**

14–18 June 2021, Providence, USA.

**Third School and Workshop Mathematical Challenges in Quantum Mechanics.**

14–19 June 2021, Como, Italy.

**8th European Congress of Mathematics.**

20–26 June 2021, Portoroz, Slovenia.

**VI International Conference on Finite Dimensional Integrable Systems in Geometry and Mathematical Physics.**

21–25 June 2021, Tel-Aviv, Israel.

**XIV. International Workshop Lie Theory and its Applications in Physics.**

21–27 June 2021, Varna, Bulgaria.

**International Conference on Theoretical and Applicable Optimization and Control.**

23–25 June 2021, Baku, Azerbaijan.

**IX School on Geometry and Physics.**

27 June–3 July 2021, Białowieża, Poland.

**XXXIX Workshop on Geometric Methods in Physics.**

27 June–3 July 2021, Białowieża, Poland.

**CIMPA School on Optimal Control and its Applications in Economics, Engineering and the Environment.**

28 June–3 July 2021, Rabat, Morocco.

## Job offers, fellowships and supports

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### Ph.D. offers

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#### PhD positions in Mathematics.

IST, Klosterneuburg, Austria

Closing date: 8 January 2021.

#### PhD positions in Mathematics.

Fondation Sciences Mathematiques de Paris, Paris, France

Closing date: 13 February 2021.

#### Short-Term Research Grants DAAD.

Any institution of higher education in Germany

Closing date: 13 April 2021.

#### PhD in stochastic geometric mechanics.

Wilfrid Laurier University, Waterloo, Canada

Closing date: Open until filled.

#### 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

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#### Postdoc Position in Algebraic Geometry.

Humboldt-Universität, Berlin, Germany

Closing date: 5 January 2021.

#### Postdoc Positions in Pure Mathematics.

KU Leuven, Leuven, Belgium

Closing date: 15 January 2021.

#### Short-Term Research Grants DAAD.

Any institution of higher education in Germany

Closing date: 13 April 2021.

#### Postdoctoral researchers in Geometry.

University of Luxembourg, Belval, Luxembourg

Closing date: 15 April 2021.

#### Postdoctoral Fellow position in the mathematical sciences.

Harvard University, Massachusetts, United States

Closing date: 30 June 2021.

#### Several Postdoctoral positions in Mathematics.

Henri Lebesgue Center, Nantes, France

Closing date: 31 May 2021.

#### 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, Israel

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

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### **Assistant Professor in Mathematics.**

Universidad Andres Bello, Santiago de Chile, Chile

Closing date: 31 January 2021.

### **Tenure Track positions in Mathematics.**

Aarhus University, Aarhus, Denmark

Closing date: 1 March 2021.

### **Faculty Positions in Mathematics.**

Duke Kunshan University, Kunshan, China

Closing date: Open until filled.

### **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

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### **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 Forschungsinstitut Oberwolfach.**

Oberwolfach, Germany.

Junior or senior scientists from outside Europe.

Closing date: Open.

### **Research in pairs at Mathematisches Forschungsinstitut 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 Research 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 Research 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 Mathématiques (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 stay.

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

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### Thematic Programs at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

### Hot Topics Workshop at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

### Summer Graduate Schools at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

### 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 Forschungsinstitut 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

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### Preprints

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#### Network's members

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Malte Heuer and Madeleine Jotz Lean: *Linear generalised complex structures.*

2011.14652

[math.DG]

Alexandre Anahory Simões, David Martín de Diego, Manuel Lainz Valcázar and Manuel de León: *The geometry of some thermodynamic systems.*

2012.07404

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

Florio M. Ciaglia, Fabio Di Cosmo, Alberto Ibort

and Giuseppe Marmo: *Schrödinger's problem with cats: measurements and states in the Groupoid Picture of Quantum Mechanics.*

2012.10284

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

Robert Cardona, Eva Miranda, Daniel Peralta Salas and Francisco Presas: *Constructing Turing complete Euler flows in dimension 3.*

2012.12828

[math.DS, cs.CC, math.AP, math.SG]

#### Network's collaborators

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Charles-Michel Marle: *On Gibbs states of mechanical systems with symmetries.*

2012.00582

[math.DG]

Benedetto Piccoli and Francesco Rossi: *Generalized solutions to bounded-confidence models.*

2012.00755

[math.OC]

David Gómez-Ullate, Yves Grandati and Robert Milson: *Spectral theory of exceptional Hermite polynomials.*

2012.02354 (version 2)

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

Tomoki Ohsawa: *Approximation of semiclassical expectation values by symplectic Gaussian wave packet dynamics.*

2012.05464

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

Li Guo, Houyi Yu and Bin Zhang: *Renormalization of quasimetric functions.*

2012.11872

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

Philip Arathoon: *Unifying the hyperbolic and spherical 2-body problem with biquaternions.*

2012.12166

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

Alberto S. Cattaneo, Pavel Mnev and Konstantin Wernli: *Constrained systems, generalized Hamilton-Jacobi actions, and quantization.*

2012.13270

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

Simonetta Abenda: *Kasteleyn theorem, geometric signatures and KP-II divisors on planar bipartite networks in the disk.*

2012.13797

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

Rodrigo D. Euzébio, Jaume Llibre and Durval J. Tonon: *Lower bounds for the number of limit cycles in a generalized Rayleigh-Liénard oscillator.*

2012.13952

[math.DS]

Alberto S. Cattaneo, Pavel Mnev and Konstantin Wernli: *Quantum Chern-Simons theories on cylinders: BV-BFV partition functions.*

2012.13983

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

## Links of interest

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**Geometry, Mechanics and Control Network**

**Journal of Geometric Mechanics - December 2020, Volume 12, Issue 4**

**International Mathematical Union (IMU) Newsletter - November 2020, Net 104**

**Instituto de Ciencias Matemáticas (ICMAT) Newsletter - Second semester 2020, Number 20**

**International Association of Mathematical Physics Bulletin - October 2020**

**European Mathematical Society**

**Royal Spanish Mathematical Society (RSME)**

**International Association of Mathematical Physics**

**Open Access American Institute of Mathematical Sciences (AIMS) Journal**

**Euraxess Spain**

**European Research Council**

**European Commission - Research and Innovation**

**International Center of Pure and Applied Mathematics (CIMPA)**

**Open Access Mathematics Journals**

**Open Access Physics Journals**

**Societat Catalana de Matemàtiques (SCM) journal on 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**

**London Mathematical Society Prizes**

**The Shaw Prize**

**The Henri Poincaré Prize**

**European Mathematical Society Prizes**

**European Mathematical Society Joint Mathematical Weekend**

**European Mathematical Society Summer**

**Schools in Mathematics**

**The Royal Society Grants**

**The Royal Society's medals and award**

**NOTE: If you want to include information in this info-sheet, please send it to [gmcactivities@gmail.com](mailto:gmcactivities@gmail.com)**