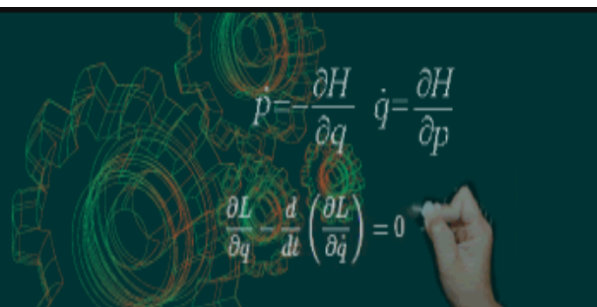




# GMC Network



## *Geometry, Mechanics and Control Network Infosheet*

March 2023

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### Outstanding event

**Dynamical Systems, Mechanics and Control: A workshop in honor to Anthony Bloch.**  
12–14 July 2023, Miraflores de la Sierra, Madrid (Spain).

**XXXI International Fall Workshop on Geometry and Physics.**  
4–8 September 2023, Santiago de Compostela, Spain.

### Other conferences

**Anosov Dynamics.**  
10–14 April 2023, Marseille, France.

**8th International Conference on Control and Robotics Engineering.**  
14–16 April 2023, Niigata, Japan.

**Higher Structures in Geometry and Mathematical Physics.**  
17–21 April 2023, Marseille, France.

**Differential Geometry and Integrable Systems.**  
20–23 April 2023, Texas, USA.

**International Conference on Mathematical Methods in Physics.**  
24–28 April 2023, Marrakesh, Morocco.

**Modern Problems of Mathematics and Mechanics.**  
26–28 April 2023, Baku, Azerbaijan.

**9th Meeting on Systems and Control Theory.**  
3–5 May 2023, Waterloo, Canada.

**Control Theory and Inverse Problems.**  
8–10 May 2023, Monastir, Tunisia.

**School on Conformal Symplectic Dynamics and Related Fields.**  
8–12 May 2023, Marseille, France.

- Geometry of Subgroups.**  
15–26 May 2023, Montréal, Canada.
- Sixth International Conference on Physics, Mathematics and Statistics.**  
20–22 May 2023, Sanya, China.
- Mathematical Physics in Quantum Technology: From Finite to Infinite Dimensions.**  
22–26 May 2023, Edinburgh, United Kingdom.
- The Geometry, Algebra, and Physics of Higgs Bundles.**  
28 May–2 June 2023, Banff, Canada.
- Interactions between Algebraic Topology and Geometric Group Theory.**  
28 May–2 June 2023, Oaxaca, Mexico.
- Poisson meeting in La Rochelle. Dedicated to the 60th birthday of Pol Vanhaecke.**  
29 May–1 June 2023, La Rochelle, France.
- Groups and Dynamics in Geometry.**  
29 May–2 June 2023, Ascona, Switzerland.
- Great Lakes Mathematical Physics Meeting.**  
9–11 June 2023, Oberlin, USA.
- Geometry, Topology and Control System Design.**  
11–16 June 2023, Banff, Canada.
- Colloquium on Finsler Geometry and its Applications.**  
11–16 June 2023, Debrecen, Hungary.
- Machine Learning for Science: Mathematics at the Interface of Data-driven and Mechanistic Modelling.**  
11–17 June 2023, Oberwolfach, Germany.
- Colloquium on Finsler Geometry and its Applications.**  
12 June–16 July 2023, Debrecen, Hungary.
- Emergent Geometries from Strings and Quantum Fields.**  
12 June–28 July 2023, Firenze, Italy.
- Analysis and Mathematical Physics.**  
19–21 June 2023, Stockholm, Sweden.
- Sub-Riemannian Geometry and Beyond, III.**  
19–23 June 2023, Pisa, Italy.
- 15th International Workshop “Lie Theory and Its Applications in Physics”.**  
19–25 June 2023, Varna, Bulgaria.
- 4th International Conference on Symmetry.**  
21–23 June 2023, Barcelona, Spain.
- Correlations in Mathematical Quantum Mechanics.**  
21–23 June 2023, Copenhagen, Denmark.
- Geometry and analysis of groups and manifolds.**  
26–30 June 2023, Pisa, Italy.
- Dg-manifolds in Geometry and Physics.**  
3–7 July 2023, Paris, France.
- From smooth to C symplectic geometry: topological aspects and dynamical implications.**  
3–7 July 2023, Marseille, France.
- Numerical Methods in Theoretical Physics.**  
10–14 July 2023, Pohang, Korea.
- Analysis of PDEs: Variational and Geometric Perspectives.**  
10–14 July 2023, Bonn, Germany.
- Symplectic Singularities and Supersymmetric QFT.**  
10–21 July 2023, Amiens, France.
- Emergent Geometries from Strings and Quantum Fields.**  
12–28 July 2023, Firenze, Italy.
- Nonlinear PDEs: Recent Trends in the Analysis of Continuum Mechanics.**  
17–21 July 2023, Bonn, Germany.
- SIAM Conference on Control and Its Applications.**  
24–26 July 2023, Pennsylvania, USA.
- XII International Symposium on Quantum Theory and Symmetries.**  
24–28 July 2023, Prague, Czech Republic.
- Integrability, Dualities and Deformations.**  
24–28 July 2023, Durham, United Kingdom.
- XXVII International Conference on Integrable Systems and Quantum Symmetries.**  
24–28 July 2023, Prague, Czech Republic.
- Online CIMPA Course: "On representations of affine Lie superalgebras".**  
25–29 July 2023, Isfahan, Iran.
- Applied and Computational Differential Geometry and Geometric PDEs.**  
30 July–4 August 2023, Banff, Canada.

**20th International Workshop on Pseudo-Hermitian Hamiltonians in Quantum Physics.**

31 July–4 August 2023, Istanbul, Turkey.

**Summer School on Current Topics in Mathematical Physics.**

31 July–4 August 2023, Warsaw, Poland.

**Finite Dimensional Integrable Systems in Geometry and Mathematical Physics.**

7–11 August 2023, Antwerp, Belgium.

**Groups, Actions, and Geometries.**

7–11 August 2023, Medford, USA.

**Women in Mathematical Physics II.**

13–18 August 2023, Banff, Canada.

**Summer School on Differential Geometry.**

14–25 August 2023, Hanoi, Vietnam.

**Symplectic Paradise.**

16–20 August 2023, Montana, USA.

**12th International Conference on Mathematical Modeling in the Physical Sciences.**

28–31 August 2023, Belgrade, Serbia.

**Geometric Science of Information.**

30 August–1 September 2023, .

**Classical and Quantum Mechanical Models of Many-Particle Systems.**

3–8 September 2023, Oberwolfach, Germany.

**Many-Body Quantum Systems.**

10–15 September 2023, Oberwolfach, Germany.

**Geometric, Algebraic and Topological Methods in Quantum Field Theory.**

17–23 September 2023, Villa de Leyva, Colombia.

**Women in Geometry 3.**

24–29 September 2023, Banff, Canada.

## Virtual seminars

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**Online Seminar of the Geometry, Mechanics and Control Thematic Network.**

Instituto de Ciencias Matemáticas' seminars on these topics.

**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.

**Control and Optimization Seminar.**

Louisiana State University.

**Differential Geometry Seminar Torino.**

Organised by the Differential Geometry groups of Università di Torino and Politecnico di Torino.

**Symplectic Zoominar.**

Online Seminar organized by CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris.

**ICTP Virtual Seminars.**

Online Seminar organized by International Centre for Theoretical Physics.

**Theory of Duality Seminar.**

Department of Mathematical Methods in Physics, University of Warsaw.

**Geometry and Topology Online.**

Warwick Mathematics Institute.

## Job offers, fellowships and supports

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### Ph.D. offers

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**Master Fellowships for Latin American Students.**

Universidad Rey Juan Carlos, Madrid, Spain

**Closing date: 10 April 2023.**

**PhD position on Applied Mathematics.**

University of Twente, Enschede, Netherlands

**Closing date: 14 April 2023.**

**PhD candidate in Algebraic Geometry.**

Royal Institute of Technology, Stockholm, Sweden

**Closing date: 21 April 2023.**

**PhD position in Sparse Control.**

CRAN-University of Lorraine, Nancy, France

Closing date: 29 April 2023.

**PhD positions in Optimal Transportation.**  
Lagrange Mathematics and Computation Center,  
Paris, France  
Closing date: 30 April 2023.

**PhD Position in Mathematics.**  
University of Münster, Münster, Germany  
Closing date: 30 April 2023.

**PhD position in Complex Geometry.**  
Aarhus University, Aarhus, Denmark

## Postdoctoral fellowships

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**Postdoctoral position in Symplectic Structures.**  
University of Cologne, Cologne, Germany  
Closing date: 6 April 2023.

**Postdoctoral Fellowship in Topological, Geometrical and AI methods in Neuroscience .**  
Basque Center for Applied Mathematics, Bilbao, Spain  
Closing date: 10 April 2023.

**Postdoctoral position in Complex Fluids.**  
Polytechnic University of Catalonia, Barcelona, Spain  
Closing date: 12 April 2023.

**Postdoctoral fellowship in Quantum Many-Body Problems.**  
Basque Center for Applied Mathematics, Bilbao, Spain  
Closing date: 14 April 2023.

**2 Postdoctoral J. A. Dieudonné Fellowships.**  
Université Côte d'Azur, Nice, France  
Closing date: 15 April 2023.

**Postdoctoral position in Mathematical Modeling .**  
Charles University, Prague, Czechia  
Closing date: 30 April 2023.

## Offers for researchers

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**Tenure-Track Assistant Professor of Mathematics.**  
Truman State University, Kirksville, United States of America  
Closing date: 3 April 2023.

**Tenure-track positions in Mathematics.**  
Eindhoven University of Technology, Eindhoven,

Closing date: 30 April 2023.

**PhD position in Differential Geometry.**  
Université libre de Bruxelles, Brussels, Belgium  
Closing date: 31 May 2023.

**PhD candidate in Differential Geometry .**  
University of Luxembourg, Belval, Luxembourg  
Closing date: 15 June 2023.

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

**Postdoctoral positions in Optimal Transportation.**  
Lagrange Mathematics and Computation Center,  
Paris, France  
Closing date: 30 April 2023.

**Postdoctoral positions in Ergodic Theory.**  
University of Zurich, Zurich, Switzerland  
Closing date: 30 April 2023.

**Postdoctoral Fellow in PDEs and Mathematical Physics.**  
Université Libre de Bruxelles, Brussels, Belgium  
Closing date: 30 May 2023.

**Postdoctoral position in Differential Geometry .**  
University of Luxembourg, Belval, Luxembourg  
Closing date: 15 June 2023.

**Postdoctoral positions in Stochastic Dynamics.**  
Technical University of Munich, Munich, Germany  
Closing date: 15 June 2023.

**Humboldt research fellowship for postdoctoral researchers.**  
Alexander von Humboldt Foundation  
Closing date: Open.

Netherlands  
Closing date: 8 April 2023.

**Lecturer in Mathematics .**  
University of Galway, Galway, Ireland  
Closing date: 26 April 2023.

**Tenure-Track Assistant Professor of Mathe-**

### **ematics.**

The University of Hong Kong, Central District,  
Hong Kong,

**Closing date: 30 April 2023.**

### **Tenure-Track position in Mathematical Biology.**

Pontificia Universidad Católica de Chile, Santiago  
de Chile, Chile

**Closing date: 7 May 2023.**

### **Tenure-track position in Mathematics.**

Nanjing University, Nanjing, China

**Closing date: 31 May 2023.**

## **Offers for visiting researchers**

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### **Abel Visiting Scholar Program.**

International Mathematical Union.

Postdoctoral mathematician to visit a research col-  
laborator for a month.

**Closing date: 30 April, 31 August and 31 December.**

### **Simons Visiting Professors at Mathematisches Forschungsinstitut Oberwolfach.**

Oberwolfach, Germany.

Junior or senior scientists from outside Europe.

**Closing date: Open.**

### **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.**

### **International Research in Groups at CIRM.**

Centre International de Rencontres Mathématiques  
(CIRM), France.

Small groups of researchers for 2 to 4 weeks.

## **Financial support for research projects and conferences**

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### **IMU Conference support program.**

For conferences in developing or economically dis-  
advantaged countries.

**Deadline: 15 April, 15 July and 1 October 2023.**

### **IMU Volunteer Lecturer Program.**

Financial assistance to universities in developing  
countries to host a 3-4-week intensive course.

**Deadline: 1 June and 1 September 2023.**

### **CIMPA-ICTP Fellowships for "Research in**

### **Professor Positions in Mathematics.**

Korea Institute For Advanced Study, Seoul , South  
Korea

**Closing date: 1 June 2023.**

### **Assistant/Associate Professor of Mathematics.**

Westminster College, Fulton, United States of  
America

**Closing date: Open Until Filled.**

### **Faculty positions in Mathematics.**

Bilkent University, Ankara, Turkey

**Closing date: Open Until Filled.**

**Closing date: Open at any time.**

### **Research in Residence at CIRM.**

Centre International de Rencontres Mathématiques  
(CIRM), France.

2 to 4 researchers.

**Closing date: Open at any time.**

### **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 CRM.**

Centre de Recerca Matemàtica, Catalonia, Spain.

Postdoctoral positions and research in pairs.

**Closing date: Any time between 6 and 12 months  
before the start of the desired stay.**

### **Visiting research fellow in Kent State Univer- sity.**

Mathematics Department-KSU, Ohio, USA.

Visiting for scholar researchers.

**Closing date: Open.**

### **Pairs".**

For researchers based in a developing country to col-  
laborate with a colleague in Europe.

**Deadline: 10 July 2023.**

### **Thematic programs at MSRI.**

Mathematical Sciences Research Institute, Berkeley,  
United States.

**Deadline: 1 October, 1 December and 1 March every  
year. Three years ahead.**

### Hot topics Workshop at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

Deadline: 1 October, 1 December and 1 March every year every year.

### Summer graduate schools at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

Deadline: 1 October, 1 December and 1 March every year every year.

### Workshop at CIRM.

Centre International de Rencontres Mathématiques, France.

Deadline: Open at any time.

### CIMPA Online courses program.

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

Deadline: Open all year.

### Support for workshop organization at Banff.

Banff International Research Station.

Deadline: No precise deadline.

### Proposal of a workshop in the Mathematisches Forschungsinstitut Oberwolfach.

Oberwolfach, Germany.

Deadline: Open.

### Hosting a workshop at AIMS South Africa.

Contributions for workshops about AIMS's research focus areas.

Deadline: No precise deadline.

## Interesting publication

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Special Issue "Contact Geometry: Reduction, Symmetries and Applications".

Section "Physics and Symmetry/Asymmetry".

Deadline: Deadline for submissions: 15 July 2023.

## Preprints

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### Network's members

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Álvaro Pelayo and Francisco Santos: *Moduli spaces of Delzant polytopes and symplectic toric manifolds.*  
2303.02369

[math.SG, math.CO, math.MG]

Juan-Pablo Ortega and Daiying Yin: *Expressiveness and Structure Preservation in Learning Port-Hamiltonian Systems.*

2303.02699

[math.DS]

Manuel de León, Manuel Lainz, Asier López-Gordón and Juan Carlos Marrero: *Nonholonomic brackets: Eden revisited.*

2303.03002

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

Alexandre Anahory Simões, David Martín de Diego and Bernhard Maschke: *Discrete gradient methods for irreversible port-Hamiltonian systems.*

2303.08034

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

Alberto Enciso, Michał Wrochna and Gunther Uhlmann: *Reconstruction of a Lorentzian manifold from its Dirichlet-to-Neumann map.*

2303.08430

[math.AP, math.DG]

Jaap Eising, Shenyu Liu, Sonia Martínez and Jorge Cortés: *Data-driven mode detection and stabilization of unknown switched linear systems.*

2303.11489

[math.OC]

Juan-Pablo Ortega and Daiying Yin: *Learnability of Linear Port-Hamiltonian Systems.*

2303.15779

[math.DS]

Eduardo García-Toraño Andrés and Tom Mestdag: *Conditions for symmetry reduction of polysymplectic and polycosymplectic structures.*

2303.16037

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

## Network's collaborators

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Veronica Centorrino, Anand Gokhale, Alexander Davydov, Giovanni Russo and Francesco Bullo: *Euclidean Contractivity of Neural Networks with Symmetric Weights*.

2302.13452 (version 2)  
[math.OC, cs.SY, eess.SY]

Rutwig Campoamor-Stusberg, Danilo Latini, Ian Marquette and Yao-Zhong Zhang: *Polynomial algebras from Lie algebra reduction chains  $\mathfrak{g} \supset \mathfrak{g}'$* .

2303.00975  
[math-ph, math.MP]

Cesare Tronci and François Gay-Balmaz: *Lagrangian trajectories and closure models in quantum-classical dynamics*.

2303.01975  
[math-ph, math.MP, math.SG, nlin.CD, physics.chem-ph, quant-ph]

Robin Delabays and Francesco Bullo: *Semicontraction and Synchronization of Kuramoto-Sakaguchi Oscillator Networks*.

2303.10127  
[math.DS, cs.SY, eess.SY, nlin.AO]

Armin Pirastehzad, Arjan van der Schaft and Bart Besselink: *A Notion of System Comparison*.

2303.11015  
[math.OC, math.DS]

Alexander Davydov, Saber Jafarpour, Anton V. Proskurnikov and Francesco Bullo: *Non-Euclidean Monotone Operator Theory and Applications*.

2303.11273  
[math.OC]

Jorge S. García and Tomoki Ohsawa: *Controlled Lagrangians and Stabilization of Euler–Poincaré Equations with Symmetry Breaking Nonholonomic Constraints*.

2303.13086  
[math.OC]

Oscar Cosserrat, Camille Laurent-Gengoux and Vladimir Salnikov: *Numerical Methods in Poisson Geometry and their Application to Mechanics*.

2303.15883  
[math.NA, cs.NA, math-ph, math.CA, math.DS, math.MP, math.SG]

Ll. Alsedà, D. Juher, J. Los and F. Mañosas: *Entropy stability and Milnor-Thurston invariants for Bowen-Series-like maps*.

2303.16516  
[math.DS]

## Links of interest

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**Geometry, Mechanics and Control Network**

**Journal of Geometric Mechanics**

**International Mathematical Union (IMU) Newsletter - March 2023**

**International Association of Mathematical Physics Bulletin - January 2023**

**European Mathematical Society**

**Royal Spanish Mathematical Society (RSME)**

**International Association of Mathematical Physics**

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

**International Centre for Theoretical Physics (ICTP)**

**European Research Council**

**European Commission - Research and Innovation**

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

**Mathematical and physical sciences funding, National Science Foundation, USA**

**Open Access Mathematics Journals**

**Open Access Physics Journals**

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

**SIAM Activity Groups award various prizes**

**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 Funding and Sponsorship

The British Royal Society Grants

The British Royal Society's medals and award

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