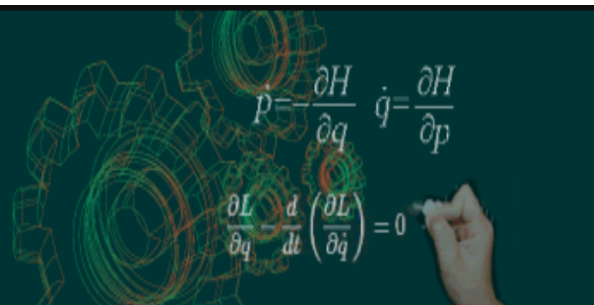




# GMC Network



## *Geometry, Mechanics and Control Network Infosheet*

August 2022

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### Virtual seminars

**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.

**Global Poisson Webinar.**

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

**Differential Geometry Seminar Torino.**

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

**Latin American Seminar on Differential Geometry.**

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

**Symplectic Zoominar.**

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

**ICMAT Geometry Seminar.**

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

**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.

## Conferences

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**Applied Mathematical Challenges and Recent Advances in the Micro-Mechanics of Matter.**

1–2 September 2022, Bristol, United Kingdom.

**Topological Methods in Mathematical Physics.**

2–6 September 2022, Erice, Italy.

**Online CIMPA/ICTP course: Lie symmetries in general relativity.**

2–7 September 2022, Trieste, Italy.

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

3–9 September 2022, Oberwolfach, Germany.

**Nonlocal Problems in Mathematical Physics, Analysis and Geometry.**

4–9 September 2022, Hangzhou, China.

**Mathematical physics: new developments and perspectives.**

4–5 September 2022, Paris, France.

**Modern advances in geometric group theory.**

5–9 September 2022, Manchester, United Kingdom.

**Summer School on Phase-field Methods in Mechanics.**

4–10 September 2022, Quiberon peninsula, France.

**Higher Symmetry and Quantum Field Theory.**

4–18 September 2022, Aspen, USA.

**QMATH 15-Mathematical Results in Quantum Physics.**

12–16 September 2022, California, USA.

**Geometry, Stochastics and Dynamics.**

12–19 September 2022, London, United Kingdom.

**Generalized Global Symmetries, Quantum Field Theory, and Geometry.**

19–23 September 2022, New York, USA.

## Job offers, fellowships and supports

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### Ph.D. offers

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**PhD student in mathematical statistics.**

Umea university, Umea, Sweden

Closing date: 18 September 2022.

**Noncommutative Geometry and Noncommutative Invariant Theory.**

25–30 September 2022, Banff, Canada.

**Poisson Geometry and Artin-Schelter Regular Algebras.**

25–30 September 2022, Banff, Canada.

**Workshop on Complex Geometry and Geometric Group Theory.**

26–30 September 2022, Karlsruhe, Germany.

**Geometric Representation Theory, Integrability, and Supersymmetric Gauge Theories.**

26–30 September 2022, New York, USA.

**Quantization of Complex Symplectic Varieties.**

2–8 October 2022, Oberwolfach, Germany.

**New Four-Dimensional Gauge Theories.**

24–28 October 2022, Berkeley, USA.

**Computational Differential Geometry and its Applications in Physics.**

14–18 November 2022, New York, USA.

**Tenth Workshop on Integrable Systems.**

1–2 December 2022, Sydney, Australia.

**5th International Conference on Soft Computing, Control and Mathematics.**

17–18 December 2022, Dubai, United Arab Emirates.

**Lie Groups, Singular Spaces, and Higher Structures.**

9–13 January 2023, Toronto, Canada.

**Workshop on the Geometry and Dynamics of Groups of Transformations.**

16–20 January 2023, Toronto, Canada.

**Young Geometric Group Theory XI.**

13–17 February 2023, Münster, Germany.

**University Assistant at the Department of Statistics and Operations Research.**

University of Vienna, Vienna, Austria

Closing date: 25 September 2022.

**PhD position in local algebra.**

BCAM, Bilbao, Spain

Closing date: 29 September 2022.

**PhD student in computational mathematical statistics.**

Umea university, Umea, Sweden

Closing date: 30 September 2022.

**PhD Position in Geometry.**

TU Wien, Vienna, Austria

Closing date: 1 October 2022 .

**Graduate scholarship in mathematics.**

Nanyang Technological University, Nanyang, Singapore

Closing date: 30 December 2022.

**PhD positions in Dynamics, Control and Numerics.****Postdoctoral fellowships**

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**Postdoctoral Fellowship in Modelling and Simulation.**

BCAM, Bilbao, Spain

Closing date: 8 September 2022.

**Postdoc on Quantum Groups and Noncommutative Geometry.**

Charles University, Prague, Czech Republic

Closing date: 9 September 2022.

**Postdoc position in numerical analysis and machine learning.**

Scuola Normale Superiore, Pisa, Italy

Closing date: 11 September 2022.

**Postdoc in Mathematical Biology.**

CRM, Barcelona, Spain

Closing date: 21 September 2022.

**PostDoc in Analysis and its Applications.**

University of Vienna, Vienna, Austria

Closing date: 30 October 2022.

**IST-BRIDGE: International Postdoctoral Program.**

Institute of Science and Technology Austria, Klosterneuburg, Austria

Closing date: 4 November 2022.

**Postdoctoral position in mathematics.**

Nanyang Technological University, Nanyang, Singapore

Closing date: 30 December 2022.

FAU Erlangen-Nurnberg, Erlangen, Germany

Closing date: 30 December 2022.

**PhD in Applied Mathematics.**

Safran Tech, Paris, France

Closing date: 31 December 2022.

**3 PhD positions in Geometry, Probability, and Deep Learning.**

NTU Singapore, Singapore

Closing date: Open until filled.

**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.

**Postdoctoral positions in Dynamics, Control and Numerics.**

FAU Erlangen-Nurnberg, Erlangen, Germany

Closing date: 30 December 2022.

**3 postdoc positions in Geometry, Probability, and Deep Learning.**

NTU Singapore, Singapore

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.

**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 Mathematical Analysis.

Bocconi University, Milan, Italy

Closing date: 11 September 2022.

### Research Professor.

KU Leuven, Leuven, Belgium

Closing date: 14 September 2022.

### Full Professor Position.

Nagoya University, Nagoya, Japan

Closing date: 20 September 2022.

### Tenure-track faculty positions.

KAIST, Daejeon, Republic of Korea

Closing date: 29 September 2022.

### Tenure Track Assistant Professor in Mathematics.

Technical University of Denmark, Lyngby, Denmark

Closing date: 30 September 2022.

## Offers for visiting researchers

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### ICTP-IMU Mathematics Visiting Fellowships.

ICTP in Trieste, Italy.

For short visits.

Closing date: 30 September.

### Abel Visiting Scholar Program.

International Mathematical Union.

Postdoctoral mathematician to visit a research collaborator for a month.

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

### 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.

### W3 professorship in Algebra or Discrete Mathematics.

Georg August University of Göttingen, Göttingen, Germany

Closing date: 30 September 2022.

### Assistant Professor positions in Mathematics.

Institute of Science and Technology Austria, Klosterneuburg, Austria

Closing date: 26 October 2022.

### Professor positions in Mathematics .

Institute of Science and Technology Austria, Klosterneuburg, Austria

Closing date: 26 October 2022.

### Permanent position in Applied Statistics.

BCAM, Bilbao, Spain

Closing date: Open until filled.

### International Research in Groups at CIRM.

Centre International de Rencontres Mathématiques (CIRM), France.

Small groups of researchers for 2 to 4 weeks.

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

### Hot topics Workshop at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

### Summer graduate schools at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

### CIMPA School 2024.

For organizing research schools in mathematics in developing countries.

Deadline: 9 October.

### 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.

### International Mathematical Union - Conference support program.

For conferences in developing or economically disadvantaged countries.

Deadline: Several calls.

## Interesting publications

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Volume: *13th Young Researchers Workshop on Geometry, Mechanics and Control*. **Mathematical Texts of the University of Coimbra.**

Number 48, 2019.

Three mini-courses.

Online, free access.

Editors: Maria Barbero-Liñán, Margarida Camarinha, Raquel Caseiro, Leonardo Colombo, and Joana Nunes da Costa.

Special Issue "*Symmetry in Geometric Mechanics and Mathematical Physics*". **A special issue of Symmetry.**

Section "Physics and Symmetry/Asymmetry".

MDPI Open Access Journals.

Editors: Manuel de León and Narciso Román-Roy.

Deadline for manuscript submissions: 15 February 2023.

## Preprints

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### Network's members

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Asier López-Gordón, Leonardo Colombo and Manuel de León: *Nonsmooth Herglotz variational principle*.

2208.02033

[math.OC, cs.SY, eess.SY, math-ph, math.MP]

Manuel de León, Manuel Lainz, Asier López-Gordón and Xavier Rivas: *Hamilton-Jacobi theory for contact systems: autonomous and non-autonomous*.

2208.07436

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

Ángel Ballesteros, Iván Gutiérrez-Sagredo and Francisco J. Herranz: *All noncommutative spaces of  $\kappa$ -Poincaré geodesics*.

2208.05851

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

Gianluca Bianchin, Miguel Vaquero, Jorge Cortés and Emiliano Dall'Anese: *k-Dimensional Agreement in Multiagent Systems*.

2208.08999

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

Mattia Bianchi, Sergio Grammatico and Jorge Cortés: *Data-driven stabilization of switched and constrained linear systems.*

2208.11392  
[math.OC, cs.SY, eess.SY, math.DS]

## Network's collaborators

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V. Mehrmann and A. J. van der Schaft: *Differential-algebraic systems with dissipative Hamiltonian structure.*

2208.02737  
[math.OC, math.DG, math.DS]

Vladimir Dragovic, Borislav Gajic and Bozidar Jovanovic: *Spherical and planar ball bearings – non-holonomic systems with invariant measures.*

2208.03009  
[math-ph, math.DS, math.MP, nlin.SI]

Francisco Correa, Andreas Fring and Takanobu Taira: *Moduli spaces for PT-regularized solitons.*

2208.03199  
[hep-th, math-ph, math.MP, nlin.SI]

Saber Jafarpour, Alexander Davydov, Matthew Abate, Francesco Bullo and Samuel Coogan: *Robust Training and Verification of Implicit Neural Networks: A Non-Euclidean Contractive Approach.*

2208.03889  
[cs.LG, cs.SY, eess.SY, math.DS, math.OC]

Federico Finkel and Artemio González-López: *Thermodynamics and criticality of  $su(m)$  spin chains of Haldane-Shastry type.*

2208.04014  
[cond-mat.stat-mech, math-ph, math.MP, quant-ph]

G. Barajas, O. García-Prada, P. B. Gothen and I. Mundet i Riera: *Non-connected Lie groups, twisted equivariant bundles and coverings.*

2208.09022  
[math.DG, math.AG]

Paolo Mason, Yacine Chitour and Mario Sigalotti: *On universal classes of Lyapunov functions for linear switched systems.*

2208.09179  
[math.OC]

Alonso Contreras-Astorga, David J. Fernández C. and César Muro-Cabral: *Equivalent non-rational extensions of the harmonic oscillator, their ladder operators and coherent states.*

2208.09733  
[quant-ph, math-ph, math.MP]

Tomoki Ohsawa: *Preservation of Quadratic Invariants by Semieexplicit Symplectic Integrators for Non-separable Hamiltonian Systems.*

2208.10546  
[math.NA, cs.NA, math.DS, physics.comp-ph]

Alberto S. Cattaneo and Pavel Mnev: *A note on gluing via fiber products in the (classical) BV-BFV formalism.*

2208.11211  
[math-ph, math.MP, math.QA]

## Links of interest

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Geometry, Mechanics and Control Network

Journal of Geometric Mechanics - June 2022, Volume 14, Issue 3

International Mathematical Union (IMU) Newsletter - July 2022

International Association of Mathematical Physics Bulletin - July 2022

European Mathematical Society

Royal Spanish Mathematical Society (RSME)

International Association of Mathematical Physics

Open Access American Institute of Mathematical Sciences (AIMS) Journal

Euraxess Spain

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 Group on Control and Sys-  
tems Theory Prize

SIAM Activity Group on Control and Sys-  
tems 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 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  
[gmcactivities@gmail.com](mailto:gmcactivities@gmail.com)