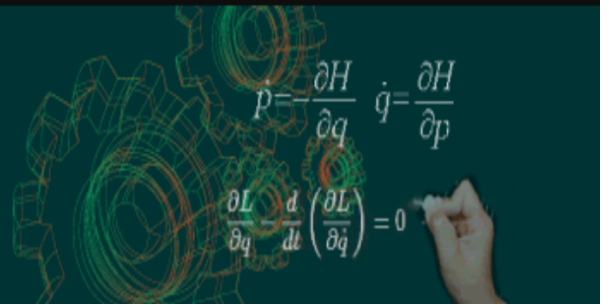




GMC Network



Geometry, Mechanics and Control Network Infosheet

June 2023

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Network's activities

XV International ICMAT Summer School on Geometry, Dynamics and Field Theory.
10–11 July 2023, Miraflores de la Sierra, Madrid, Spain.

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

Dg-manifolds in Geometry and Physics.
3–7 July 2023, Paris, France.

From smooth to C^0 symplectic geometry: topological aspects and dynamical implications.
3–7 July 2023, Marseille, France.

Workshop “Mathematical Physics in the Heart of Germany”.
4 July 2023, Paderborn, Germany.

“Dynamics, bifurcations and numerics”, dedicated to the memory of Claudia Wulff.
4–7 July 2023, Surrey, United Kingdom.

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.

Summer school of Geometry, Topology and Applications.

12 July–12 August 2023, Hradec Králové, Czech Republic.

Nonlinear PDEs: Recent Trends in the Analysis of Continuum Mechanics.

17–21 July 2023, Bonn, Germany.

LMS Research School: Machine Learning in Mathematics and Theoretical Physics.

17–21 July 2023, Oxford, United Kingdom.

Emergent Geometries from Strings and Quantum Fields.

19–22 July 2023, Firenze, Italy.

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.

VIASM-IAMP Summer School in Mathematical Physics.

1–5 August 2023, Quy Nhon, Vietnam.

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 Physical Sciences.

18–31 August 2023, Belgrade, Serbia.

DANGER 3: Data, Numbers, and Geometry.

24–25 August 2023, London, United Kingdom.

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, Saint-Malo, France.

XLIII Dynamics Days Europe.

3–8 September 2023, Naples, Italy.

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.

Summer school in theoretical mechanics.

11–16 September 2023, Quiberon, France.

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.

2nd International Conference on Advanced Physics and Quantum Physics.

2–4 October 2023, Vienna, Austria.

Complex Lagrangians, Mirror Symmetry, and Quantization.

15–20 October 2023, Banff, Canada.

Lagrangian Multiform Theory and Pluri-Lagrangian Systems.

22–27 October 2023, Banff, Canada.

Differential Galois Theory and Applications to Mechanics (CIMPA School).

23 October–3 November 2023, Santo Domingo, Dominican Republic.

On Symmetries of Differential and Difference Equations and Their Applications.

25–27 October 2023, Stellenbosch, South Africa.

Mini-Workshop: Standard Subspaces in Quantum Field Theory and Representation Theory.

29 October–3 November 2023, Oberwolfach, Ger-

many.

Recent advances in geometric analysis.

6–10 November 2023, Luminy, France.

8th Iberoamerican Congress on Geometry.

10–15 December 2023, Pucón, Chile.

Online Course

ICTP–PWF Latin America - Advanced Lectures on Theoretical Physics: Quantum Field

Theory I.

11 September 2023–31 January 2024.

Virtual seminars

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

Instituto de Ciencias Matemáticas' seminars on these topics.

Mathematics and High Energy Physics Seminars.

ICTP-PWF Latin America-Physics Latam New Seminar Series.

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

Ph.D. offers

PhD position in Geometry and Probability.

University of Strasbourg, Strasbourg, France

Closing date: 2 July 2023.

PhD candidates in Mathematics.

University of Genova, Genova, Italy

Closing date: 9 July 2023.

PhD Position in Geometric Mechanics.

University of Exeter, Exeter, United Kingdom

Closing date: 10 July 2023.

PhD position in Deep Learning.

University of Vienna, Vienna, Austria

Closing date: 15 July 2023.

PhD Positions in Geometric Variational Problems.

University of Vienna, Vienna, Austria

Closing date: 13 August 2023.

PhD position in Algebraic Geometry.

University of Antwerp, Antwerp, Belgium

Closing date: 17 August 2023.

PhD position in Analysis/Geometry .

University of Fribourg, Fribourg, Switzerland

Closing date: 30 August 2023.

PhD position in Algebraic Geometry .
Max Planck Institute for Mathematics in the Sciences,
Leipzig, Germany
Closing date: 14 September 2023.

PhD candidate in Tensor Calculus.

Postdoctoral fellowships

Postdoctoral position in Symplectic Topology.
University of Cambridge Bielefeld, Germany
Closing date: 10 July 2023.

Postdoctoral position in Mathematical Analysis.
University of Luxembourg, Belval, Luxembourg
Closing date: 15 July 2023.

Postdoctoral position in Fluid Dynamics.
Monash University, Melbourne, Australia
Closing date: 15 July 2023.

Research Fellow in Mathematical Physics.
University of Melbourne, Melbourne, Australia
Closing date: 27 July 2023.

Postdoctoral fellowship in Applied Mathematics.
Fundação Getulio Vargas, Rio de Janeiro, Brazil
Closing date: 6 August 2023.

Associate Professor in Networks and Complex Systems.
Royal Institute of Technology, Stockholm, Sweden
Closing date: 16 August 2023.

Offers for researchers

Lecturer in Mathematics and Statistics.
Murdoch University, Perth, Australia
Closing date: 4 July 2023.

Lecturer in Applied Mathematics.
University of Leicester, University of Leicester, United Kingdom
Closing date: 5 July 2023.

Ikerbasque 2023 call for Research Associates.
Basque Center for Applied Mathematics, Bilbao, Spain
Closing date: 14 July 2023.

Tenure-track position in Algebra.
Universidad Nacional Autónoma de México, Oaxaca, México
Closing date: 21 July 2023.

Open rank faculty positions in Applied Mathematics .

Czech Technical University, Prague, Czech Republic
Closing date: 25 October 2023.

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

Postdoctoral position in Mathematics.
Czech Academy of Sciences, Prague, Czechia
Closing date: 19 August 2023.

Postdoctoral position in Geometry.
Technical University of Graz, Graz, Germany
Closing date: 26 August 2023.

Postdoctoral position in PDE Analysis.
National Taiwan University, Taipei, Taiwan
Closing date: 31 August 2023.

Postdoctoral positions in Mathematics.
Max Planck Institute for Mathematics in the Sciences,
Leipzig, Germany
Closing date: 30 November 2023.

Postdoctoral position in Scientific Computing.
Ecole Polytechnique Fédérale de Lausanne, Lausanne,
Switzerland
Closing date: Open until filled.

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

Fundação Getulio Vargas, Rio de Janeiro, Brazil
Closing date: 6 August 2023.

Professor positions in Mathematics.
ETH Zurich, Zurich, Switzerland
Closing date: 15 August 2023.

Tenure-track professorship in Data Science and Optimization.
Heidelberg University, Heidelberg, Germany
Closing date: 30 August 2023.

Tenure-track position in Applied Mathematics.
California State University, San Bernardino(CA),
United States of America
Closing date: 15 September 2023.

Assistant/Associate Professor of Mathematics.
Westminster College, Fulton, United States of America
Closing date: Open Until Filled.

Offers for visiting researchers

Abel Visiting Scholar Program.

International Mathematical Union.
Postdoctoral mathematician to visit a research collaborator for a month.

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

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.

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

IMU Volunteer Lecturer Program.

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

Deadline: 1 September and 1 June 2023.

CIMPA-ICTP Fellowships for "Research in Pairs".

For researchers based in a developing country to collaborate with a colleague in Europe.

Deadline: 10 July 2023.

IMU Conference support program.

For conferences in developing or economically disadvantaged countries.

Deadline: 15 July, 1 October 2023 and 15 April 2024.

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.

CIMPA Schools call for proposals.

Research schools in developing countries.

Deadline: 10 October 2023.

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

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

Section "Physics and Symmetry/Asymmetry".

Deadline: Deadline for submissions: 15 July 2023.

Preprints

Network's members

Henrique Bursztyn, Alberto S. Cattaneo, Rajan Amit Mehta and Marco Zambon: *Graded geometry and generalized reduction*.

2306.01508

[math.SG, hep-th, math.DG]

Carlos San Millán, Manuel Gadella, Şengül Kuru and Javier Negro: *SUSY partners and S-matrix poles of the one dimensional Rosen-Morse II Hamiltonian*.

2306.01912

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

María Barbero Liñán, David Martín de Diego and Rodrigo T. Sato Martín de Almagro: *A new perspective on symplectic integration of constrained mechanical systems via discretization maps*.

2306.06786

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

Alexandre Anahory Simões, Leonardo Colombo, Manuel de León, Juan Carlos Marrero, David Martín de Diego and Edith Padrón: *Reduction by symmetries of contact mechanical systems on Lie groups*.

2306.07028 (version 2)

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

Mohammed Alyaseen, Nikolay Atanasov and Jorge Cortés: *Continuity and Boundedness of Minimum-Norm CBF-Safe Controllers*.

2306.07398

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

Xavier Gràcia, Javier de Lucas, Xavier Rivas and Narciso Román-Roy: *On Darboux theorems for geometric structures induced by closed forms*.

2306.08556

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

Josep Fontana-McNally, Eva Miranda and Daniel Peralta-Salas: *An equivariant Reeb-Beltrami correspondence and the Kepler-Euler flow*.

2306.09898

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

J. C. González-Dávila: *Invariant contact metric structures on tangent sphere bundles of compact symmetric spaces*.

2306.11356

[math.DG]

José Luis Alonso, Carlos Bouthelie-Madre, Jesús Clemente-Gallardo and David Martínez-Crespo: *Geometric flavours of Quantum Field theory on a Cauchy hypersurface. Part I: Geometric quantization*.

2306.14844

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

Álvaro Pelayo and Fraydoun Rezakhanlou: *The random Arnold Conjecture: a new probabilistic Conley-Zehnder Theory for symplectic maps*.

2306.15586

[math.DS, math.PR, math.SG]

C. Bouthelie-Madre, J. Clemente-Gallardo, L. González-Bravo and D. Martínez-Crespo: *Hybrid Koopman C^* -formalism and the hybrid quantum-classical master equation*.

2306.15601

[math-ph, math.MP]

Network's collaborators

Géry de Saxcé and Charles-Michel Marle: *Presentation of Jean-Marie Souriau's book "Structure des systèmes dynamiques"*.

2306.03106

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

Hichem Lassoued and Camille Laurent-Gengoux: *Contact resolutions of singular Jacobi structures*.

2306.06774

[math.DG]

Paolo Aniello, Sonia L’Innocente, Stefano Mancini, Vincenzo Parisi, Ilaria Svampa and Andreas Winter: *Invariant measures on p-adic Lie groups: the p-adic quaternion algebra and the Haar integral on the p-adic rotation groups.*

2306.07110

[math-ph, math.FA, math.MP, math.NT]

Friedrich Philipp, Manuel Schaller, Karl Worthmann, Timm Faulwasser and Bernhard Maschke: *Optimal control of port-Hamiltonian systems: energy, entropy, and exergy.*

2306.08914

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

R. Camassa, G. Falqui, G. Ortenzi, M. Pedroni and T. T. Vu Ho: *Simple two-layer dispersive models in the Hamiltonian reduction formalism.*

2306.09154

[physics.flu-dyn, math-ph, math.MP, nlin.SI]

Antonio Linero Bas, Víctor Mañosa and Daniel Nieves Roldán: *On the accumulation points of non-periodic orbits of a difference equation of fourth order.*

2306.12061

[math.DS]

François Gay-Balmaz and Hiroaki Yoshimura: *Systems, variational principles and interconnections in nonequilibrium thermodynamics.*

2306.12328

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

Alexey V. Bolsinov, Andrey Yu. Konyaev and Vladimir S. Matveev: *Applications of Nijenhuis Geometry V: geodesically equivalent metrics and finite-dimensional reductions of certain integrable quasilinear systems.*

2306.13238

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

Ameth NDiaye and Aïssa Wade: *Deformations of pairs of codimension one foliations.*

2306.15060

[math.DG]

Philip Arathoon and Matthew D. Kvalheim: *Koopman Embedding and Super-Linearization Counterexamples with Isolated Equilibria.*

2306.15126

[math.DS]

David Marín, Lucas Queiroz and Jordi Villadelprat: *The period of the limit cycle bifurcating from a persistent polycycle.*

2306.15473

[math.DS]

François Gay-Balmaz and Cesare Tronci: *Fluid models of mixed quantum-classical dynamics.*

2306.15652

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

Links of interest

Geometry, Mechanics and Control Network

Journal of Geometric Mechanics

International Mathematical Union (IMU) Newsletter - May 2023

International Association of Mathematical Physics Bulletin - April 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 gmcactivities@gmail.com