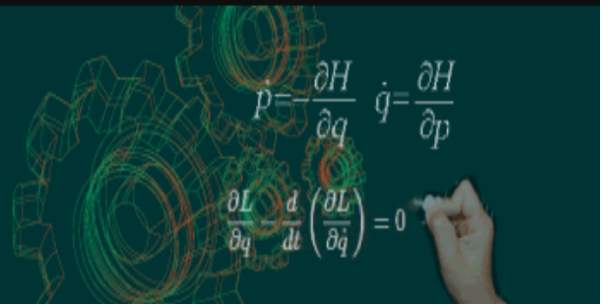




GMC Network



Geometry, Mechanics and Control Network Infosheet

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Contents

Outstanding event	1
Other conferences	1
Online courses	3
Virtual seminars	3
Job offers, fellowships and supports	3
Ph.D. offers	3
Postdoctoral fellowships . .	4
Offers for researchers	4
Offers for visiting researchers	5
Financial support	5
Preprints	6
Network's members	6
Network's collaborators . .	6
Links of interest	7

Outstanding event

XXXI International Fall Workshop on Geometry and Physics.

4–8 September 2023, Santiago de Compostela, Spain.

Other conferences

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.

School on Categorical Symmetries in Quantum Field Theory.

3–8 September 2023, Les Diablerets, Switzerland.

International Conference on Mathematical Physics, and Applications.

4–5 September 2023, Tokyo, Japan.

Differential Geometry Workshop.

6–9 September 2023, Iasi, Romania.

Many-Body Quantum Systems.

10–15 September 2023, Oberwolfach, Germany.

International Conference on Classical Physics and Symplectic Geometry.

11–12 September 2023, Amsterdam, Netherlands.

International Conference on Mathematical Physics and Dynamics.

11–12 September 2023, Zurich, Switzerland.

International Conference on Symplectic Geometry and Mathematical Physics.

11–12 September 2023, Zurich, Switzerland.

International Conference on Mathematical Physics, and Applications.

11–12 September 2023, Zurich, Switzerland.

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.

International Conference on Mathematical Physics and Geometry.
18–19 September, 2023, Paris, France.

International Conference on Symplectic Geometry in Classical Mechanics.
18–19 September, 2023, Toronto, Canada.

Women in Geometry 3.
24–29 September 2023, Banff, Canada.

International Conference on Mathematical Physics, and Applications.
2–3 October 2023, Beijing, China.

2nd International Conference on Advanced Physics and Quantum Physics.
2–4 October 2023, Vienna, Austria.

Marvellous Event On Geometric Analysis.
8–13 October 2023, Bedlewo, Poland.

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.

Control of PDEs Models for Living Systems.
22–27 October 2023, Oberwolfach, Germany.

VI Workshop on Fluids and PDE.
23–27 October 2023, Campinas, Brazil.

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, Germany.

Infinite Dimensional Geometry and Fluids.
5–10 November 2023, Banff, Canada.

International Conference on Continuum Mechanics.
6–7 November, 2023, Cape Town, South Africa.

International Conference on Mathematics and Theoretical Physics.
6–7 November, 2023, San Francisco, USA.

Recent advances in geometric analysis.
6–10 November 2023, Luminy, France.

Small scale dynamics in incompressible fluid flows.
6–10 November 2023, Pasadena, California.

Emergent Hydrodynamics of Integrable Systems and Soliton Gases.
13–17 November 2023, Luminy, France.

Mathematical billiards: at the crossroads of dynamics, geometry, analysis, and mathematical physics.
13–17 November 2023, New York, USA.

International Conference on Continuum Mechanics and Conservation Laws.
27–28 November 2023, Singapore, Singapore.

Vortex Dynamics: the Crossroads of Mathematics, Physics and Applications.
3–8 December 2023, Banff, Canada.

International Conference on Symplectic Geometry in Physics.
4–5 December 2023, Kuala Lumpur, Malaysia.

International Conference on Physics and Symplectic Geometry.
4–5 December 2023, Tokyo, Japan.

8th Iberoamerican Congress on Geometry.
10–15 December 2023, Pucón, Chile.

International Conference on Mathematical Physics, and Applications.
2–3 February 2024, Rio de Janeiro, Brazil.

Winter School in Mathematical Physics.
8–13 January 2024, Les Diablerets, Switzerland.

International Conference on Mathematical Physics, and Applications.
19–20 February 2024, Paris, France.

International Conference on Mathematical Physics, and Applications.
26–27 February 2024, Sydney, Australia.

Online courses

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

11 September 2023–31 January 2024.

ICTP–PWF Latin America - Advanced Lec-

tures on Theoretical Physics: Theoretical Particle Physics.

12 September 2023–31 January 2024.

Equivariant methods in geometry.

8–12 January 2024, Cambridge, United Kingdom.

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 Algebraic Geometry.

Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany

Closing date: 14 September 2023.

PhD positions in Exact Sciences.

University of Turku, Turku, Finland

Closing date: 15 September 2023.

PhD position in Geometry and Gauge Theory.

Georg August University of Göttingen, Göttingen, Germany

Closing date: 20 September 2023.

PhD position in Differential Geometry.

Université libre de Bruxelles, Brussels, Belgium

Closing date: 30 September 2023.

PhD position in Inverse Problems .

University of Helsinki, Helsinki, Finland

Closing date: 1 October 2023.

PhD position in Control of Aerial Robots.

University of Luxembourg, Kirchberg, Luxembourg

Closing date: 9 October 2023.

PhD candidate in Tensor Calculus.

Czech Technical University, Prague, Czech Republic

Closing date: 25 October 2023.

PhD position in Optimization of Heat Exchange.

KU Leuven, Leuven, Belgium

Closing date: Open Until Filled.

3 PhD positions in Robotics.

University of Twente, Twente, Austria

Closing date: Open Until Filled.

PhD position in Geometry.

University of Luxembourg, Belval, Luxembourg

Closing date: Open Until Filled.

Postdoctoral fellowships

Postdoctoral fellowships in Mathematics.

ETH Zurich, Zurich, Switzerland

Closing date: 17 September 2023.

Postdoctoral position in Mathematical General Relativity.

University of Edinburgh, Edinburgh, United Kingdom

Closing date: 20 September 2023.

Postdoctoral positions in Algebraic Geometry.

University of Antwerp, Antwerp, Belgium

Closing date: 28 September 2023.

Postdoctoral position in Multiscale Multi-physics.

University of Liverpool, Liverpool, United Kingdom

Closing date: 30 September 2023.

Postdoctoral position in Machine Learning.

University of Würzburg, Würzburg, Germany

Closing date: 30 September 2023.

Postdoctoral position in Modelling of Curly Hair.

University of Grenoble, Montbonnot, France

Closing date: 30 September 2023.

Postdoctoral position in Complex and Symplectic Geometry.

University of Florence, Florence, Italy

Closing date: 17 October 2023.

Postdoctoral positions in IST-BRIDGE program.

The Institute of Science and Technology Austria, Klosterneuburg, Austria

Closing date: 11 November 2023.

Postdoctoral positions in Mathematics.

Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany

Closing date: 30 November 2023.

Two Postdoctoral positions as Milnor Lecturer.

Stony Brook University, Stony Brook (NY), United States of America

Closing date: 30 November 2023.

Postdoctoral positions in Mathematics.

Tsinghua University, Beijing, China

Closing date: 1 March 2024.

Humboldt research fellowship for postdoctoral researchers.

Alexander von Humboldt Foundation

Closing date: Open.

Offers for researchers

Lecturer in Applied Algebra or Applied Topology.

Swansea University, Swansea, United Kingdom

Closing date: 4 September 2023.

Tenure-track position in Applied Mathematics.

California State University, San Bernardino (CA), United States of America

Closing date: 15 September 2023.

Full Professor in Geometry/Optimization.

The Paris Lodron University Salzburg, Salzburg, Austria

Closing date: 24 September 2023.

Two Tenure-track positions in Geometry or Topology .

University of Missouri, Columbia (MI), United States of America

Closing date: 1 October 2023.

Tenured professor in Mathematics.

Stony Brook University, Stony Brook (NY), United States of America

Closing date: 5 October 2023.

Full Professor in Computational PDE.

Murdoch University, Perth, Australia

Closing date: 18 October 2023.

Tenure-track positions in Mathematics.

The Institute of Science and Technology Austria, Klosterneuburg, Austria

Closing date: 25 October 2023.

Professor position in Mathematics.

University of Fribourg, Fribourg, Switzerland

Closing date: 31 October 2023.

Professor of Mathematics.

Harvard University, Cambridge (MA), United States of America

Closing date: 1 December 2023.

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 2023, 15 March and 1 June 2024.

SwissMAP Research Station in Les Diablerets.

Financial support for scientific events.

Deadline: 30 September 2023.

IMU Conference support program.

For conferences in developing or economically disadvantaged countries.

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

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.

Preprints

Network's members

Masih Haseli and Jorge Cortés: *Modeling Nonlinear Control Systems via Koopman Control Family: Universal Forms and Subspace Invariance Proximity.*

2307.15368

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

L. Blanco, F. Jiménez Alburquerque, J. de Lucas and C. Sardón: *Geometry preserving numerical methods for physical systems with finite-dimensional Lie algebras.*

2308.00820

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

Alexandre Anahory Simões, Leonardo Colombo, Manuel de León, Modesto Salgado and Silvia Souto: *Contact formalism for dissipative mechanical systems on Lie algebroids.*

2308.00990

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

Álvaro Pelayo and Francisco Santos: *The structure of monotone blow-ups in symplectic toric geometry and a question of McDuff.*

2308.03085

[math.SG, math.AG, math.CO]

Manuel de León and Rubén Izquierdo-López: *A review on coisotropic reduction in Symplectic, Cosymplectic, Contact and Co-contact Hamiltonian systems.*

2308.07637 (version 2)

[math.SG]

Begüm Ateşli, Oğul Esen, Manuel de León and Cristina Sardón: *On Non-autonomous Hamiltonian Dynamics, Dual Spaces, and Kinetic Lifts.*

2308.10336

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

J. L. Alonso, C. Bouthelier-Madre, J. Clemente-Gallardo, D. Martínez-Crespo and J. Pomar: *Effective nonlinear Ehrenfest hybrid quantum-classical dynamics.*

2308.14440 (version 2)

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

Alberto Enciso and Daniel Peralta-Salas: *Obstructions to topological relaxation for generic magnetic fields.*

2308.15383

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

Miguel Vaquero, Jorge Cortés and David Martín de Diego: *Symmetry Preservation in Hamiltonian Systems: Simulation and Learning.*

2308.16331

[math-ph, cs.LG, cs.NA, math.MP, math.NA, math.OC, math.SG]

Network's collaborators

Daniel Precioso, Robert Milson, Louis Bu, Yvonne Menchions and David Gómez-Ullate: *Hybrid Search method for Zermelo's navigation problem.*

2308.02434

[cs.SE, math.OC]

Damien Calaque: *Derived symplectic geometry.*

2308.04210 (version 2)

[math.SG, math.AG]

Gioele Zardini, Nicolas Lanzetti, Giuseppe Belgioioso, Christian Hartnik, Saverio Bolognani, Florian Dörfler and Emilio Frazzoli: *Strategic Interactions in Multimodal Mobility Systems: A Game-Theoretic Perspective.*

2308.04820

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

Andreas Fring and Marta Reboiro: *Thermodynamic*

cycles in the broken PT-regime – beating the Carnot cycle.

2308.06176

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

Nicki Magill, Ana Rita Pires and Morgan Weiler: *A classification of infinite staircases for Hirzebruch surfaces.*

2308.08065

[math.SG, math.NT]

Isabelle Charton and Liat Kessler: *Monotone Symplectic Six-Manifolds that admit a Hamiltonian GKM Action are diffeomorphic to Smooth Fano Threefolds.*

2308.10541

[math.SG]

Rutwig Campoamor-Stursberg, Danilo Latini, Ian Marquette and Yao-Zhong Zhang: *Polynomial alge-*

bras from commutants: Classical and Quantum aspects of \mathcal{A}_3 .

2308.12705

[math-ph, math.MP]

Christopher Eldred, François Gay-Balmaz, Sofia Hu-

raka and Vakhtang Putkaradze: *Lie-Poisson Neural Networks (LPNets): Data-Based Computing of Hamiltonian Systems with Symmetries.*

2308.15349

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

Links of interest

Geometry, Mechanics and Control Network

Journal of Geometric Mechanics

International Mathematical Union (IMU) Newsletter - July 2023

Instituto de Ciencias Matemáticas (ICMAT) Newsletter - July 2023

International Association of Mathematical Physics Bulletin - July 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