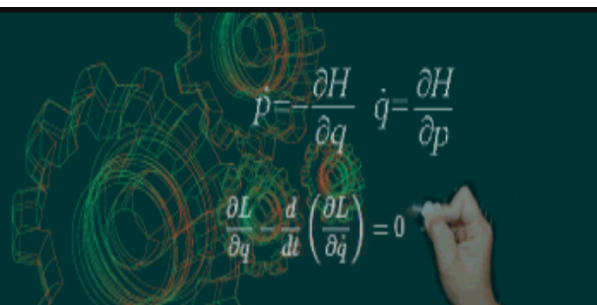




GMC Network



Geometry, Mechanics and Control Network Infosheet

February 2023

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Network's activities

17th International Young Researchers Workshop on Geometry, Mechanics and Control.
29–31 March 2023, KU Leuven, Belgium.

Other conferences

Cartan Geometry and Related Topics.
5–9 March 2023, Geilo, Norway.

Gauge Fields in Arithmetic, Topology and Physics.
6–10 March 2023, Edinburgh, United Kingdom.

Optimal Transport Theory and Applications to Physics.
13–17 March 2023, French Alps, France.

Crossroads of Representation Theory, Geometry and Higher Structures.
13–26 March 2023, Puerto Madryn, Argentina.

Interactions between Poisson Geometry and Quantisation.
20–24 March 2023, Göttingen, Germany.

SuperGeometry and SuperModuli.
27–31 March 2023, New York, United States.

Walkshop “Mathematical Physics”.
27 March –1 April 2023, Trier, Germany.

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.

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.

Groups and Dynamics in Geometry.

29 May–2 June 2023, Ascona, Switzerland.

Geometry, Topology and Control System Design.

11–16 June 2023, Banff, Canada.

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.

11–16 June 2023, Debrecen, Hungary.

Emergent Geometries from Strings and Quantum Fields.

12 June–28 July 2023, Firenze, 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.

Symplectic Singularities and Supersymmetric QFT.

10–21 July 2023, Amiens, France.

Emergent Geometries from Strings and Quantum Fields.

12–28 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.

Online CIMPA Course: "On representations of affine Lie superalgebras".

25–29 July 2023, Isfahan, Iran.

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.

Geometric, Algebraic and Topological Methods in Quantum Field Theory.

31 July– 9 August 2023, Villa de Leyva, Colombia.

Finite Dimensional Integrable Systems in Geometry and Mathematical Physics.

7–11 August 2023, Antwerp, Belgium.

Women in Mathematical Physics II.

13–18 August 2023, Banff, Canada.

Summer School on Differential Geometry.

14–25 August 2023, Hanoi, Vietnam.

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, .

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.

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 Plasma Modelling.

KU Leuven, Leuven, Belgium

Closing date: 31 March 2023.

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 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 position in Modeling Fracture of Metamaterials.

ETH Zurich, Zurich, Switzerland

Closing date: Open until filled.

PhD positions.

TU Delft, Delft, The Netherlands

Closing date: Open until filled.

Postdoctoral fellowships

Postdoctoral position in Algebraic Geometry.

Royal Institute of Technology, Stockholm, Sweden

Closing date: 6 March 2023.

Burgos University, Burgos, Spain

Closing date: 19 March 2023.

Postdoctoral position in Quantum Information.

Postdoctoral positions in Mathematics.

University of Jyväskylä, Jyväskylä, Finland

Closing date: 31 March 2023.

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 fellowship in Quantum Many-Body Problems.

Basque Center for Applied Mathematics, Bilbao, Spain

Closing date: 14 April 2023.

Postdoctoral position in Mathematical Modeling .

Charles University, Prague, Czechia

Closing date: 30 April 2023.

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.

Humboldt research fellowship for postdoctoral researchers.

Alexander von Humboldt Foundation

Closing date: Open.

Offers for researchers

Tenure-track position in Applied Mathematics.

City University of New York, New York, United States

Closing date: 6 March 2023.

4 Ayudante Doctor positions in Mathematics.

Technical University of Madrid, Madrid, Spain

Closing date: 8 March 2023.

Full Professorship (W3) in Mathematics, Modelling and Simulation of Complex Systems.

University of Bonn, Bonn, Germany

Closing date: 15 March 2023.

Senior academic staff Differential Geometry and Dynamical Systems.

University of Antwerp, Antwerp, Belgium

Closing date: 20 March 2023.

Professor in Applied Dynamical Systems.

Ghent University, Ghent, Belgium

Closing date: 20 March 2023.

Assistant Professor in Algebra, Analysis and Geometry.

Université Côte d'Azur, Nice, France

Closing date: 31 March 2023.

Tenure-track positions in Mathematics.

Eindhoven University of Technology, Eindhoven, Netherlands

Closing date: 8 April 2023.

Tenure-track position in Mathematics.

Nanjing University, Nanjing, China

Closing date: 31 May 2023.

Assistant/Associate Professor of Mathematics.

Westminster College, Fulton (MO), 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 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.

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.

Financial support for research projects and conferences

Thematic programs at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

Hot topics Workshop at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

Summer graduate schools at MSRI.

Mathematical Sciences Research Institute, Berkeley, United States.

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

IMU Volunteer Lecturer Program.

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

Deadline: 15 March, 1 June and 1 September 2023.

IMU Conference support program.

For conferences in developing or economically disadvantaged countries.

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

CIMPA-ICTP Fellowships for "Research in Pairs".

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.

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

Deadline: 10 July 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

Eva Miranda and Arnau Planas: *Action-angle coordinates and KAM theory for singular symplectic manifolds.*

2301.00266

[math.SG, math.DS]

Benjamin Bode and Daniel Peralta-Salas: *The topology of stable electromagnetic structures and Legendrian fields on the 3-sphere.*

2302.01043

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

Alexandre Anahory Simões and Leonardo J. Colombo: *Nonholonomic systems with inequality constraints.*

2302.02616

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

J. de Lucas, A. Maskalaniec and B. M. Zawora: *A cosymplectic energy-momentum method with applications.*

2302.05827

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

Alberto Mayorgas, Julio Guerrero and Manuel Calixto: *Localization measures of parity adapted $U(D)$ -spin coherent states applied to the phase space analysis of the D -level Lipkin-Meshkov-Glick model.*

2302.06254

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

J. de Lucas, X. Rivas, S. Vilariño and B. M. Zawora: *A k -polysymplectic Marsden-Weinstein reduction.*

2302.09037

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

Alberto Enciso, Antonio J. Fernández and Daniel Peralta-Salas: *Small spheres with prescribed non-constant mean curvature in Riemannian manifolds.*

2302.09809

[math.DG, math.AP]

Nathaël Da Costa, Cyrus Mostajeran and Juan Pablo Ortega: *The Gaussian kernel on the circle and spaces that admit isometric embeddings of the circle.*

2302.10623

[cs.LG, math.DG]

Leonardo J. Colombo, Manuel de León, Manuel Lainz and Asier López-Gordón: *Liouville-Arnold theorem for contact Hamiltonian systems.*

2302.12061

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

Network's collaborators

Richard Moeckel and Richard Montgomery: *No Infinite Spin for Planar Total Collision.*

2302.00177

[math.DS]

Carlos Heredia and Josep Llosa: *Infinite Derivatives vs Integral Operators. The Moeller-Zwiebach paradox.*

2302.00684

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

Paul-Hermann Balduf, Amelia Cantwell, Kurusch Ebrahimi-Fard, Lukas Nabergall, Nicholas Olson-Harris and Karen Yeats: *Tubings, chord diagrams, and Dyson-Schwinger equations.*

2302.02019

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

Andrzej J. Maciejewski, Maria Przybylska and Galiano Valent: *The geodesic flow of the BGPP metric is Liouville integrable.*

2302.02620

[math-ph, math.MP]

Eduardo Hulett, Paola Ruth Moas and Marcos Salvai: *The sub-Riemannian geometry of screw motions with constant pitch.*

2302.03208

[math.DG, math.OC]

Alexander Kilian, Bernhard Maschke, Andrii Mironchenko and Fabian Wirth: *A case study of port-Hamiltonian systems with a moving interface.*

2302.03344

[math.AP, math.DS, math.FA, math.OC]

Robert Carr, Daniel de Roux and R. Ravi: *Instance-specific linear relaxations of semidefinite optimization problems.*

2302.08118
[math.OC]

Jonas Kirchhoff and Bernhard Maschke: *On the Generating Functions of Irreversible port-Hamiltonian Systems.*

2302.09023
[math.DS]

Bernhard Maschke and Jonas Kirchhoff: *Port maps of Irreversible Port Hamiltonian Systems.*

2302.09026
[math.DS]

Benedetto Piccoli: *Control of multi-agent systems: results, open problems, and applications.*

2302.12308
[math.OC, math.DS]

Links of interest

Geometry, Mechanics and Control Network

Journal of Geometric Mechanics

International Mathematical Union (IMU)
Newsletter - January 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 Mathe-
matical Sciences (AIMS) Journal

International Centre for Theoretical Physics
(ICTP)

European Research Council

European Commission - Research and Inno-
vation

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 Poincarè 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