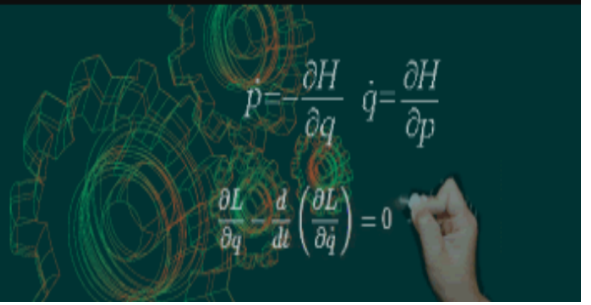# GMC Network

Geometry, Mechanics and Control Network Infosheet

March 2020

Editors: Viviana Díaz, Iván Gutiérrez, Rodrigo Sato

Contents

Network's activities

XIV International Summer School on Geometry, Mechanics and Control (Postponed).
6–10 July 2020, Burgos, Spain.

Special Session "Geometry, Mechanics, Control and its Interactions" at VI Latin American Congress of Mathematicians (CLAM 2020).
20–24 July 2020, Montevideo, Uruguay.

Outstanding events

Special Session "Geometric Mechanics, Dynamics and Control" in honor of Anthony Bloch (XIII AIMS Conference on Dynamical Systems).
6–9 June 2020, Atlanta, USA.

"Geometry, Mechanics, and Dynamics". Conference in Honor of the 70th Birthday of Tudor Ratiu.
20–24 July 2020, Lausanne, Switzerland.

25th International Summer School on Global Analysis and Applications (interesting courses).
16–22 August 2020, Shenyang, China.

XXIX International Fall Workshop on Geometry and Physics.
1 – 4 September 2020, Covilhã, Portugal.

Other conferences

Workshop on classical and quantum aspects of symplectic geometry (Postponed to 2021).
6–9 April 2020, Nantes, France.

Poisson structures and Noncommutative Integrability (Postponed).
16–18 April 2020, Kent, United Kingdom.

Integrable Systems and Group Actions (Postponed).
23–26 April 2020, Savannah, USA.

Regularity theory for elliptic and parabolic systems and problems in continuum mechanics (Cancelled to next year).
6–9 May 2020, Telč, Czech Republic.

Quantum Topology and Geometry (Contact the organizers).
11 – 15 May 2020, Luminy, France.

Poisson meeting in La Rochelle (Postponed).
14 – 15 May 2020, La Rochele, France.

Geometry and Dynamics of Foliations.
18–22 May 2020, Luminy, France.

Geometry and Polish groups.
18–22 May 2020, Luminy, France.

Intensive Period on Poisson Geometry and Mathematical Physics.
18 May–17 July 2020, Fisciano, Italy.

GAP XVII - Deformations and higher structures (Postponed).
25–29 May, 2020, Vancouver, Canada.

Interactions of Gauge Theory with Contact and Symplectic Topology in Dimensions 3 and 4.
7–12 June 2020, Banff, Canada.

22th International Conference on Geometry, Integrability and Quantization.
8–13 June 2020, Varna, Bulgaria.

Third School and Workshop Mathematical Challenges in Quantum Mechanics.
8–13 June 2020, Como, Italy.

6th International Conference on Physics.
15–16 June 2020, Barcelona, Spain.

Dynamics, SCV and CR Geometry.
15–19 June 2020, Nice, France.

Geometric Flows.
15–26 June 2020, Athens, Greece.

Mathematical and Conceptual Aspects of Quantum Theory.
21–26 June 2020, Banff, Canada.

Geometric Structures and Supersymmetry.
22–25 June 2020, Troms⊘, Norway.

VIII Iberoamerican Congress on Geometry.
22–26 June 2020, Morelia, Mexico.

IX School on Geometry and Physics.
22–26 June 2020, Białowieża, Poland.

Foliation Theory and Complex Geometry.
22–26 June 2020, Luminy, France.

Digital Geometry and Discrete Variational Calculus.
22–26 June 2020, Luminy, France.

Geometric Representation Theory.
22–26 June 2020, Waterloo, Canada and Bonn, Germany.

XXXIX Workshop on Geometric Methods in Physics.
28 June–04 July 2020, Białowieża, Poland.

Geometry Festival.
29 June–03 July 2020, Veszprém, Hungary.

Advanced Variational Methods for Solid Mechanics.
29 June–03 July 2020, Trieste, Italy.

Pseudo-Hermitian Hamiltonians in Quantum Physics.
29 June–03 July 2020, Santa Fe, United States.

Seminal Interactions Between Mathematics and Physics. II.
30 June–03 July 2020, Rome, Italy.

CIMPA-IASBS Research School on Spectra in Riemannian and Symplectic Geometry (Postposed).
4–15 July 2020, Zanjan, Iran.

8th European Congress of Mathematics.
5–11 July 2020, Portoroz, Slovenia.

Poisson 2020 Summer School.
6–10 July 2020, Fisciano, Italy.

CIMPA School: Optimal Control and its Applications in Economics, Engineering and the Environment (Postponed).
6–17 July 2020, Rabat, Morocco.

Poisson 2020 Conference.
12–17 July 2020, Napoli, Italy.

21st IFAC World Congress on Automatic Control.
12–17 July 2020, Berlin, Germany.

Poisson 2020 International Conference.
13–17 July 2020, Napoli, Italy.

Conformal field theories in higher dimensions 2020.
13–17 July 2020, Moscow, Russia.

Integrable Systems in Geometry and Mathematical Physics.
13–17 July 2020, Trieste, Italy.

The 33rd International Colloquium on Group Theoretical Methods in Physics.
13–17 July 2020, Cotonou, Benin.

International Meeting on Fluid Dynamics and Fluid Mechanics.
22–23 July 2020, Vancouver, Canada.

Calculus of Variations.
2–8 August 2020, Oberwolfach, Germany.

Workshop on Classical and Quantum Integrable Systems.
2–8 August 2020, Sochi, Russia.

Tematic Program: Higher Structures and Field Theory.
3 August-25 September 2020, Wien, Austria.

7th International Conference on Applied Physics and Space Science.
17–18 August 2020, Paris, France.

Dynamics Days Europe - XL.
24–28 August 2020, Nice, France.

The 7th International Conference on Control and Optimization with Industrial Applications.
26–28 August 2020, Baku, Azerbaijan.

Nijenhuis Geometry.
31 August – 11 September 2020, Luminy, France.

The 1st International Conference on Contemporary Problems of Physics and Mathematics with Applications.
4–6 September 2020, Baku, Azerbaijan.

Summer School on Méthodes Probabilistes et Stochastiques en Mécanique.
6 – 12 September 2020, Quiberon, France.

Second IMA Conference on Mathematics of Robotics.
9 – 11 September 2020, Manchester, United Kingdom.

2nd IMA Conference on Mathematics of Robotics.
09–11 September 2020, Manchester, United Kingdom.

Summer School in Mathematical Physics 2020.
14–18 September 2020, Munich, Germany.

International conference on Geometry in the Large.
14–19 September 2020, Saint Petersburg, Russia.

Women in Mathematical Physics.
20–25 September 2020, Alberta, Canada.

Geometric Structures in Integrable Systems 2020.
20–26 September 2020, Gallipoli, Italy.

2nd World Wide Congregation on Physics.
21–22 September 2020, Rome, Italy.

The unity of mathematics: A conference in honour of Sir Michael Atiyah.
22–24 September 2020, Cambridge, United Kingdom.

Job offers, fellowships and supports

Ph.D. offers

PhD position in Graded Geometry and Numerical Methods.
University of La Rochelle, La Rochelle, France
Closing date: 5 April 2020.

PhD Fellow in Fluid Mechanics.
University of Oslo, Oslo, Norway
Closing date: 7 April 2020 .

PhD positions in Operator Algebras.

KU Leuven, Leuven, Belgium
Closing date: 13 April 2020.

Doctoral student in mathematics.
KTH, Stockholm, Sweden
Closing date: 23 April 2020.

IMU Breakout Graduate Fellowship Program.
Research centers in a developing country

Closing date: 31 May 2020.

PhD in Control Theory.
Ecole des Mines de Saint-Etienne, Saint-Etienne, France
Closing date: 30 June 2020.

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

Doctoral candidate (PhD student) in the Systems Control Group.

University of Luxembourg, Luxembourg
Closing date: Open until filled.

Open PhD Positions in Geometry.
Max Planck Institute For Informatics, Saarbrücken, Germany
Closing date: Open until filled.

Doctoral candidate in applied algebraic geometry.
Aalto University, Espoo, Finland
Closing date: Open until filled.

Postdoctoral fellowships

Postdoc position in Homotopy Theory.
Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Poland
Closing date: 10 April 2020.

Postdoctoral Research Positions.
Sobolev Institute of Mathematics, Novosibirsk, Russia
Closing date: 12 April 2020.

Post-doctoral assistant.
Ghent University, Ghent, Belgium
Closing date: 21 April 2020.

Postdoctoral positions in geometry.
Heidelberg University, Germany
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.

Research scientist in Mathematics.
Massachusetts Institute of Technology, Massachusetts, United States
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

Assistant Professor in Intelligent Systems in Cooperative Autonomous Systems.
KTH Royal Institute of Technology, Stockholm, Sweden
Closing date: 5 April 2020.

Research Engineer in Automatic Control.
Lund University, Faculty of Engineering, Lund, Sweden
Closing date: 8 April 2020.

Lecturer in Mathematics.
University of Gothenburg, Gothenburg, Sweden
Closing date: 15 April 2020.

Lecturer in Pure Mathematics.
University of Leeds, Leeds, United Kingdom
Closing date: 26 April 2020.

Research Professor in Mathematics.
Beijing Institute of Mathematical Sciences and Applications, Beijing, China
Closing date: Open until filled.

Differential geometry expert.
Barcelona, Spain.
Mail to: mcastellano@talentocientifico.com.
Closing date: Open until filled.

Several Tenure Track positions.

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

Assistant professor in Mathematics.
Deusto University, Bilbao, Spain
Closing date: Open until filled.

Mathematics adjunct instructors.
Portland State University, Oregon, United States
Closing date: Open until filled.

Tenure track position in geometry.

McMaster University, Ontario, Canada
Closing date: Open until filled.

Tenure track positions in Mathematics.
University of Texas at Dallas, United States
Closing date: Open until filled.

Assistant professor in Mathematics.
Embry-Riddle Aeronautical University at Prescott, Arizona, United States
Closing date: Open until filled.

Offers for visiting researchers

SAMSI visiting research fellows.
Statistical and Applied Mathematical Sciences Institute, USA.
Applications from junior and senior researchers.
Closing date: Open.

Simons Visiting Professors at Mathematisches Forschunginstitut Oberwolfach.
Oberwolfach, Germany.
Junior or senior scientists from outside Europe.
Closing date: Open.

Research in pairs at Mathematisches Forschunginstitut Oberwolfach.
Oberwolfach, Germany.
Between 2 and 4 people, from 2 weeks to 3 months.
Closing date: Six months before planned stay.

Focused research groups in Banff, Canada.
Banff International Researh 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 Researh Station, Canada.
Teams of 2 to 4 researchers for 1 to 2 weeks.
Closing date: Minimum 4 months before the event.

Centre International de Rencontres Mathematiques (CIRM).
CIRM, Marseille, France.
2 to 3 researchers for 1 to 2 weeks.
Closing date: Open all year.

Research in pairs program: Centro Internazionale per la Ricerca Matematica.
Fondazione Bruno Kessler, Trento, Italy.
2-3 people from 1 to 6 weeks.
Closing date: Open.

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 Centre de Recerca Matemàtica.
CRM, Catalonia, Spain.
Any time between 6 and 12 months before the start of the desired stay.
Closing date: Open.

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

Short-term exchanges of research and business staff - Research and Innovation Staff Exchange (RISE) 2020.

European Commission, Marie Skłodowska-Curie Actions.

Deadline: April, 28.

CIMPA Courses program.
Geographic areas of activities of CIMPA (Africa, Central or South America, Asia).
Deadline: Open all year.

Support for workshop organization.
Banff International Research Station.

Proposal of a workshop in the Mathematisches Forschunginstitut Oberwolfach.
Oberwolfach, Germany.

Mathematical and physical sciences funding.
National Science Foundation, United States of America.

Hosting a workshop at AIMS South Africa.
Contributions for workshops about AIMS's research focus areas.

International Mathematical Union - Conference support program.
For conferences in developing or economically disadvantaged countries.

Interesting news and publications

Preprints

Network's members

Ángel Ballesteros, Giulia Gubitosi, Iván Gutiérrez-Sagredo and Francisco J. Herranz: *The κ-Newtonian and κ-Carrollian algebras and their noncommutative spacetimes.*
2003.03921
[hep-th, gr-qc, math-ph, math.MP]

Boris Khesin, Daniel Peralta-Salas and Cheng Yang: *The helicity uniqueness conjecture in 3D hydrodynamics.*
2003.06008
[math.DG, math-ph, math.DS, math.MP]

Francesca Boso, Dimitris Boskos, Jorge Cortés, Sonia Martínez and Daniel M. Tartakovsky: *Dynamics of Data-driven Ambiguity Sets for Hyperbolic Conservation Laws with Uncertain Inputs.*
2003.06735
[math.OC, math.AP]

Andrew J. Taylor, Pio Ong, Jorge Cortes and Aaron D. Ames: *Safety-Critical Event Triggered Control via Input-to-State Safe Barrier Functions.*
2003.06963
[eess.SY, cs.SY, math.OC]

Leonardo J. Colombo, María Emma Eyrea Irazú and Eduardo García-Toraño Andrés: *A note on Hybrid Routh reduction for time-dependent Lagrangian systems.*
2003.07484
[math-ph, math.MP]

Dan Li and Sonia Martínez: *High-Confidence Attack Detection via Wasserstein-Metric Computations.*
2003.07880
[math.DS, math.OC, math.PR, math.ST, stat.TH]

Ahmed Allibhoy and Jorge Cortés: *Data-based Receding Horizon Control of Linear Network Systems.*
2003.09813
[math.OC, cs.MA, cs.SY, eess.SY]

Alexandre Anahory Simões, Juan Carlos Marrero and David Martin de Diego: *Exact discrete Lagrangian mechanics for nonholonomic mechanics.*
2003.11362
[math-ph, cs.NA, math.DG, math.MP, math.NA]

Alexandre Anahory Simões, David Martín de Diego, Manuel de León and Manuel Lainz Valcázar: *On the geometry of discrete contact mechanics.*
2003.11892
[math-ph, cs.NA, math.MP, math.NA]

Manuel de León, Jordi Gaset, Manuel Laínz, Xavier Rivas and Narciso Román-Roy: *Unified Lagrangian-Hamiltonian formalism for contact systems.*
2003.13037
[math-ph, math.MP]

Klas Modin and Milo Viviani: *Integrability of point-vortex dynamics via symplectic reduction: a survey.*
2003.00716
[math-ph, math.DS, math.MP, math.SG]

Yannick Guedes Bonthonneau, Tho Nguyen Duc, Nicolas Raymond and San Vũ Ngoc: *Magnetic WKB constructions on surfaces.*
2003.00985
[math.SP, math-ph, math.MP]

Camille Laurent and Matthieu Léautaud: *On uniform observability of gradient flows in the vanishing viscosity limit.*
2003.02147
[math.AP, math.OC]

Li Guo, Yunnan Li, Yunhe Sheng and Guodong Zhou: *Cohomologies, extensions and deformations of differential algebras with any weights.*
2003.03899
[math.RA, math-ph, math.MP, math.RT]

Rémi Robin, Nicolas Augier, Ugo Boscain and Mario Sigalotti: *On the compatibility of the adiabatic and rotating wave approximations for robust population transfer in qubits.*
2003.05831
[math-ph, math.DS, math.MP, quant-ph]

B. Basu-Mallick, F. Finkel and A. González-López: *A novel class of translationally invariant spin chains with long-range interactions.*
2003.07217
[cond-mat.stat-mech, hep-th, math-ph, math.MP, nlin.SI]

N. Aizawa, Z. Kuznetsova and F. Toppan: $\mathbb{Z}_2 \times \mathbb{Z}_2$-graded mechanics: the classical theory.
2003.06470 (version 2)
[hep-th, math-ph, math.MP]

Vicente Muñoz: *Gompf connected sum for orbifolds and K-contact Smale-Barden manifolds.*

2003.07319
[math.DG, math.SG]

A. V. Borisov, E. A. Mikishanina and A. V. Tsiganov: *On inhomogeneous nonholonomic Bilimovich system.*
2003.08577
[nlin.CD, math.DS]

G. Falqui, I. Mencattini, G. Ortenzi and M. Pedroni: *Poisson quasi-Nijenhuis manifolds and the Toda system.*
2003.08916
[math-ph, math.MP, nlin.SI]

Amlan K. Halder, Andronikos Paliathanasis and P. G. L. Leach: *Similarity solutions and Conservation laws for the Bogoyavlensky-Konopelchenko Equation by Lie point symmetries.*
2003.10131
[math-ph, math.MP]

Arjan van der Schaft: *Cyclo-dissipativity revisited.*
2003.10143
[math.OC]

César Contreras and Tomoki Ohsawa: *Controlled Lagrangians and Stabilization of Euler–Poincaré Mechanical Systems with Broken Symmetry.*
2003.10584
[math.OC]

Margarida Camarinha and Matteo Raffaelli: *Curvature adapted submanifolds of bi-invariant Lie groups.*
2003.12295
[math.DG]

Matteo Petrera, Yuri B. Suris and René Zander: *How one can repair non-integrable Kahan discretizations.*
2003.12596
[nlin.SI, math-ph, math.MP]

Links of interest

Geometry, Mechanics and Control Network

Journal of Geometric Mechanics - March 2020, Vol 12, Issue 1

International Mathematical Union (IMU) Newsletter - March 2020, Net 100

Instituto de Ciencias Matemáticas (ICMAT) Newsletter - First semester 2020,

Number 19

European Mathematical Society

Royal Spanish Mathematical Society (RSME)

Open Access American Institute of Mathematical Sciences (AIMS) Journal

Euraxess Spain

European Research Council

International Cooperation "Open to the World"

International Center of Pure and Applied Mathematics (CIMPA)

Mathematics in Spain

Open Access Mathematics Journals

Open Access Physics Journals

Societat Catalana de Matemàtiques (SCM) journal on Mathematics

Mathematics in Europe

Jobs for Mathematicians

Academic positions in Spain, France and Belgium

Academic jobs in Mathematics in Europe

Academic jobs in Mathematics in the UK

Academic jobs in Mathematics worldwide

Academic jobs in Mathematics in Spain

Academic jobs in Mathematics

SIAM Activity Group on Control and Systems Theory Prize

SIAM Activity Group on Control and Systems 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

European Mathematical Society Prizes

Fermat Prize

Society for Industrial and Applied Mathematics Prizes

Noether Lectures Award

The Royal Society Grants

The Royal Society's medals and award

NOTE: If you want to include information in this info-sheet, please send it to gmcactivities@gmail.com