

# CURRICULUM VITAE

EVA MIRANDA

ABSTRACT. This is a presentation of my curriculum vitae. A copy of my papers and preprints is available at the webpage: <https://mat-web.upc.edu/people/eva.miranda/research.html>.

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*Date:* October 6, 2018.

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## 1. PERSONAL DATA

- Surname : Miranda
- Name : Eva
- Nationality : Spanish.
- Professional address : Departament de Matemàtiques, EPSEB, Edifici P  
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Despatx 333, Tercera Planta 08028, Barcelona, Spain
- e-mail: [eva.miranda@upc.edu](mailto:eva.miranda@upc.edu)
- Web: <https://mat-web.upc.edu/people/eva.miranda/>
- Languages :
  - Spanish : Mother tongue
  - Catalan : Mother tongue
  - English: Fluent
  - French: Fluent

## 2. ACADEMICS

### 2.1. Education.

- (1) Ph.D in Mathematics 2003, Universitat de Barcelona. Title: *On symplectic Linearization of singular Lagrangian foliations*. Qualification : Excel.lent cum laude per unanimitat.
- (2) MSc. in Algebra and Geometry, 1999, Departament d'Àlgebra i Geometria, Universitat de Barcelona.

### 2.2. Professional Experience.

- (1) Since January 2017, ICREA Acadèmia Professor at Universitat Politècnica de Catalunya.
- (2) Since June 2017, honorary member of ICMAT-CSIC (Doctor Vinculado).
- (3) Since October 2015, Associate Professor at Universitat Politècnica de Catalunya.
- (4) September 2013-September 2015, Associate Professor in Interim at Universitat Politècnica de Catalunya.
- (5) September 2009-August 2013, Lecturer in Mathematics at Universitat Politècnica de Catalunya.
- (6) Maître des Conférences invitée at Université de Toulouse in December 2013, November 2012, November 2010 and November 2008.
- (7) June 2007- August 2009, Juan de la Cierva Researcher, Universitat Autònoma de Barcelona.
- (8) January 2006- May 2007, Postdoc at Université de Toulouse via a EIF Marie Curie Postdoc.
- (9) October 2004-October 2005, Postdoc at Université de Toulous, IMUB grant.
- (10) Assistant Professor (Professor Ajudant) Universitat de Barcelona, 01/10/2001–01/01/2006

- (11) Previous experience: Professor associat at Universitat de Barcelona, Universitat Politècnica de Catalunya and Universitat de Lleida

### 2.3. Appointments.

- Governing Board BGSMath Barcelona Graduate School of Mathematics (2018– ).
- European Mathematical Society-Societat Catalana de Matemàtiques corresponding member (2011-2017).
- Scientific Advisory Board at CRM-Centre de Recerca Matemàtica (since 2017–).
- Group Leader of the UPC Research group GEOMVAP (since 2018).
- Head of the Laboratory of Geometry and Dynamical Systems (since 2016).

### 2.4. Qualifications.

- Selected for Promotion to Full Professor under the Programa Càtedres UPC in 2017.
- Qualified as Full Professor by the Accreditation System AQU-Catalunya since October 2016.
- Qualified by the Ministère de l'Enseignement Supérieur et de la Recherche, République Française as *Professeur des Universités* en Section 25 (Mathématiques), CNU (February 2010).
- Qualified as "Professor Lector", "Professor Col.laborador" and "Professor Agregat" (2010) by AQU.
- Qualified as Professor Titular by ANECA.
- Two Research Primes (concerning the periods 2000-2005 and 2006-2011) and three teaching primes.

### 2.5. Prizes and Distinctions.

- Awarded with a Research Excellence Chair of the Fondation Sciences Mathématiques de Paris in 2017.
- Awarded the ICREA Academia Prize 2016.
- Giovanni Prodi Chair 2017 at the University of Würzburg (declined due to incompatibility with the Excellence Chair of FSMP).

2.6. **Research: Keywords.** Differential Geometry, Mathematical Physics, Symplectic Geometry, Poisson Geometry, Lie group actions, Moment maps, Hamiltonian actions, Hamiltonian Dynamics, Integrable systems, Singularities, Foliation theory, Geometric Quantization, Rigidity of Geometrical Structures.

## 3. PUBLICATIONS

### 3.1. Published research papers.

- (1) Alexey Bolsinov, Vladimir Matveev, Eva Miranda, Sergei Tabachnikov, *Open Problems, Questions, and Challenges in Finite-Dimensional Integrable Systems*, arXiv:1804.03737, to appear at Philosophical Transactions of the Royal Society A, 2018.

- (2) Victor Guillemin, Eva Miranda and Jonathan Weitsman, *On geometric quantization of  $b$ -symplectic manifolds*, Adv. Math. 331 (2018), 941–951.
- (3) Damien Boulloc, Eva Miranda, Nguyen Tien Zung, *Singular fibers of the Gelfand–Cetlin system on  $u(n)^*$* , arXiv:1803.08332, to appear at Philosophical Transactions of the Royal Society A, 2018.
- (4) Eva Miranda and Arnau Planas, *Equivariant classification of  $b^m$ -symplectic surfaces*, Regul. Chaotic Dyn. 23 (2018), no. 4, 355–371.
- (5) Victor Guillemin, Eva Miranda and Jonathan Weitsman, *Convexity of the moment map image for torus actions on  $b^m$ -symplectic manifolds*, to appear at Philosophical Transactions of the Royal Society A, 2018.
- (6) Robert Cardona and Eva Miranda, *Integrable systems and closed one forms*, J. Geom. Phys. 131 (2018), 204–209.
- (7) Martínez-Torres, David; Miranda, Eva; *Zeroth Poisson Homology, Foliated Cohomology and Perfect Poisson Manifolds*. Regul. Chaotic Dyn. 23 (2018), no. 1, 47–53.
- (8) Miranda, Eva; Planas, Arnau; *Classification of  $b^m$ -Nambu structures of top degree*. C. R. Math. Acad. Sci. Paris 356 (2018), no. 1, 92–96.
- (9) Roisin Braddell, Amadeu Delshams, Eva Miranda, Cedric Oms and Arnau Planas, *An invitation to singular symplectic geometry to appear at the International Journal of Geometric Methods in Modern Physics*, April 2017, arXiv:1705.03846.
- (10) Victor Guillemin, Eva Miranda and Jonathan Weitsman, *Desingularizing  $b^m$ -symplectic structures* International Mathematics Research Notices, rnx126, <https://doi.org/10.1093/imrn/rnx126>.
- (11) Anna Kiesenhofer and Eva Miranda, *Cotangent models for integrable systems*, Communications in Mathematical Physics, Comm. Math. Phys. 350 (2017), no. 3, 1123–1145.
- (12) Anna Kiesenhofer and Eva Miranda, *Noncommutative integrable systems on  $b$ -symplectic manifolds*, Regul. Chaotic Dyn. 21 (2016), no. 6, 643–659.
- (13) Chiara Esposito and Eva Miranda, *Rigidity of infinitesimal momentum maps*, Israel J. Math. 219 (2017), no. 2, 757–781.
- (14) David Martínez Torres, Eva Miranda *Weakly Hamiltonian actions*, J. Geom. Phys. 115 (2017), 131–138.
- (15) Amadeu Delshams, Eva Miranda and Anna Kiesenhofer, *Examples of integrable and non-integrable systems on singular symplectic manifolds*, J. Geom. Phys. 115 (2017), 89–97.
- (16) Victor Guillemin, Eva Miranda, Ana Pires and Geoffrey Scott, *Convexity for Hamiltonian torus actions on  $b$ -symplectic manifolds*, Math. Res. Lett. 24 (2017), no. 2, 363–377.
- (17) Pedro Frejlich, David Martinez and Eva Miranda, *A note on Symplectic topology on  $b$ -symplectic manifolds*, J. Symplectic Geom. 15 (2017), no. 3, 719–739.
- (18) A. Kiesenhofer, E. Miranda and G. Scott, *Action-angle variables and a KAM theorem for  $b$ -Poisson manifolds*, J. Math. Pures Appl. (9) 105 (2016), no. 1, 66–85.
- (19) Victor Guillemin, Eva Miranda, Ana Pires and Geoffrey Scott, *Toric actions on  $b$ -manifolds*, Int Math Res Notices Int Math Res Notices (2015) 2015 (14): 5818–5848.

- (20) Eva Miranda and Francisco Presas, *Geometric Quantization of real polarizations via sheaves*, J. Symplectic Geom. 13 (2015), no. 2, 421–462.
- (21) Victor Guillemin, Eva Miranda and Ana Pires, *Symplectic and Poisson Geometry on b-manifolds*, Adv. Math. 264 (2014), 864–896.
- (22) Eva Miranda, *Integrable systems and group actions*, Central European Journal of Mathematics, (2014), 12, 2, 240-270.
- (23) Eva Miranda, Romero Solha, *On a Poincaré lemma for singular foliations and geometric quantization*, Journal of Geometric Mechanics, (2013), 5, 4, 473-491.
- (24) Eva Miranda and Romero Solha, *On a Poincaré lemma for foliations*, "Foliations 2012 : proceedings of the international conference". World Scientific Publishing Co., 2013, p. 115-137.
- (25) Camille Laurent Gengoux and Eva Miranda, *Coupling symmetries with Poisson structures*, Acta Math Vietnam. (2013), 38, 1, 21-32.
- (26) Eva Miranda, Philippe Monnier and Nguyen Tien Zung, *Rigidity for Hamiltonian actions on Poisson manifolds*, Adv. Math. 229 (2012), no. 2, 1136-1179.
- (27) Victor Guillemin, Eva Miranda and Ana Pires, *Codimension one symplectic foliations and regular Poisson manifolds*, Bulletin of the Brazilian Mathematical Society. 42(4), 607-623, 2011.
- (28) Eva Miranda, *From action-angle coordinates to geometric quantization: a round trip*, Oberwolfach report, Geometric quantization in the non-compact setting, 2011.
- (29) Camille Laurent-Gengoux, Eva Miranda and Pol Vanhaecke, *Action-angle coordinates on Poisson manifolds*, Int. Math. Res. Not. IMRN 2011, no. 8, 1839-1869.
- (30) Mark Hamilton and Eva Miranda, *Geometric quantization of integrable systems with hyperbolic singularities*, Annales de l'Institut Fourier, vol. 60 (1) p. 51-85, 2010.
- (31) Eva Miranda, *Symmetries and singularities of Hamiltonian systems*, J. Phys.: Conf. Ser. 175 012011, 2009.
- (32) Eva Miranda, *Some rigidity results for symplectic and Poisson group actions*. XV International Workshop on Geometry and Physics,, Publ. R. Soc. Mat. Esp., 11, 177-183, R. Soc. Mat. Esp., Madrid, 2007.
- (33) Eva Miranda, *Rigidity of Poisson group actions*, Oberwolfach Report, 2007-Poisson Geometry and applications, Oberwolfach Report, Report number 25, 2007, pages 33-36
- (34) Eva Miranda and Nguyen Tien Zung, *A note on equivariant normal forms of Poisson structures*, Mathematics Research Letters, 2006 , vol 13-6, pages 1001-1012.
- (35) Eva Miranda and San Vu Ngoc, *A singular Poincaré lemma*, IMRN, International Mathematics Research Notices, 1, pag 27-46, 2005.
- (36) Eva Miranda, *A normal form theorem for integrable systems on contact manifold*, Publ. R. Soc. Mat. Esp., 9, R. Soc. Mat. Esp., (2005), 240–246.
- (37) Eva Miranda, Nguyen Tien Zung, *Equivariant normal form for nondegenerate singular orbits of integrable hamiltonian system*, Annales Scientifiques de l'Ecole Normale Supérieure, 37, n°6, pag 819-839, 2004

- (38) Eva Miranda, Carlos Currás Bosch, *Symplectic linearization of singular lagrangian foliations in  $M^4$* , Differential Geometry and its applications, 18, n° 2, 195-205,2003
- (39) Eva Miranda, *On the symplectic classification of singular Lagrangian foliations*, Publicaciones de la Real Sociedad Matemática Española, 239-244, vol 3, 2001.

### 3.2. Divulgatio.

- (1) Eva Miranda, The Hirsch Conjecture has been disproved: an interview with Francisco Santos, Eur. Math. Soc. Newsl , 2012, vol. 86, p. 31-37.
- (2) Eva Miranda, The Clay Public Lecture and Conference on the Poincaré Conjecture, Paris, 7-9 June 2010, Eur. Math. Soc. Newsl, issue 77, pages 21-23, 2010.

### 3.3. Prepublications.

- (1) Eva Miranda y Cédric Oms, Contact structures with singularities, arXiv:1806.05638.
- (2) Eva Miranda and Robert Cardona, On the volume elements of a manifold with transverse zeroes, preprint, 2018.
- (3) Roisin Braddell, Anna Kiesenhofer y Eva Miranda, Cotangent models for group actions on  $b$ -Poisson manifolds, preprint 2018.
- (4) Victor Guillemin, Eva Miranda and Jonathan Weitsman, On geometric quantization of  $b^m$ -symplectic manifolds, arXiv:1801.03762 preprint, 2018, submitted.
- (5) Eva Miranda and Geoffrey Scott, The geometry of  $E$ -manifolds, arXiv:1802.02959, preprint 2018, submitted.
- (6) Eva Miranda, Francisco Presas, Romero Solha, *Geometric Quantization of semitoric integrable systems*, arXiv:1705.06572
- (7) Eva Miranda, *A note on symplectic and Poisson linearization of semisimple Lie algebra actions*, <http://arxiv.org/abs/1503.03840>.

## 4. ADMINISTRATION. SERVICES FOR THE MATHEMATICAL COMMUNITY

### 4.1. Editorial Responsibilities.

- (1) I am editor of a Topical Issue on integrability at the Philosophical Transactions of the Royal Society A, Mathematical, Physical and Engineering sciences (publication scheduled in 2018).
- (2) During 2010-2017, I have been an editor of the Journal *Newsletter of the European Mathematical Society*.
- (3) Guest editor for three Special Issues at *Journal of Geometry and Physics* in 2015, 2016 and 2018.
- (4) Editor (together with Vladimir Matveev) of a book in the collection CRM-Advanced Courses (Springer) entitled *Geometry and Dynamics of Integrable system* <http://www.springer.com/gp/book/9783319335025> ISBN 978-3-319-33503-2.
- (5) Guest editor of a Special issue of *Geometriae Dedicata* (volume 1, issue 265, August) and for a Special issue of *Acta Mathematica Vietnamica* published in January 2013 (issue 38).

- (6) Responsible for the EMS Column at *Notícies de la Societat Catalana de Matemàtiques*.

4.2. **Participation in research evaluation and panels.** I am acting/have acted as reviewer and panel expert for several international agencies including:

- Member of the Governing Body of the Barcelona Graduate School in Mathematics, BGSMath, (2018–).
- Member of the Scientific Advisory Board at **Centre de Recerca Matemàtica, CRM** (2017–).
- **ANR** (Agence National de Recherche, France): evaluation of research projects.
- **ANEP** (Agencia Nacional de Evaluación y Prospectiva, Spain): evaluation of research projects.
- **NWO** (De Nederlandse Organisatie voor Wetenschappelijk, The Netherlands): evaluation for Veni grants within the Innovational Research Incentives Scheme.
- **DFG** (Deutsche Forschungsgemeinschaft, Germany): Evaluation of Collaborative Research Centres.
- Member of the CS for the MCF position Mathématiques Fondamentales: Géométrie et Systèmes Dynamiques at Université de Paris 7 in 2017 and for several selection committees for positions in Spain (including the Serra Hunter programme).
- Eventual Evaluator for calls at the Barcelona Graduate School of Mathematics.

4.3. **Referee/Reviewer:**

- Acta Mathematica.
- Acta Applicandae Mathematicae.
- Acta Mathematica Vietnamica.
- AIP Conference Proceedings Series.
- Annali di Matematica Pura ed Applicata.
- Annales de l'Institut Fourier.
- Birkhauser, CRM- Avanced courses series.
- Bulletin of the London Mathematical Society.
- Collectanea Mathematica.
- Differential Geometry and its applications.
- Discrete and Continuous Dynamical Systems.
- International Mathematics Research Notices.
- Journal of the London Mathematical Society.
- Journal of the American Mathematical Society.
- Journal of Symplectic Geometry.
- Journal of Physics A.
- Journal of Regular and Chaotic Dynamics.
- Journal of Mathematical Physics.
- Journal of Geometry and Physics.
- Nonlinearity.
- Revista Matemática Complutense.
- The Quaterly Journal of Mathematics.

- Transactions of the AMS.

#### 4.4. Ph.D., master and postdoc supervision.

- (1) Ph.D students :
  - (a) **Romero Barbieri Solha.**
    - (i) thesis title : *Geometric Quantization of integrable systems with singularities.*
    - (ii) Date of defense: 21 of October 2013.
    - (iii) Qualification: Excellent cum laude.
    - (iv) Currently CNpq postdoc at Pontificia Universidade de Rio de Janeiro.
    - (v) Romero Solha has published 5 papers (in journals including Phys Review E, Journal of Geometry and Physics and Journal of Geometric Mechanics) and has several preprints.
  - (b) **Anna Kiesenhofer.**
    - (i) thesis title : *Integrable systems on b-symplectic manifolds*
    - (ii) Ph.D. student since October 2012 with a FI grant (generalitat de Catalunya) and a UPC grant.
    - (iii) Currently Postdoctoral researcher for 3 years at EPFL-Lausanne.
    - (iv) Date of Defense: December 21, 2016.
    - (v) Anna Kiesenhofer has published 4 papers: one paper at Journal des Mathématiques Pures et appliquées, 1 paper at Communications in Mathematical Physics, 1 paper at Journal of Geometry and Physics and 1 paper on Regular and Chaotic Dynamical Systems.
  - (c) **Arnau Planas Bahí.**
    - (i) Ph.D. thesis title : *Symmetries and singularities of Poisson structures.*
    - (ii) Expected date of defense: In 2019.
    - (iii) Arnau Planas has 2 publications, 1 prepublication and 1 working paper.
  - (d) **Cédric Oms.**
    - (i) Ph.D. thesis title : *Global Hamiltonian Dynamics of singular symplectic manifolds.*
    - (ii) Started in September 2016.
    - (iii) Project GLADYSS AFR-Luxembourg.
    - (iv) Cédric Oms has 1 publication, 1 preprint and 1 working paper.
  - (e) **Roisin Braddell** (in co-supervision with Amadeu Delshams)
    - (i) Ph.D. thesis title : *New geometrical and dynamical techniques for problems in Celestial Mechanics .*
    - (ii) Start in January 2017.
    - (iii) Grant with ICREA Academia
    - (iv) Roisin Braddell has 1 publication, 1 preprint and 1 working paper.
  - (f) **Robert Cardona** will start his PhD thesis under my supervision in September 2018 with a BGSMath-FPI grant. The title of his thesis is "Singularities, integrable systems and foliations in Symplectic and Poisson Geometry".
  - (g) **Anastasia Matveeva** will start her PhD thesis under my supervision in September 2018 with a La Caixa-BGSMath grant under the INPHINIT program. Her thesis will focus on the Interactions between symmetries and singularities in Geometry and Physics
  - (h) Informal co-supervision with Nguyen Tien Zung (Ph.D tutorials) of Iman Alamiddine (Toulouse, July, 2009) title of the thesis: *Géométrie des systèmes intégrables : Le système de Gelfand-Ceitin.*
- (2) Master Student: Arnau Planas Bahí, *Symplectic surfaces with singularities*, 2014-2015. Qualification: 10/10 (MH) with honors



- (3) Undergraduate Thesis (co-supervised with Marc Chaperon at Université de Paris VII): Alexandre Thiele, *Transversality, Old and New*, Defense February 2015. Qualification 9.5/10 Excellent.
- (4) Current Master students: Robert Cardona and Joaquim Brugués.
- (5) Member of Thesis Jury of the following Ph.D students:
  - (a) Roy Wang (Utrecht Universiteit), September 2017 (member and referee).
  - (b) Damien Bouloc (Université de Toulouse), June 2017 (membre et rapporteur).
  - (c) Álvaro del Pino (UAM-ICMAT), June 2017 (member).
  - (d) Yasmine Fittouhi (Université de Poitiers), January 2017 (membre et rapporteur).
  - (e) Jiang Kai (Université de Paris VII), September 2016 (membre et rapporteur).
  - (f) Andratx Bellmunt (University of Barcelona), December 2015.
  - (g) Boris Osorno (University of Utrecht), October 2015 (referee).
  - (h) Ionut Marcu (University of Utrecht), January 2013.
  - (i) Chiara Esposito (Université de Copenhagen), January 2012. (and referee)
  - (j) Isabel Berna (Universitat Politècnica de Catalunya), February 2012.
  - (k) Ainhoa Aparicio (Université de Limoges), December 2010. (and referee)
  - (l) Ana Rita Pires (MIT), April 2010.
  - (m) Iman Alamiddine (Université de Toulouse), July 2011 (and referee).
- (6) Supervision of Postdocs:
  - (a) Chiara Esposito (2013).
  - (b) Pablo Suarez Serrato (under an i-math programme) in 2010-2011.
  - (c) Marco Zambon in 2008
  - (d) Anne Pichereau in 2008 and Mark Hamilton (for 3 months) in 2008

#### 4.5. Scientific Committees:

- Scientific Committee of the Poisson 2018 Conference.
- Scientific Committee of two CRM Research Programs.
- Scientific Committee of the FDIS conferences (Finite Dimensional Integrable Systems (since 2015).
- Scientific Committee of GESTA conferences.

4.6. **Organization of conferences:** Total of 24 including the scientific coordination of 2 research programmes at CRM and a Follow-up program at CRM.

- (1) Eurosummer school on Symplectic Geometry of Integrable Hamiltonian systems, CRM, Barcelona, 2001.
- (2) GESTA 2001, Barcelona.
- (3) VII Workshop on Symplectic and Contact Topology, satellite conference of ICM, Getafe, August 2006.
- (4) Organiser of the conference "Weekendoid Géométrie de Poisson", 2-3, march, 2007, Toulouse.
- (5) Coorganiser of the research programme Geometric Flows and Equivariant Problems in Symplectic Geometry, January-July, 2008

- (6) Organiser of GAP VI, "Geometry and Physics", CRM, in June 2008.
- (7) Organiser "Conference on Moment Maps", CRM, in June 2008.
- (8) Member of the Scientific committee of GESTA 2008, CRM, in May 2008.
- (9) Member of the Scientific committee of GESTA 2009 in Benasque
- (10) Member of the Organizing committee of the conference in honour of Paulette Libermann. " Paulette Liberman : Héritage et Descendance " in December 2009 at Institut Henri Poincaré, Paris.
- (11) Member of the organizing and scientific committee of GEDYTO in Hanoi Vietnam, 2011. <http://www.pagine.ma1.upc.edu/miranda/hanoi/conference/>
- (12) Member of the organizing committee of GESTA 2011.
- (13) Organizer of the Workshop on VI Workshop on Symplectic Geometry, Contact Geometry and Interactions in Madrid in 2012
- (14) Organizer of the Research Programme " Equivariant problems in Symplectic Geometry ", at CRM, May-July 2008.
- (15) Organizer of GESTA 2013 in Toulouse June 2013.
- (16) Organizer of the Research Programme " Geometry and Dynamics of Integrable systems ", at CRM in September 2013.
- (17) Organizer of the conference Qdays in Barcelona, October 2013.
- (18) Organizer of the conference Symplectic Techniques in Dynamical Systems at ICMAT-MADRID, November 2013.
- (19) Organizer of the Conference Geometry and Dynamics of Foliations at ICMAT, Madrid, September 2014.
- (20) Organizer of Advanced Course on Geometry and Dynamics of Integrable systems, September 2013.
- (21) Organizer of the Conference Integrability, topological obstructions of Integrability and interplay with Geometry, September 2013.
- (22) Member of the Scientific Committee of the conference FDIS2015 to take place in Bedlewo, Poland in July 2015.
- (23) Member of the organizing committee of FDIS 2017 in July 2017.
- (24) Member of the organizing committee of JISD 2017, CRM.
- (25) Member of the organizing committee of the conference on the h-principle, July 2017, UB.

#### 4.7. Organization of Seminars.

- (1) I have organized the "Seminari Teen de Geometria".
- (2) During the second semester 2007-2008, I have organized " Seminar on Symplectic and Poisson Geometry ".
- (3) GESTA itinerante.
- (4) Hamiltonian Intensive Seminars:
  - HIS I
  - HIS II
  - HIS III

#### 4.8. Other administrative experience.

- Member of the committee Mujeres y Matemáticas of the RSME.
- Principal researcher at GEOMAP: <https://geomap.upc.edu/en>.
- Selection Committee for MCF position *Géométrie et Dynamique* at Université de Paris 7 in 2017.

- Coordinator for studies of Mathematics in Building Engineering (2010–).
- Member of many jury of Master and Degree at the UPC.
- Member of the Scientific Committee of the department of Algebra and Geometry at Universitat de Barcelona, 2001-2003.
- Member of the Library committee Universitat de Barcelona, 2001-2003.

**4.9. Teaching.** I have taught in four Different Universities at undergraduate and graduate level : University of Barcelona, Universitat de Lleida, Universitat Autònoma de Barcelona and Universitat Politècnica de Catalunya which is my current institution. I have spent 2 years and 5 months at Universite de Toulouse as Post-doc and Marie Curie researcher. At Universite de Toulouse my teaching experience was in PhD advising (tutorials). I have actively participated in the designing and implementing new subjects during the Bologna Process. In particular I have designed the curricular trajectory of Foundations of Mathematics (degree of Building Engineering) and Topology and Differential Geometry (Degree in Mathematics). I am currently coordinator of studies in Foundation of Mathematics at Universitat Politècnica de Catalunya.

Detailed teaching experience:

4.9.1. *Undergraduate level :*

- (1) Riemannian Geometry ( 1 semester)
- (2) Differential Geometry ( 11 semesters)
- (3) Differential Geometry of Curves and Surfaces ( 7 semesters)
- (4) Lie groups and Lie Algebras ( 5 semesters)
- (5) Projective Geometry (5 semesters)
- (6) Linear Geometry ( 2 semesters)
- (7) Linear Algebra (2 semesters for Mathematics at University of Barcelona, 2 semesters in Chemical Engineering at University of Barcelona and 1 semester at UAB, 1 semester at Informatics Engineering and four semester in Industrial engineering at University of Lleida)
- (8) Introduction to Algebra and Geometry ( 2 semesters)
- (9) Calculus and Algebra I (4 semesters)
- (10) Calculus and Algebra II (3 semesters)
- (11) Mathematics I and II (2 semesters)
- (12) Introduction to Analysis (1 semester)
- (13) Basics of Mathematics I (4 semesters)
- (14) Topology (4 semesters)
- (15) Statistics for Engineers (3 semesters)
- (16) Foundations of Mathematics for Building engineering (14 semesters)

4.9.2. *Master courses.* Differentiable manifolds (2016-2020).

4.9.3. *Graduate courses.* Symplectic Geometry (2003–2004).

4.9.4. *BGSMath Courses.* Symplectic Techniques in Dynamical Systems and Mathematical Physics (2015–2016)

#### 4.9.5. *Minicourses in International Schools.*

- Cours Geometry and Dynamics of Singular Symplectic Manifolds, 20 hours at Institut Henri Poincaré in the context of my Chaire d'Excellence de la Fondation Sciences Mathématiques de Paris. Available online in vimeo <https://www.sciencesmaths-paris.fr/fr/le-cours-deva-miranda-933.htm>
- Lecturer at the Summer School Poisson 2014 <http://www.math.illinois.edu/Poisson2014/school.html> ( minicourse on Poisson manifolds and Integrable Systems) available on youtube:<https://www.youtube.com/watch?v=IQzR4mZfkpE&feature=youtu.be>.
- Autumn School at Universität Würzburg, *From Poisson Geometry to Quantum Fields on Noncommutative Spaces* on Basics on Poisson manifolds and  $b$ -Symplectic manifolds <https://www.mathematik.uni-wuerzburg.de/autumnschool2015/>.

### 5. RESEARCH ACTIVITIES

I am principal researcher/group leader of the group GEOMAP: <https://geomap.upc.edu/en>. Together with Amadeu Delshams we have created a Laboratory of Geometry and Dynamical Systems at EPSEB-UPC. I am the director of this lab [http://epseb.upc.edu/ca/universitat-empresa/laboratori-i-tallers/copy\\_of\\_laboratori-de-gestio-de-projectes-i-obres-t](http://epseb.upc.edu/ca/universitat-empresa/laboratori-i-tallers/copy_of_laboratori-de-gestio-de-projectes-i-obres-t).

**5.1. Grants and research networks as main researcher.** I have been **principal investigator** of the following projects:

- (1) Principal investigator of an ICREA Academia Project: Total amount: 200000 euros (Start date January 2017, duration of the grant 5 years).
- (2) Principa investigator of an SGR Research project 2017SGR935: 65898 euros 2017-2019 (total number of members 21).
- (3) Principal investigator of the project GEOMETRIA Y TOPOLOGIA DE VARIETADES, ALGEBRA Y APLICACIONES, code MTM2015-69135-P, total number of participants: 24. total number of PI: 2. Total funding: 150600. Start date January 2016 end date December 2019.
- (4) Principal investigator of SGR grant 2017 SGR 932. Total amount: 65896 euros. 2017-2019. Number of PI:1.
- (5) Principal investigator for an AFR-Ph.D. project 2016-2019, Total amount: 120.462 euros.
- (6) Marie Curie EIF. Total amount (including grant) : EUR 142 866.
- (7) Spanish project reference number MTM2007-30184-E for the conference on Moment maps. Total amount : 5000 euros.
- (8) Catalan project reference number 2007ARCS2-00079 for the conference moment maps. Total amount : 5000 euros.
- (9) I-math future project on Dynamics of Poisson structures (principal investigator) total amount : 37.356,11
- (10) I-math project for GESTA2011 : 6000 euros
- (11) MICINN : J-09422GESTA2011: New Trends in Symplectic and Contact Geometry: 5000 euros
- (12) Responsible for the project "GESTA 2011: New trends in Symplectic and Contact Geometry", (5000 euros).

- (13) Responsible of the project " Geometry and Dynamics of Integrable systems" financed by ESF-CAST (16400 euros).

## 5.2. Other Grants and research networks.

- (1) Excellence project EXPLORA ciencia MTM2015-72876-EXP based at ICMAT-CSIC (Members: Alberto Ibort, Eva Miranda and Francisco Presas (PI)). Total amount: 15000 euros.
- (2) Network GMC, Red GMC- Geometry Mechanics and Control. MTM2010-12116-E main researcher. Juan Carlos Marrero.
- (3) Network CAST: Contact and Symplectic Topology, Main Researcher: Frédéric Bourgeois.
- (4) Member of the Research group: Grupo consolidado en Geometría Diferencial- Referencia : SGR 2017, Main researcher Joan Porti.
- (5) Member of the ICMAT Viktor Ginzburg Laboratory financed by the Severo Ochoa Programme. Total amount:89.420
- (6) Member of the research group GEOMETRIA ALGEBRAICA, SIMPLECTICA, ARITMETICA Y APLICACIONES MTM2012-38122-C03-01. Total amount 122.500.
- (7) Member of the research project "proyecto: MTM2009-07594 (subprograma MTM) Título del proyecto: ESTRUCTURAS GEOMETRICAS: DEFORMACIONES, SINGULARIDADES Y GEOMETRIA INTEGRAL" of the Spanish Ministry of research. Main researcher : Joan Porti Piqué. 135.157,01 euros
- (8) Member of the research project "Geometria Hiperbólica y Geometria Simpléctica (MTM2006-04353)" of the Spanish Ministry of research. Main researcher : Joan Porti Piqué. 97730.
- (9) Network REAG: Red de análisis geométrico, Main researcher: Luis Guisjarro.
- (10) Member of Grupo consolidado en Geometría Diferencial- Referencia 2005SGR 00317, Main Researcher: Marcel Nicolau.
- (11) Member of the research project "Geometria Diferencial: foliaciones Lagrangianas, métricas singulares e integrales de curvatura (BFM2003-03458)" of the Spanish Ministry of research. Main researcher : Joan Porti Piqué. TOTAL AMOUNT: 122.260
- (12) Member of the research MINECO project GEOMETRIA ALGEBRAICA, SIMPLECTICA, ARITMETICA Y APLICACIONES with reference: MTM2012-38122-C03-01 of the Spanish Ministry of research. Main researcher : Marta Casanellas Rius.

## 5.3. Invitations as main speakers in Workshops, Conferences and Seminars.

### 5.3.1. Invited speaker at.

- (1) February 2019, Plenary speaker at the Congreso Bienal RSME.
- (2) July 2018, Plenary speaker at Poisson 2018 at the Fields Institute.
- (3) June 2018, Plenary speaker at GDIS2018 in Moscow.
- (4) April 2018, Plenary speaker at the Workshop Geometry of the Momentum Map, Ascona.

- (5) September 2017, Plenary speaker at Classical Integrable Systems and Perturbations, Observatoire de Paris.
- (6) August 2017, Plenary speaker at the Workshop PADGE 2017, Leuven University.
- (7) June 2017, invited speaker at the Workshop RSME-SMM, Valladolid.
- (8) June 2017, Plenary speaker at the Workshop Women in Geometry and Topology in Zurich.
- (9) August 2016, plenary speaker at the Workshop on Celestial Mechanics and Symplectic Geometry.
- (10) August 2016, plenary speaker at XXV International Fall Workshop on Geometry and Physics.
- (11) June 2016, plenary speaker at the Workshop on Integrable Systems in Ascona.
- (12) September 23-25 2016- Speaker at CSASC <http://csasc2016.espais.iec.cat/>
- (13) June 10-13 2015- AMS-EMS-SMP International Meeting, invited speaker at the session on Symplectic and Contact Topology.
- (14) November 2014- Barcelona Mathematical Days (section Geometric Structures in Interaction).
- (15) July-August 2014- Invited lecturer at the Poisson 2014 Summer School, Illinois, Urbana-Champaign.
- (16) July- Invited speaker at a special sessions at the AIMS conference at IC-MAT, Madrid.
- (17) April BBQ2014- Belgian Brackets and Quantization, Université Libre de Bruxelles (plenary speaker) , April 1-3, 2014.
- (18) December 9-13 2013- Main speaker at Focused research workshop on exterior differential systems and Lie theory, Fields Institute, Toronto, Canada.
- (19) Workshop in honour of Alan Weinstein,(main speaker) July 2013.
- (20) Colloque RSME Young researchers (main speaker), September 2013 (Sevilla).
- (21) FDIS 2013 (main speaker), Luminy, July 2013.
- (22) Quantization and Reduction 2013 (main speaker), Erlangen 2013.
- (23) Normal forms day (main speaker), Utrecht February 2013.
- (24) Colloque Joves SCM (main speaker), Octobre, Novembre 2013.
- (25) Workshop "Integrability in Dynamical Systems and Control" in Rouen (main speaker), France, November 2012.
- (26) Iberoamerican Workshop on Geometry, Mechanics and Control(main speaker), Salamanca, 2012.
- (27) STS at 6ecm on Integrable Systems (main speaker), June 2012.
- (28) Foliations 2012,(présentation de communication) June 2012.
- (29) Quarterly Seminar on Geometry and Topology in Utrecht (main speaker), February 2012.
- (30) Thematic Day on Poisson Geometry and Applications (main speaker), Zaragoza, February 2012.
- (31) CSASC special session on Geometry (main speaker), Analysis and Mathematical Physics, September 2011.
- (32) Modern approaches to dynamical integrability in Portsmouth,(main speaker) July 2011.
- (33) Geometric Quantization in the non-compact setting, Oberwolfach, February 2011.

- (34) EMS-RSME Mathematical Weekend (main speaker), September 2011.
- (35) FDIS2011 (main speaker) June 2011.
- (36) CSASC 2011 (main speaker) September 2011.
- (37) Poisson 2010, IMPA, Rio de Janeiro, July 2010. (Plenary Speaker).
- (38) Conference SCAS, Prague, Janvier 2010. (Main speaker)
- (39) Workshop on Conservative dynamics and Symplectic Geometry, IMPA, Río de Janeiro, August, 2009. (Main speaker).
- (40) "Higher Symmetries in Physics", Universidad Complutense de Madrid . (Main speaker).
- (41) Workshop on Transverse Poisson Structures and Poisson Singularities, Lausanne, October, 2008. (Main speaker)
- (42) Rencontre Painlevé, Paris, 17-20, September 2007. . (Main speaker, exposé 1 heure)
- (43) Moment Maps Conference (invited speaker), Lausanne, August, 2008. . (Main speaker)
- (44) New trends in Poisson Geometry, CRM Thematic Day, June 2008. (Main speaker)
- (45) GESTA-Barcelona-Madrid, "Cuantización geométrica con singularidades", April 2008 ( main speaker).
- (46) Minicourse "Coordenadas acción-ángulo y singularidades" at CSIC-Madrid, december 2007. (Minicours 3 hours).
- (47) Rigidity for Poisson group actions, Workshop Poisson Geometry and Applications, MFO Oberwolfach, avril 29-mai 5, 2007. . (Main speaker)
- (48) Some rigidity results for integrable systems and Hamiltonian group actions, Conférence, Intégrabilité Dynamique. Dynamical Integrability, CIRM, décembre 2006. . (Main speaker)
- (49) Rigidity problems for compact group actions and equivariant normal forms for Poisson structures, Conference XV International Conference on Geometry and Physics, A satellite conference of ICM2006, September 2006. (Communication, 30 min.)
- (50) Formes normales équivariantes pour les systèmes intégrables non-dégénérées au voisinage d'une orbite compacte. Réunion Hamilton, Limoges, July 2006. (Main speaker).
- (51) Equivariant splitting theorem in Poisson manifolds, July 2005, poster, Trieste.
- (52) Infinitesimal deformations of integrable systems, février 2005, Conference GESTA, Barcelona. (Main speaker)
- (53) Singularities in integrable systems, Poster, Workshop on Geometry and Physics, Murcia, September 2004.
- (54) Equivariant symplectic linearization of integrable systems, minicours GESTA, february 2004, Salamanca. (minicourse 4 hours).
- (55) Foliaciones Lagrangianas, Conférence GESTA, Madrid, February 2000. (Main speaker).
- (56) Symplectic Linearization of singular Lagrangian foliations, Poster Workshop on Geometry and Physics, Vilanova i la Geltrú, june 2000.

### 5.3.2. *Speaker at Seminars.*

- (1) Seminars 2017: Seminar in Montpellier.

- (2) Seminars 2016: Luxembourg (General Mathematical Seminar), IMJ-Paris (Séminaire de Géométrie Hamiltonienne), Orsay (Séminaire Topologie, Géométrie et Systèmes Dynamiques et Seminaire Symplectique Nantes-Orsay), MIT (Seminar of Geometry and Topology)
- (3) Seminars 2014: Madrid, Toulouse, Paris.
- (4) Seminars 2013: Bilbao, Madrid, Angers, Metz.
- (5) Seminars 2012: Toulouse, Barcelona, Madrid.
- (6) Seminars 2011: Toulouse, Poitiers, Paris 13 (séminaire des systèmes dynamiques et géométrie ergodique), Lyon (séminaire Géométries), Barcelona, Madrid, Milano...
- (7) Seminar at CRM at Advanced course on Foliations , April 2010.
- (8) Seminar Systèmes dynamiques, Barcelone, March 2010.
- (9) Seminar Géométrie Algébrique, Barcelone, March 2010.
- (10) Seminar Geometria em Lisboa, February, 2010.
- (11) Special Gesta Seminar, Madrid February, 2010.
- (12) Seminar Géométrie Symplectique et Applications, Strasbourg, January 2010.
- (13) Seminari de Geometria Algebraica, Barcelona, January, 2010.
- (14) Special GESTA Seminar on Contact Geometry, Madrid, June, 2009.
- (15) Seminar de Géométrie Symplectique et de Contact, Université Libre de Bruxelles, March 2009.
- (16) Seminari de Geometria, Universitat Autònoma de Barcelona, February 2009.
- (17) Seminario de Geometría y Física, Universidad de Salamanca, February, 2009.
- (18) Seminar d'Équations Différentielles, Université de Toulouse, January 2009.
- (19) Seminar on Symplectic Geometry, Madrid, March, 2009.
- (20) Seminar Géométries, Université de Lyon 1, November 2008.
- (21) Seminario de geometría simpléctica y de contacto, CSIC-Madrid, October, 20-21, 2008.
- (22) Geometric Quantization of Integrable Systems with Singularities, le 10 March 2008, Symplectic Seminar, MIT.
- (23) Simultaneous linearisation of Hamiltonian vector fields, CRM, novembre 2007.
- (24) Autour de la linéarisation des actions des algèbres de Lie semisimples avec des structures géométriques additionnelles, Paris, Chevaleret, October 2007.
- (25) On symplectic linearisation of semisimple Lie algebra actions, Conference "Special day on geometric mechanics and Lie algebroids", Lisbon, September 2007.
- (26) Rigidity results for group actions on Poisson manifolds, Symplectic Seminar, Toronto, May 2007.
- (27) Geometrical Aspects of Integrable systems in Symplectic and Poisson manifolds, Symplectic Geometry, Toronto, May 2007.
- (28) Group actions and integrable systems on Poisson manifolds: normal forms and rigidity, Seminar Géométrie et Dynamique, UMPA, ENS, Lyon, April 2007.
- (29) Rigidity problems for Poisson Group actions, Paris, Chevaleret, January 2007.



- (30) Equivariant normal forms for integrable systems, Observatoire de Paris, January 2007.
- (31) Equivariant Splitting theorem and normal forms for Poisson manifolds, Symplectic Seminar, MIT, May 2006.
- (32) Equivariant normal forms for Poisson structures, PennState University, April 2006.
- (33) Equivariant normal forms for Poisson structures, Berkeley (Seminar on Symplectic Geometry), April 2006.
- (34) Formas normales equivariantes para estructuras de Poisson, Madrid, March 2006.
- (35) Equivariant splitting theorem for Poisson manifolds : Seminaire de Géométrie non Commutative, Marseille, March 2006.
- (36) Complex de deformacions de sistemas integrables, CRM, December 2005.
- (37) Equivariant splitting theorem in Poisson manifolds, june 2005, Institut Fourier
- (38) Infinitesimal Stability for integrable systems with nondegenerate points, Strasbourg, April 2005.
- (39) Equivariant normal forms for integrable systems in a neighbourhood of a singular nondegenerate orbit, Poitiers, January 2005.
- (40) A singular Poincaré Lemma for nondegenerate singular integrable systems, Toulouse, November 2004.
- (41) Linealització d'accions simplèctiques i fibracions singulars, Barcelona December 2004.

### 5.3.3. *Research Stays.*

- (1) MSRI, Research Member, October-November 2018.
- (2) Observatoire de Paris-IMJ-Ceremade Paris, Excellence Chair of the Fondation Sciences Mathématiques de Paris, September 2017- February 2018.
- (3) MIT, invited visiting Professor, April 2014.
- (4) Université de Paris 7 et Observatoire de Paris, invitée, May 2014.
- (5) Institute de Ciencias Matemáticas- ICMAT-Madrid, Invited visiting Researcher February, March and June 2014.
- (6) Toulouse, October 2012, Maitre des Conférences invitée at Université Paul Sabatier.
- (7) MIT June 2012 with Victor Guillemin (visiting scholar).
- (8) Toulouse, January 2011, Maitre des Conférences Invitee at Université Paul Sabatier.
- (9) MIT April 2010 with Victor Guillemin. (visiting scholar)
- (10) MIT April 2009 with Victor Guillemin. (visiting scholar)
- (11) Laboratoire Émile Picard, MCF invitée, November 2008 and January 2009.
- (12) 1 month Invited Research Stay: Observatoire de Paris and IMJ October 2008.
- (13) Laboratoire Emile Picard, Maître des Conférences invitée, November 2008 and January 2009.
- (14) MIT, March 2008 with Victor Guillemin.
- (15) Oberwolfach, February 2008 with Mark Hamilton (in the context of Leibniz Fellowships).
- (16) Paris, October 2007 with Jean-Pierre Marco.

- (17) Lisbon, September 2007 with Rui Loja Fernandes.
- (18) Poitiers, January 2007 with Camille Laurent Gengoux et Pol Vanhaecke.
- (19) Toronto, May 2007 with Yael Karshon.
- (20) Poitiers, december 2007 with Pol Vanhaecke.
- (21) MIT, May 2006 with Victor Guillemin.
- (22) University of California at Santa Cruz, April 2006 with Viktor Ginzburg.
- (23) Toulouse, February 2002 with Nguyen Tien Zung.
- (24) Fields institute à Toronto as invited graduate student during a special semester on group actions, june 2001.

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