Renato C. Calleja +52-55-5622-3541
Department of Mathematics and Mechanics
Instituto de Investigaciones en Matemáticas Aplicadas y en Sistemas (IIMAS),
Universidad Nacional Autónoma de México (UNAM),
Admón. No. 20,
Delegación Alvaro Obregón
01000 México D. F. (MEXICO)
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Web-page: `http://mym.iimas.unam.mx/renato/`

Education

- Ph.D. *Mathematics*
  University of Texas at Austin
  August 2004 - May 2009
  Advisor: Rafael de la Llave
  Thesis: *Existence and persistence of invariant objects in dynamical systems and mathematical physics* [1]

- B.S. *Applied Mathematics* (honors)
  Instituto Tecnológico Autónomo de México
  August 1999 - June 2004
  Advisor: Héctor E. Lomelí
  Thesis: *Symplectic dynamics and numerical approximations of separatrices and chaotic transport*

Research Interests

Dynamical Systems Appearing in Physics and Applied Mathematics

Ordinary Differential Equations, Kolmogorov-Arnold-Moser (KAM) Theory, Numerical KAM Theory, Bifurcation Theory, Non-linear Lattice Equations, Numerical Analysis, Partial Differential Equations, State-Dependent Delay Differential Equations, Hyperbolicity.

[1] Frank Gerth III Dissertation Award

Employment

- Investigador Titular "A" (Research Associate Professor)
  August 2017 to present, Department of Mathematics and Mechanics,
  IIMAS–UNAM
  Mexico City, Mexico

- *Simons CRM Scholar*
  Centre de Recherches Mathématiques,
  Université de Montreal and Simons Foundation
  April 2019

- *Research Member*
  Mathamatical Sciences Research Institute,
  University of California Berkeley
  August-December 2018

- Investigador Asociado "C" (Research Assistant Professor)
  August 2013 to August 2017, Department of Mathematics and Mechanics,
  IIMAS–UNAM
  Mexico City, Mexico

- *Adjunct Professor*
  November 2015 to present, Department of Mathematics and Statistics, McGill
  Universtity
  Montreal, Canada

- *Visiting Professor*
  January 2015 - May 2015, Department of Mathematics and Statistics, McGill
  Universtity
  Montreal, Canada

- *Lluís Santaló Visiting Professor*
  June 2014 - July 2014, Centre de Recerca Matamàtica - Universitat de Barcelona
  Barcelona, Spain

- *Visiting Assistant Professor*
  January 2013 - May 2013, School of Mathematics, Georgia Institute of Technology
  Atlanta, USA

- *Postdoctoral Fellow*
  September 2012 - December 2012, Institute for Mathematics and its Applications,
  University of Minnesota
  Minneapolis, USA

- *Postdoctoral Fellow*
  August 2009 - August 2012, McGill University, Concordia University, and Centre de
  Recherches Mathématiques

Supervisors: Eusebius Doedel and Antony R. Humphries
Montreal, Canada

- *Visiting Researcher*
September 2008 - December 2008, Centre de Recerca Matemàtica
Barcelona, Spain

- *Graduate Research Assistant*
Summer 2006, 2007, & 2008, The Universtiy of Texas at Austin
Austin, USA

- *Teacher Assistant*
August 2004 - May 2009, The University of Texas at Austin
Austin, USA

Publications

1) R. Calleja, A. Celletti, J. Gimeno, R. de la Llave, Accurate computations up to break-down of quasi-periodic attractors in the dissipative spin-orbit problem, J. Nonlinear Sci.34(2024), no.1, Paper No. 12.

2) R. Calleja, A. Celletti, R. de la Llave, KAM quasi-periodic solucions for the dissipative standard map Commun. Nonlinear Sci. Numer. Simul. 106, (2022), 106111

3) R. Calleja, A. Celletti, J. Gimeno, R. de la Llave, KAM quasi-periodic tori for the dissipative spin-orbit problem Commun. Nonlinear Sci. Numer. Simul. 106, (2022), 106099

4) R. Calleja, A. Celletti, J. Gimeno, R. de la Llave, Efficient and accurate KAM tori construction for the dissipative spin-orbit problem using a map reduction, Journal of Nonlinear Science volume 32, Article number: 4 (2022)

5) Calleja, R., Celletti, A., de la Llave, R. KAM Theory for Some Dissipative Systems. In: Baù, G., Di Ruzza, S., Páez, R.I., Penati, T., Sansottera, M. (eds) New Frontiers of Celestial Mechanics: Theory and Applications. I-CELMECH 2020. Springer Proceedings in Mathematics & Statistics, vol 399. Springer, Cham. (2022)

6) R. Calleja, D. del-Castillo-Negrete, D. Martinez-del-Rio and A. Olvera, A new method to compute periodic orbits in general symplectic maps , Commun. Nonlinear Sci. Numer. Simul. 99, (2021), 105838.

7) R. Calleja, C. García-Azpeitia, J.P. Lessard, and J.D. Mireles-James, From the Lagrange polygon to the figure eight I: Numerical evidence extending a conjecture of Marchal, Celestial Mechanics and Dynamical Astronomy volume 133, Article number: 10 (2021).

8) R. Calleja, M. Canadell, A. Haro, *Non-twist tori in conformally symplectic systems*, Commun. Nonlinear Sci. Numer. Simul. 96, (2021), 105695.

9) A. P. Bustamante y R. Calleja, *Corrigendum and Addendum to "Computation of domains of analyticity for the dissipative standard map in the limit of small dissipation"*, Physica D 417 (2021) 132837.

10) R. Calleja, C. García-Azpeitia, J.P. Lessard, y J.D. Mireles-James, *Torus knot choreographies in the n-body problem*, Nonlinearity, Volume 34, Number 1, (2021) 313.

11) Calleja, R., Celletti, A., y de la Llave, R., *Existence of whiskered KAM tori of conformally symplectic systems*, Mathematics Research Reports, Volume 1 (2020), 15–29.

12) Renato C. Calleja, Alessandra Celletti, y Rafael de la Llave, *Existence of whiskered KAM tori of conformally symplectic systems*, Nonlinearity, Volume 33, Number 1, (2020) 538–597.

13) A. P. Bustamante y R. Calleja, *Computation of domains of analyticity for the dissipative standard map in the limit of small dissipation*, Physica D: Nonlinear Phenomena, Available online 23 February 2019.

14) R. Calleja, E. Doedel, y C. García-Azpeitia, *Choreographies in the n-vortex problem*, Regular and Chaotic Dynamics, 2018, vol. 23, no. 5, pp. 595-612

15) Renato Calleja, Eusebius Doedel y Carlos García-Azpeitia, *Symmetries and choreographies in families that bifurcate from the polygonal relative equilibrium of the n-body problem*, Celestial Mech. Dynam. Astronom. 130 (2018), no. 7, 130:48.

16) R. Calleja, E. Doedel, C. García-Azpeitia, y Carlos L. Pando, *Choreographies in the Discrete Nonlinear Schrödinger Equations*, Eur. Phys. J. Special Topics 227, 615–624 (2018).

17) Renato C. Calleja, Alessandra Celletti, Rafael de la Llave, *Domains of analyticity of Lindstedt expansions of KAM tori in dissipative perturbations of Hamiltonian systems*, Nonlinearity 30, (2017) 3151-3202

18) Renato C. Calleja, Antony R. Humphries y Bernd Krauskopf, *Resonance phenomena in a scalar delay differential equation with two state-dependent delays*, SIAM J. Appl. Dyn. Syst., 16(3), 1474–1513

19) Renato C. Calleja, Alessandra Celletti, Livia Corsi, Rafael de la Llave, *Response solutions for quasi-periodically forced, dissipative wave equations*, SIAM J. Math. Anal., 49(4), 3161–3207 (2017)

20) Renato Calleja, Diego del-Castillo-Negrete, David Martínez-del-Río, y Arturo Olvera, *Global transport in a nonautonomous standard map*, Commun. Nonlinear Sci. Numer. Simul. 51 (2017), 198–215

21) Renato Calleja, Eusebius Doedel, Carlos García Azpeitia, *Symmetry-breaking for a restricted n-body problem in the Maxwell-ring configuration*, Eur. Phys. J. Special Topics 225, 274 1–2750 (2016).

22) Antony R. Humphries, Daniel A. Bernucci, Renato Calleja, Namdar Homayounfar, Michael Snarski, *Periodic Solutions of a Singularly Perturbed Delay Differential Equation With Two State-Dependent Delays*, J. Dynam. Differential Equations (2016), Volume 28, Issue 3, pp 1215–1263

23) David Martínez, Diego del-Castillo-Negrete, Arturo Olvera, Renato Calleja, *Self-consistent chaotic transport in a high-dimensional mean-field Hamiltonian map model*, Qual. Theory Dyn. Sys. (2015), Volume 14, Issue 2, pp 313–335

24) Renato Calleja, Alessandra Celletti, Corrado Falcolini y Rafael de la Llave, *Partial justification of Green's criterion for conformally symplectic systems*, SIAM J. Math. Anal. 46 (2014), no. 4, 2350–2384.

25) Renato Calleja, Alessandra Celleti, & Rafael de la Llave, *Local behavior near quasi–periodic solutions of conformally symplectic systems*, J. Dynam. Differential Equations 25 (2013), no. 2

26) Renato Calleja, Alessandra Celletti y Rafael de la Llave, *KAM theory for conformally symplectic systems*, J. Differential Equations 255 (2013), no. 5, 978-1049,

27) Renato Calleja, Alessandra Celletti y Rafael de la Llave, *Construction of response functions in forced strongly dissipative systems*, Disc. Cont. Dyn. Sys. Series - A, Vol. 33, No. 10 (2013)

28) Renato Calleja y Jordi-Lluis Figueras, *Collision of invariant bundles of quasi-periodic attractors in the dissipative standard map*, Chaos 23, 021203 (2012)

29) Renato Calleja, Eusebius Doedel, Antony R. Humphries, Alexandra Lemus-Rodríguez y Bart Oldeman, *Baoundary-value problem formulations for computing invariant manifolds and connecting orbits in the restricted three body problem*, Celestial Mechanics and Dynamical Astronomy, Volume 114, Issue 1-2, pp 77-106 (2012)

30) Renato Calleja y Rafael de la Llave, *Computation of the breakdown of analyticity in statistical mechanics models: numerical results and a renormalization group explanation*, Journal of Statistical Physics (2010) 141:940-951

31) Renato Calleja y Rafael de la Llave, *A numerically accessible criterion for the breakdown of quasi-periodic solutions and its rigorous justification*, Nonlinearity 23, (2010) 2029-2058

32) Renato Calleja y Alessandra Celletti, *Breakdown of invariant attractors for the dissipative standard map*, Chaos 20 0131 21 (2010)

33) Renato Calleja y Yannick Sire, *Travelling waves in discrete nonlinear systems with non-nearest neighbor interactions*, Nonlinearity 22, (2009) 2583-2605

34) Renato Calleja y Rafael de la Llave, *Fast numerical computation of quasi-periodic equilibrium states in 1-D statistical mechanics models, including twist maps*, Nonlinearity 22, (2009) 1311-1336

35) Héctor E. Lomelí y Renato Calleja, *Heteroclinic bifurcations and chaotic transport in the two-harmonic Standard Map*, Chaos 16, 0231 17 (2006)

Research Projects Participation

- Project *Analytic and numerical methods in applied mathematics* (Principal Investigator)
  DGAPA-UNAM, PAPIIT, IN 103423 January 2023-December 2024.

- Project *Computation of invariant manifolds using the parameterization method in applied mathematics and physics II* (Principal Investigator)
  DGAPA-UNAM, PAPIIT-Program, Grant: IN 101020
  January 2020-December 2021.

- Project *Differential Equations, Dynamical Systems and Control* (Associate Investigator)
  2019 de Financiación de Proyectos de Investigación Interuniversitaria de la Unión Iberoamericana de Universidades (UB, UBA, UCM, UNAM, USP) (Principal Investigator: Rosa Pardo) September 2019 - August 2020.

- Project *Computation of invariant manifolds using the parameterization method in applied mathematics and physics* (Principal Investigator)
  DGAPA-UNAM, PAPIIT-Program, Grant: IA 102818
  January 2018-December 2019.

- Project *Calculus of barriers to global transport in non autonomous maps* (Associate Investigator)
  DGAPA-UNAM, PAPIIT-Program, Grant: IN 104514, (Principal investigator: Arturo Olvera)
  January 2017-December 2017.

- Project *Chaotic transport and dynamical systems* (Associate Investigator)
  DGAPA-UNAM, PAPIIT-Program, Grant: IN 104514, (Principal investigator: Arturo Olvera)
  January 2014-December 2014.

- Project *Chaotic transport and dynamical systems II* (Associate investigator)
  DGAPA-UNAM, PAPIIT-Program , Grant: IN 104514-2 , (Principal investigator: Arturo Olvera)
  January 2015-December 2015.

- Group Project *Non-linear Mathematics in Physics and Engineering III* (Associate Investigator)

CONACYT 133036 (Principal Investigator: Antonmaría Minzoni)
January 2012-December 2016, (Member since: 2013).

Awards and Fellowships

- *Sistema Nacional de Investigadores (Mexico)*
  SNI-Conacyt, Level II
  January 2020 to present

- *Sistema Nacional de Investigadores (Mexico)*
  SNI-Conacyt, Level I
  January 2013 to 2019

- *Simons CRM Scholar*
  Centre de Recherches Mathématiques,
  Université de Montreal and Simons Foundation
  April 2019

- *Lluís Santaló Visitining Professor Fellowship*
  Institut d'Estudis Catalans and Centre de Recerca Matemàtica
  June - July 2015.

- *Postdoctoral Fellowships*

  - McGill University, Concordia University, and Centre de Recherches Mathématiques
    September 2009 - August 2010.September 2011- August 2012.
  - Programme de Bourses d'Excellence pour Étudiants Étrangers (PBEEE)
    Fonds de recherche du Québec – Nature et technologies (FQRNT)
    Hosted by McGill University
    September 2010 - August 2011, $35,000 CAD

- *Frank Gerth III Dissertation Award*
  Department of Mathematics, University of Texas at Austin
  May 2009.

- *E.D. Farmer Fellowship*
  The Mexican Center, University of Texas at Austin
  September 2007 - May 2008.

- *Burton Fellowship*
  Department of Mathematics, University of Texas at Austin
  September 2004 - May 2005.

- *Regents Scholarship*
  Department of Mathematics, University of Texas at Austin
  May 2005.

Teaching

- *University of Texas at Austin*
  Teaching Assistant, Department of Mathematics
  - Calculus I, Fall 2004
  - Real Analysis I, Spring 2005
  - Advance Calculus for Applications I, Fall 2005 and 2006, Spring 2006 & 2008
  - Probability I, Spring 2007
  - Elementary Methods in Statistics, Fall 2007
  - Introduction to Mathematics, Spring 2009

- *McGill University*
  Course instructor, Department of Mathematics and Statistics
  - Nonlinear Dynamics and Chaos, Fall 2009 & 2011
  - Honors Nonlinear Dynamics, Fall 2009 & 2011
  - Ordinary Differential Equations for Engineers, Fall 2010
  - Advanced Calculus for Engineers, Winter 2015

- *Georgia Institute of Technology*
  Course instructor, School of mathematics
  - Differential Equations, Spring 2013

- *UNAM*
  Course instructor, Posgrado en Ciencias Matemáticas (Graduate Program in Mathematics)
  - Introduction to Analytic Mechanics, Fall 2019, 2020 ,2024
  - Selected topics of Analytic Mechanics (Symplectic Geometry and KAM Theory), Spring 2014, 2021
  - Ordinary Differential Equations, Fall 2014, Fall 2015, Spring 2019, Spring 2023
  - Delay Differential Equations, Fall 2016 and Spring 2018

  Course instructor, Facultad de Ciencias (School of Sciences)
  - Ordinary Differential Equations I, Spring 2016 and 2017
  - Ordinary Differential Equations II, Fall 2017
  - Nonlinear Dynamical Systems, Spring 2020
  - Project I, Fall 2021.

Students Supervised

- Department of Mathematics and Statistics, McGill University
  - *Robert Gibson*
    Numerical Analysis of Wave Maps (co-supervised with Gantumur Tsogtgerel), B.Sc.
    Summer 2010
  - *Namdar Homayounfar*
    Numerical Analysis of a State-Dependent Delay Equation close to a singular limit. (co-supervised with Antony R. Humphries), undergraduate
    Summer & Fall 2011
  - *Nicolas Gonzalez-Boileau*
    Numerical Analysis of a State-Dependent Delay Equation with two independent state dependent delay. (co-supervised with Antony R. Humphries), B.Sc.
    Summer 2012
- IIMAS, UNAM
  - *Miguel Angel Cadena*
    Resonancias espin-órbita en cuerpos celestes (Spanish), B.Sc., Spring 2015, Graduated on February 20th, 2015.
  - *Adrián Pérez Bustamante*
    Singular limit of small dissipation in celestial mechanics models, M.Sc., Spring 2016, Graduated on June 30th, 2016.
  - *Edgar Rodriguez*
    Periodic Solutions in the dynamics of three neurons with delay, M.Sc., Spring 2017, Graduated on September 10th, 2017.
  - *Nicolás González Boileau*
    Celestial Mechanics Numerics of Quasi-Periodic Motion
    M.Sc. Spring 2018, Graduated on April 18th, 2018.
  - *Laura Rosales Ortiz*
    Comportamiento alrededor de L4 en el problema restringido de los tres cuerpos
    M.Sc., Graduated on August 30th, 2020.
  - *Evelyn Álvarez Cruz*
    Calculo de variedades invariantes en órbitas periódicas
    Msc. Graduated on October 10th, 2021.
- Current students supervised at IIMAS, UNAM
  - *Edgar Rodriguez Mendieta*
    Bifurcation theory in infinite dimensional dynamical systems, PhD Ongoing
  - *Miguel Angel Cadena Negrete*
    Chains of Hamiltonian Oscillators with dissipation, PhD Ongoing (on temporary leave)

– *Pedro Porras Flores*
Constuctive KAM methods for non-autonomous Hamiltonian systems with applications to Celestial Mechanics, PhD Ongoing

Student Committee Participation

PhD

Eduardo Iván Velázquez Richards
Sara Galasso
Wouter Heterbrij
Marta Canadell Cano
Francisco Martínez Farías
Eduardo Iván Velázquez Richards
David Martínez del Río
Jorge Pérez Hernández
Israel Ramos García
Juliho Castillo Colmenares
Diego Iniesta Miranda

Masters

José Alfornso Cabrera Sanchez
Eduardo Iván Velázquez Richards
Alejandro Bravo Doddoli

Undergraduate

Nahum Efrén Vazquez Espinosa
Adrián Pérez Bustamante
Andrés Nieto Guadarrama
Edgar Itamar Avalos Almanza
Carlos Rodolfo Barrera Anselmo
Evelyn Álvarez Cruz
Rossana Torres Álvarez

Course and Conference Organization

Conference, *Geometric and Variational Methods in Celestial Mechanics*,
Casa Matemática Oaxaca, Oaxaca, México, june 19 -24, 2022

- Mini-simposium, *Oscillatory Dynamics in Delay Differential Equations*
  Conference on the Applications of Dynamical Systems, SIAM
  Snowbird, USA. May 25th, 2011

- Graduate Course Organization, *An Introduction to Numerical Continuation Methods with Applications*
  Course taught by Prof. Eusebius Doedel
  IIMAS-UNAM, July 28th - August 1st, 2014

http://www.fenomec.unam.mx/curso2014/

- Scientific Committee, *Interinstitutional Colloquium of Analysis and its Applications,* IIMAS - Institute of Mathematics - School of Sciences (UNAM), August 2015 to present

- Colloquim Organization, *Applied Mathematics Colloquium* Department of Mathematics and Mechanics
  IIMAS-UNAM, January 2016 - present date
  http://uxmym1.iimas.unam.mx/coloquio/index.html

- Mini-simposium, *Dynamics, from Theory to Computation*
  Dynamics Days Latin America and the Caribbean
  Puebla, Mexico, October 24 - November 01, 2016

- Scientific Session *Finite and Infinite Dymensional Hamiltonian Systems*
  Mathematical Congress of the Americas
  Montreal, Canada, July 24-28, 2017

- Local Organizing Committee, *XII Americas Conference on Differential Equations and Nonlinear Analysis*, Guanajuato, December 2019.

- Graduate course organization, *Computer assisted proofs in Nonlinear Dynamics,* Course taught by professors Jean-Philippe Lessard and Jason Mireles-James
  IIMAS-UNAM, August 1st to 3rd, 2018

Refereeing

Boletín de la Sociedad Matemática Mexicana

Celestial Mechanics and Dynamical Astronomy

Communications in Nonlinear Science and Numerical Simulations

Communications on Pure and Applied Analysis

Discrete and Continuous Dynamical Systems

European Physics Journal

Journal of Engineering Mathematics

Journal of Mathematical Physics

Journal of Nonlinear Science

Journal of Physics A

Journal of Statistical Physics

SIAM Journal of Applied Dynamical Systems

SIAM Journal of Mathematical Analysis

Nonlinearity

International Journal of Bifurcation and Chaos

Mathematical Reviews

Physica D

Recent Conference and Seminar Talks

- *Invited Talks in Conferences*
  - "School on conformal symplectic dynamics and related fields", France, may 12, 2023.
  - "11 Taller de Geometría y Sistemas Dinámicos", Mexico, april 27, 2023.
  - "Mexican HAT", Mexico, December 8, 2022.
  - "TRAX2022", Spain, may 12, 2022.
  - "SIAM Conference on Applications of Dynamical Systems", USA, may 24, 2021.
  - "Celestial Mechanics and Beyond, In honor of Professor Don Saari, on the occasion of his 80th birthday", Puebla, Mexico, March 12th, 2020.
  - "12th Americas Conference on Differential Equations and Nonlinear Analysis (Americas XII)", Guanajuato, Mexico, December 9th, 2019.
  - "Dynamics, Equations and Applications", Krakow, Polland, September 16th, 2019
  - "Hamiltonian systems, from topology to applications through analysis I", MSRI, Berkeley, October 12th, 2018
  - "Mathematical Congress of the Americas", Canada, July 28th, 2017.
  - "Pacific Rim Mathematical Association (PRIMA 2017)", Mexico, August 13th, 2017
  - "CEDYA-CMA", Spain, June 29th, 2017.
  - "V Iberoamerican meeting on Geometry, Mechanics and Control", Spain, January 20th, 2017.
  - AIMS' 11th International Conference on Dyn. Systems, Diff. Equations and Applications. Orlando, USA. Two talks: July 2nd and 4th 2016
  - "Encuentro Nacional de Jovenes Investigadores en Matematicas", Mexico, Mexico, December, 2015.
  - "X Americas Conference on Differential Equations and Nonlinar Analysis", Buenos Aires, Argentina, February, 2015.

- "AIMS' 10th International Conference on Dyn. Systems, Diff. Equations and Applications", Madrid, Spain, July, 2014
- Conference on Dynamics of Differential Equations, Gerogia Tech,. March 16th, 2013
- AIMS' 9th International Conference on Dyn. Systems, Diff. Equations and Applications. Orlando, EUA. July 1st, 2012
- Conference on the Applications of Dynamical Systems, SIAM
  Snowbird, USA. May 25th, 2011
- Conference on Analysis and Math. Physics, Universidad Autónoma del Estado de Hidalgo
  Pachuca, Mexico. January 12th, 2011
- International Conference of Industrial and Applied Mathematics (ICIAM)
  Vancouver, Canada. July 20th, 2011
- AIMS' 7th International Conference on Dyn. Systems, Diff. Equations and Applications. Arlington, USA. May 20 2008
- AIMS' 6th International Conference on Dyn. Systems, Diff. Equations and Applications. Poitiers, France. June 18th 2006

- *Contributed Talks, Workshops, and Seminars*
  - "TRAX2022", Barcelona, España, May 12th, 2022.
  - "Floris Takens Seminar", Groningen, Nederlands, May 17th, 2022.
  - "Col.loqui IMUB", Barcelona, Spain, December 1st, 2021.
  - "Dynamics and Variational Methods of Quasi-Hamiltonian Systems", Beijin (Online), China, November 19th, 2020.
  - "CRM CAMP in Nonlinear Analysis", Montreal (Online), Canada, August 11th, 2020.
  - "Seminari de Sistemes Dinámics UB-UPC", Barcelona, Spain, January 22nd, 2020.
  - "Instituto of Mathematics Colloquium", Mexico, February 12th, 2019.
  - "Tulane Department of Mathematics Colloquium", Nueva Orleans, EUA, October, 2018
  - "Llavefest: A broad perspective on finite and infinite dimensional Dynamical Systems (FIDDS-17)", Spain, June 8th, 2017
  - Seminari de Sistemes Dinàmics UB-UPC, UPC, Barcelona, Spain, June 14th, 2017
  - Junior Colloquium, Università degli Studi di Roma "Tor Vergata", Dipartimento di Matematica, Italy, January 11th, 2017
  - "Dynamics Days Latin America and the Caribbean", Puebla, Mexico, October 26th, 2016

- Workshop on "Coherent Structures in PDEs and Their Applications", Oaxaca, Mexico, June 23rd , 2016
- Workshop on "Hamiltonian Systems and Celestial Mechanics (HAMSYS2015)", Oaxaca, Mexico, September 10th , 2015
- "CRM-McGill Applied Mathematics Seminar", Montreal, Canada, February, 2015
- Workshop on "Hamiltonian Systems and Celestial Mechanics (HAMSYS 2014)", CRM, Barcelona, Spain, June 2014
- "Coloquium of the Institute for Mathematics-UNAM", Cuernavaca, Mexico, May, 2014
- "Seminari de Sistemas Dinàmics UB-UPC", Barcelona, Spain, July, 2014
- Workshop on "Planetary Motions, Satellite Dynamics, and Spaceship Orbits", CRM, Montreal, Canada, August 22nd, 2013
- Workshop on "Advanced Computational and Experimental Techniques in Nonlinear Dynamics", Cusco, Peru, May 15th, 2013
- CDSNS Colloquium, School of Mathematics, Georgia Tech. January 14th, 2013
- Postdoc Seminar, IMA, University of Minnesota. October 9th, 2012
- Dynamical Systems Seminar, University of Toronto
  Toronto, Canada. September 28th, 2011
- PDE/Analysis Seminar, McMaster University
  Hamilton, Canada. September 30th, 2011
- Workshop on KAM Theory and Numerical Integration
  Banff, Canada. June 10th, 2011
- Mathematics Seminar, Instituto Tecnológico Autónomo de México
  Mexico City, Mexico. January 14th, 2011
- Workshop Bifurcation Analysis and Applications, Concordia University
  Montreal, Canada. July 7th, 2010
- State-Dependent Delay Equations International Workshop, Max-Planck-Institut für Physik komplexer Systeme, Dresden, Germany. October 13 2009.
- Centre de Recerca Matemàtica. Barcelona, Spain. October 8 2008.
- AIMS' 7th International Conference on Dyn. Systems, Diff. Equations and Applications. Arlington, USA. May 19 2008
- *IIMAS-UNAM, Nonlinear Waves in Continuous and Descrete Systems.* Mexico City, Mexico. January 29 2008
- UPC, Dynamical Systems Seminar. Barcelona, Spain. February 15 2007
- AIMS' 6th International Conference on Dyn. Systems, Diff. Equations and Applications. Poitiers, France. June 18 2006