
Comisión Interministerial de Ciencia y Tecnología

Curriculum vitae

Name: M. Teresa Martínez-Seara Alonso

Date: September 30 2020

Surname: Martínez-Seara Alonso

DNI: 46.526.613-M

Date of birth: 15 de July de 1961

Name: M. Teresa

Gender: Female

Actual Position

University: Universitat Politècnica de Catalunya

School, Faculty or Institute: E.T.S.E.I.B./F.M.E.

Department: Departament de Matemàtiques

Adress: Diagonal 647. 08028 Barcelona

Phone number 93 401 65 51

Fax: 93 401 17 13

Email: tere.m-seara@upc.es

Especialization (UNESCO Code): 1202, 1206, 2106

Profesional position: Full professor

From: 7 de July de 2008.

Situation

☒ Permanent

☐ Contract

☐ Interino

☐ PhD. student

☐ Other:

Dedication

Full time

☒

Partial time

☐

Field of research

Short description, key words.

Dynamical Systems, Hamiltonian Systems, Invariant manifolds, Asymptotic methods, Exponentially small phenomena, Resurgence theory, Arnold diffusion, bifurcation theory in Non-smooth Systems

Academic degrees

Bachelor

Center

Date

Batchelor in Mathematics	Universitat de Barcelona	30 June 1984
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PhD

Center

Date

Mathematics	Universitat de Barcelona	11 October 1991
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Previous appointments

Job	Institution	Dates
Profesora Encargada de Curso	Universitat Politècnica de Catalunya	1-10-1984 a 30-09-1987
Profesora Asociada a Tiempo Completo	Universitat Politècnica de Catalunya	1-10-1987 a 24-07-1990
Titular de Escuela Universitaria	Universitat Politècnica de Catalunya	25-07-1990 a 31-05-1993
Titular de Universidad	Universitat Politècnica de Catalunya	1-06-1993 a 6-07-2008

Lenguajes (R = regular, B = good, C = correct)

Lenguaje	Speak	Read	Write
Español	C	C	C
Inglés	B	C	B
Francés	R	C	R
Portugués	B	C	R
Italiano		C	

Participation in Funding Projects from public calls

(national and international)

Title of the project: Fenómenos homoclínicos y heteroclínicos en sistemas conservativos y disipativos

Funding agency: CICYT n° PB86-0527

Participant institutions: Univ. Barcelona, Univ. Autònoma de Barcelona, Univ. Politècnica de Catalunya

From: 1987 to: 1990

Principal investigator: Carles Simó

Number of researchers participating in the project: 11

TOTAL AMOUNT: 2 600 000 pesetas

Title of the project: Ayuda a grupos precompetitivos del MEC.

Funding agency: M.E.C.

Participant institutions: Unic. Politècnica de Catalunya

From: 1990 to: 1991

Principal investigator: J. Solà-Morales

Number of researchers participating in the project:

TOTAL AMOUNT:

Title of the project: Ajut d'infraestructura per a càlcul científic

Funding agency: CIRIT

Participant institutions: Univ. Barcelona

From: 1990 to: 1990

Principal investigator: Carles Simó

Number of researchers participating in the project: 21

TOTAL AMOUNT:

Title of the project: Estructura de las trayectorias caóticas en sistemas Hamiltonianos y sistemas disipativos

Funding agency: DGICYT n° PB90-0580

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya

From: 1991 to: 1994

Principal investigator: Gerard Gómez

Number of researchers participating in the project: 12

TOTAL AMOUNT: 5 760 000 pesetas

Title of the project: Hamiltonian Dynamics and Bifurcations

Funding agency: INTAS n° 93-0339

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Milano, Univ. Warwick, Moscow State Univ., Moscow Space Research Inst., St. Petersburg State Univ.

From: 1993 to: 1996

Principal investigator: Carles Simó

Number of researchers participating in the project:

TOTAL AMOUNT: 30 000 Ecu

Title of the project: Ajut per a Grups de recerca de qualitat 1993

Funding agency: CIRIT n° GRQ93-1135

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya

From: 1994 to: 1996

Principal investigator: Carles Simó

Number of researchers participating in the project: 16

TOTAL AMOUNT: 4 000 000 pesetas

Title of the project: Stability and Universality in Classical Mechanics

Funding agency: CEE, Human Capital and Mobility proposal n° ERB4050PL932146,
Contract n° ERBCHRXCT940460

Participant institutions: Univ. Roma I, II, Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Dijon, Univ. Milano, Univ. Paris

From: 1995 to: 1998

Principal investigator: Giovanni Gallavotti. Contratador asociado UPC: Amadeu Delshams

Number of researchers participating in the project: 75 (total), 12 (UPC)

TOTAL AMOUNT: 250 000 Ecu (total), 15 432 Ecu (UPC)

Title of the project: Estudio global de Sistemas Dinámicos. Desarrollo de métodos analíticos, geométricos y numéricos. Aplicaciones.

Funding agency: DGICYT n° PB94-0215

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Autònoma de Barcelona

From: 1995 to: 2000

Principal investigator: Carles Simó

Number of researchers participating in the project: 10

TOTAL AMOUNT: 19 000 000 pesetas

Title of the project: Ajut per a Grups de recerca de qualitat 1996

Funding agency: CIRIT n°1996SGR-00105

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya

From: 1996 to: 1998

Principal investigator: Carles Simó

Number of researchers participating in the project: 16

TOTAL AMOUNT: 3 500 000 pesetas

Title of the project: Hamiltonian Dynamics and Bifurcations

Funding agency: INTAS n° 93-0339 ext

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Milano, Univ. Warwick, Moscow State Univ., Moscow Space Research Inst., St. Petersburg State Univ.

From: 1996 to: 1999

Principal investigator: Carles Simó

Number of researchers participating in the project:

TOTAL AMOUNT: 30 000 Ecu

Title of the project: Ajut del Programa d'infraestructura de recerca

Funding agency: CIRIT n° 1995PIRA-00143

Participant institutions: Univ. Politècnica de Catalunya

From: 1996 to: 1999

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 7

TOTAL AMOUNT: 4 800 000 pesetas

Title of the project: Stability and Diffusion in Dynamical Systems

Funding agency: NATO, Research Grant n° RG950273 (Renewal)

Participant institutions: Univ. Politècnica de Catalunya, Univ. Barcelona, Univ. of Texas at Austin

From: 1997 to: 1999

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 8

TOTAL AMOUNT: 245 000 francos belgas

Title of the project: Hyperbolicity and diffusion in Hamiltonian systems

Funding agency: INTAS n° 97-0771

Participant institutions: Univ. Politècnica de Catalunya, Univ. Milano, Univ. Cambridge, Univ. Barcelona, Moscow State Univ., St. Petersburg State Univ., Moscow Space Research Inst.

From: 1999 to: 2001

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 43

TOTAL AMOUNT: 57 000 Euros

Title of the project: Ajut per a Grups de recerca consolidats 1998

Funding agency: CIRIT n°1998SGR-00041

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Autònoma de Barcelona

From: 1998 to: 2000

Principal investigator: Carles Simó

Number of researchers participating in the project: 28

TOTAL AMOUNT: 3 900 000 pesetas

Title of the project: Transporte y objetos invariantes en sistemas dinámicos y aplicaciones

Funding agency: Comisión Conjunta Hispano Norteamericana de Cooperación Científica y Tecnológica n° 96, B.O.E. 18-05-2000

Participant institutions: Univ. Politècnica de Catalunya, Univ. de Barcelona, Univ. of Texas at Austin

From: 2000 to: 2001

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 14

TOTAL AMOUNT: 14 800 dólares USA

Title of the project: Transiciones entre objetos invariantes de sistemas dinámicos

Funding agency: Programa Cátedra FBBV 2000

Participant institutions: Univ. Politècnica de Catalunya, Univ. de Barcelona, Univ. of Texas at Austin

From: 2001 to: 2001

Principal investigator: Amadeu Delshams. Catedrático FBBV: Rafael de la Llave

Number of researchers participating in the project: 6

TOTAL AMOUNT: 1 200 000 pesetas

Title of the project: Ajut per a Grups de recerca consolidats 2000

Funding agency: CIRIT n° 2000SGR-00027

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Autònoma de Barcelona

From: 2000 to: 2002

Principal investigator: Carles Simó

Number of researchers participating in the project: 30

TOTAL AMOUNT: 5 950 000 pesetas

Title of the project: Estudio global del espacio de fases de sistemas dinámicos en dimensión finita

Funding agency: DGICYT n° BFM2000-0805-C02

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Autònoma de Barcelona

From: 2000 to: 2003

Principal investigator: Carles Simó (coordinador), Amadeu Delshams (subprojecto UPC)

Number of researchers participating in the project: 18 (total), 8 (UPC)

TOTAL AMOUNT: 12 180 000 pesetas (total), 4 180 000 pesetas (UPC)

Title of the project: La medida del caos y la teoría de la resurgencia de Ecalle

Funding agency: Service pour la Science et la Technologie

Participant institutions: Embajada Francesa en España, Univ. Politècnica de Catalunya

From: 2001 to: 2002

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 10

TOTAL AMOUNT: 200 000 pesetas

Title of the project: Chaotic motion and stability in conservative and near-conservative systems

Funding agency: INTAS n° 2000-221

Participant institutions: Univ. Politècnica de Catalunya, Univ. Milano, Univ. Cambridge, Univ. Barcelona, Moscow State Univ., St. Petersburg State Univ., Moscow Space Research Inst., Res. Inst. Appl. Math. Cybernetics (N. Novgorod)

From: 2001 to: 2003

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 60

TOTAL AMOUNT: 120 000 Euros

Title of the project: Ajut per a Grups de recerca consolidats 2001

Funding agency: CIRIT n° 2001SGR-70

Participant institutions: Univ. Barcelona, Univ. Politècnica de Catalunya, Univ. Autònoma de Barcelona

From: 2001 to: 2004

Principal investigator: Carles Simó

Number of researchers participating in the project: 32

TOTAL AMOUNT: 9 000 000 pesetas

Title of the project: Objetos invariantes en sistemas dinámicos, sus conexiones, evolución respecto a parámetros y aplicaciones

Funding agency: DGICYT n° BFM2003-09504-C02-02

Participant institutions: Universitat Politècnica de Catalunya

From: 2003 to: 2006

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 11

TOTAL AMOUNT: 197 920 Euros

Title of the project: Caos en sistemas dinámicos: su relación con el fenómeno de la difusión y la teoría de la resurgencia de Ecalle

Funding agency: acción integrada HF2002-0058

Participant institutions: Universitat Politècnica de Catalunya, CNRS

From: 2003 to: 2005

Principal investigator: Tere M. Seara

Number of researchers participating in the project: 10

TOTAL AMOUNT: 10 200 Euros

Title of the project: Dinámica no lineal en dimensión baja y atractores extraños

Funding agency: Red temática n° BFM2001-5237-E

Participant institutions: Universitat Autònoma de Barcelona, Universitat de Barcelona, Universidad de Granada, Universidad de Oviedo, Universitat Politècnica de Catalunya, Universidad de Sevilla y Universidad de Valladolid

From: 2003 to: 2003

Principal investigator: Lluís Alsedà (coordinador), Amadeu Delshams (co-coordinador grupo UPC)

Number of researchers participating in the project: 55

TOTAL AMOUNT: 6 000 Euros

Title of the project: Dinàmica no lineal en dimensió baixa i atractors estranys

Funding agency: CIRIT, Xarxa temàtica n° 2002/XT/00094

Participant institutions: Universitat Autònoma de Barcelona

From: 2003 to: 2004

Principal investigator: Lluís Alsedà (coordinador), Amadeu Delshams (co-coordinador grupo UPC)

Number of researchers participating in the project: 41

TOTAL AMOUNT: 5 400 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Red temática n° BFM2002-12129-E

Participant institutions: Universitat Autònoma de Barcelona, Universitat de Barcelona, Universidad de Granada, Universitat de les Illes Balears, Universidad de Murcia, Universidad de Oviedo, Universitat Politècnica de Catalunya, Universidad de Sevilla, Universidad de Valencia y Universidad de Valladolid

From: 2004 to: 2004

Principal investigator: Lluís Alsedà (coordinador), Amadeu Delshams (co-coordinador grupo UPC)
Number of researchers participating in the project: 85
TOTAL AMOUNT: 18 000 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Red temática n° MTM2004-20977-E

Participant institutions: Univ. Autònoma de Barcelona, Univ. de Barcelona, Univ. de Granada, Univ. de les Illes Balears, Univ. de Lleida, Univ. de Murcia, Univ. de Oviedo, Univ. Politècnica de Catalunya, Univ. de Sevilla, Univ. de Valencia y Univ. de Valladolid

From: 2005 to: 2005

Principal investigator: Lluís Alsedà (coordinador), Amadeu Delshams (co-coordinador grupo UPC)

Number of researchers participating in the project: 99

TOTAL AMOUNT: 6 000 Euros

Title of the project: Dinàmica no lineal en dimensió baixa i atractors estranys

Funding agency: CIRIT, Xarxa temàtica n° 2004/XT/00053

Participant institutions: Universitat Autònoma de Barcelona, Universitat de Barcelona, Universitat Politècnica de Catalunya, Universidad de Granada, Universidad de Oviedo, Universidad de Valladolid y Universitat de Lleida

From: 2005 to: 2006

Principal investigator: Lluís Alsedà (coordinador), Amadeu Delshams (co-coordinador grupo UPC)

Number of researchers participating in the project: 61

TOTAL AMOUNT: 8 400 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Red temática n° MTM2005-23973-E

Participant institutions: Universitat Autònoma de Barcelona, Universitat de Barcelona, Universidad de Granada, Universitat de les Illes Balears, Universidad de Murcia, Universidad de Oviedo, Universitat Politècnica de Catalunya, Universidad de Sevilla, Universidad de Valencia y Universidad de Valladolid

From: 2006 to: 2006

Principal investigator: Amadeu Delshams (coordinador), Lluís Alsedà (co-coordinador grupo UAB)

Number of researchers participating in the project: 141

TOTAL AMOUNT: 12 000 Euros

Title of the project: EMS-SCM Joint Mathematical Weekend

Funding agency: Universitat Politècnica de Catalunya, 4-CO05725

Participant institutions: Societat Catalana de Matemàtiques, Universitat Politècnica de Catalunya

From: 16 September 2006 to: 18 September 2006

Principal investigator: Tere M-Seara

Number of researchers participating in the project: 1

TOTAL AMOUNT: 1000 Euros

Title of the project: Grup de recerca consolidat 2005

Funding agency: CIRIT n° 2005SGR-986

Participant institutions: Univ. Politècnica de Catalunya

From: 2005 to: 2008

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 24

TOTAL AMOUNT:

Title of the project: Dinámica Asociada a Conexiones entre Objetos Invariantes, Astrodinámica y otras Aplicaciones (DACOBIA)

Funding agency: DGICYT n° MTM2006-00478

Participant institutions: Universitat Politècnica de Catalunya

From: 2006 to: 2009

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 29

TOTAL AMOUNT: 543 665.10 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Acción Complementaria n° MTM2006-26626-E

Participant institutions: Univ. Autònoma de Barcelona, Univ. Autónoma de Madrid, Univ. de Barcelona, Univ. Complutense de Madrid, Univ. de Granada, Univ. de Huelva, Univ. de les Illes Balears, Univ. de Lleida, Univ. de Murcia, Univ. de Oviedo, Univ. Politècnica de Catalunya, Univ. Politècnica de Madrid, Univ. Politècnica de Valencia, Univ. de Sevilla, Univ. de Valencia, Univ. de Valladolid y Univ. Zaragoza

From: 2006 to: 2006

Principal investigator: Jorge Galán (coordinador), Amadeu Delshams (co-coordinador grupo UPC)

Number of researchers participating in the project: 138

TOTAL AMOUNT: 3 000 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Red temática n° MTM2006-27481-E

Participant institutions: U. Autònoma de Barcelona, U. Autónoma de Madrid, U. de Barcelona, U. Complutense de Madrid, U. de Lleida, U. de Granada, U. de Huesca, U. de les Illes Balears, U. de Murcia, U. de Oviedo, U. Politècnica de Catalunya, U. Politècnica de Madrid, U. Politècnica de Valencia, U. de Sevilla, U. de Valencia, U. de Valladolid y U. de Zaragoza

From: 2007 to: 2007

Principal investigator: Amadeu Delshams (coordinador), Lluís Alsedà (co-coordinador grupo UAB)

Number of researchers participating in the project: 156

TOTAL AMOUNT: 12 000 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Acción Complementaria nº MTM2007-29352-E

Participant institutions: Univ. Autònoma de Barcelona, Univ. Autónoma de Madrid, Univ. de Barcelona, Univ. Complutense de Madrid, Univ. de Extremadura, Univ. de Lleida, Univ. de Granada, Univ. de Huelva, Univ. de les Illes Balears, Univ. de Murcia, Univ. de Oviedo, Univ. Politècnica de Catalunya, Univ. Politècnica de Madrid, Univ. Politècnica de Valencia, Univ. de Sevilla, Univ. de Valencia, Univ. de Valladolid y Univ. de Zaragoza

From: 2008

to: 2008

Principal investigator: Àngel Jorba (coordinador), Amadeu Delshams (co-coordinador grupo UPC)

Number of researchers participating in the project: 206

TOTAL AMOUNT: 12 000 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Red temática nº MTM2008-01396-E

Participant institutions: Univ. Autònoma de Barcelona, Univ. Autónoma de Madrid, Univ. de Barcelona, Univ. Complutense de Madrid, Univ. de Extremadura, Univ. de Lleida, Univ. de Granada, Univ. de Huelva, Univ. de les Illes Balears, Univ. de Murcia, Univ. de Oviedo, Univ. Politècnica de Catalunya, Univ. Politècnica de Madrid, Univ. Politècnica de Valencia, Univ. de Sevilla, Univ. de Valencia, Univ. de Valladolid y Univ. de Zaragoza

From: 2009

to: 2010

Principal investigator: Carmen Núñez (coordinadora), Amadeu Delshams (co-coordinador grupo UPC)

Number of researchers participating in the project: 209

TOTAL AMOUNT: 12 000 Euros

Title of the project: Diseño y estudio de viabilidad de un microtrón compacto para aplicaciones médicas

Funding agency: Acciones Complementarias Internacionales, PCI2005-A7-0284

Participant institutions: Universitat Politècnica de Catalunya, Universidad de Moscú

From: 2006

to: 2008

Principal investigator: I. Koubychine

Number of researchers participating in the project: 7

TOTAL AMOUNT: 7 700 E

Title of the project: Jornades d'Introducció als Sistemes Dinàmics i a les EDP'S 2007 (JISD2007)

Funding agency: Ingenio Mathematica i-MATH MIGS-C1-0005

Participant institutions: Universitat Politècnica de Catalunya

From: 4 June 2007

to: 30 June 2007

Principal investigator: Xavier Cabré, Amadeu Delshams y Tere M. Seara

Number of researchers participating in the project: 3

TOTAL AMOUNT: 14 800 Euros

Title of the project: Conformal Structures and Dynamics

Funding agency: Marie Curie Research Training Network FP6, Contract Number MRTN-CT-2006-035651

Participant institutions: Univ. of Warwick, Institute of Mathematics of Polish Academy of Sciences, Univ. of Helsinki, Univ. d'Orléans, Univ. Barcelona, Univ. of Kiel, Roskilde Univ., Technological Institution of West Macedonia, Univ. of Genève

From: 2007 **to:** 2010

Principal investigator: Sebastian van Strien

Number of researchers participating in the project: 90

TOTAL AMOUNT: 2 690 000 Euros

Title of the project: Stability and Instability in Mechanical Systems (SIMS08), CRM Research Program

Funding agency: Ingenio Mathematica i-MATH C3-0125

Participant institutions: Universitat Politècnica de Catalunya, Centre de Recerca Matemàtica

From: 1 September 2008 **to:** 31 December 2008

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 3

TOTAL AMOUNT: 75 200 Euros

Title of the project: Stability and Instability in Mechanical Systems

Funding agency: MEC, acción complementaria MTM2007-30595-E

Participant institutions: U. Autònoma de Barcelona, U. de Barcelona, U. Politècnica de Catalunya, Centre de Recerca Matemàtica

From: 1 September 2008 **to:** 31 December 2008

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 6

TOTAL AMOUNT: 55 850 Euros

Title of the project: Conference on Stability and Instability in Mechanical Systems: Recent Progress And Mathematical Theory (CCSIMS)

Funding agency: UPC 8-CO08725-64

Participant institutions: Universitat Politècnica de Catalunya, Centre de Recerca Matemàtica

From: 15 September 2008 **to:** 19 September 2008

Principal investigator: Tere M. Seara

Number of researchers participating in the project: 3

TOTAL AMOUNT: 500 Euros

Title of the project: Advanced Course on Stability and Instability in Mechanical Systems (ACSIMS)

Funding agency: AGAUR 2008ARCS100139

Participant institutions: Universitat Politècnica de Catalunya, Centre de Recerca Matemàtica

From: 15 September 2008

to: 19 September 2008

Principal investigator: Tere M. Seara

Number of researchers participating in the project: 3

TOTAL AMOUNT: 5 400 Euros

Title of the project: Dynamics associated to connections between invariant objects, astrodynamics, neuroscience and other applications (DACOBIAN)

Funding agency: MTM2009-06973

Participant institutions: Universitat Politècnica de Catalunya

From: 2009

to: 2012

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 29

TOTAL AMOUNT: 533 500 Euros

Title of the project: Sistemes Dinàmics de la UPC

Funding agency: Grup de Recerca Consolidats n° CUR-DIUE 2009SGR859

Participant institutions: Univ. Politècnica de Catalunya

From: 2009

to: 2013

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 31

TOTAL AMOUNT: 58 240 Euros

Title of the project: Emerging Topics on Dynamical Systems and Partial Differential Equations

Funding agency: MEC, acción complementaria MTM2009-05771-E/MTM

Participant institutions: U. Barcelona, U. Politècnica de Catalunya, Centre de Recerca Matemàtica

From: 1 January 2010

to: 31 December 2010

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 4

TOTAL AMOUNT: 20 000 Euros

Title of the project: Emerging Topics on Dynamical Systems and Partial Differential Equations. A joint SIAM/RSME-SCM-SEMA meeting

Funding agency: AGAUR, 2009 ARCS1 00205

Participant institutions: U. Barcelona, U. Politècnica de Catalunya, Centre de Recerca Matemàtica

From: 1 January 2010

to: 31 December 2010

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 4

TOTAL AMOUNT: 5 000 Euros

Title of the project: 1 encuentro sueco-catalan de matematicas

Funding agency: MICIN, acción complementaria MTM2010-10048-E

Participant institutions: U. Politècnica de Catalunya

From: 16 September 2010

to: 18 September 2010

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 3

TOTAL AMOUNT: 2 500 Euros

Title of the project: Emerging Topics on Dynamical Systems and Partial Differential Equations. A joint SIAM/RSME-SCM-SEMA meeting

Funding agency: UPC CO09725-30

Participant institutions: Universitat Politècnica de Catalunya

From: 1 January 2010

to: 31 December 2010

Principal investigator: Tere M. Seara

Number of researchers participating in the project: 1

TOTAL AMOUNT: 600 Euros

Title of the project: Eight Jornades d'introduccio als sistemes dinamics i les edp (JISD)

Funding agency: Convocatoria de ayudas de Ingenio Mathematica (i-MATH) MIGS-C6-0392

Participant institutions: Universitat Politècnica de Catalunya

From: 27 June 2011

to: 1 July 2011

Principal investigator: Tere M. Seara

Number of researchers participating in the project: 4

TOTAL AMOUNT: 10 000 Euros

Title of the project: Eight Jornades d'introduccio als sistemes dinamics i les edp (JISD)

Funding agency: UPC CO10725-

Participant institutions: Universitat Politècnica de Catalunya

From: 27 June 2011

to: 1 July 2011

Principal investigator: Tere M. Seara

Number of researchers participating in the project: 1

TOTAL AMOUNT: 750 Euros

Title of the project: Brazilian-European Partnership in Dynamical Systems (BREUDS)

Funding agency: European Call. Marie Curie Action FP7-PEOPLE-2012-IRSES

Participant institutions: Imperial College London, University of Surrey, Centre National de la Recherche Scientifique (CNRS), University of Pisa, KTH Royal Institute of Technology, Vrije Universiteit Amsterdam (VU), Technical University of Dresden, Universitat Politècnica de Catalunya (UPC), University of Liverpool, Abdus Salam International Centre for Theoretical Physics (ICTP), Universitat Autònoma de Barcelona (UAB), University of Warwick, University of Porto, Universidade da Beira Interior (UBI), Instituto Superior Técnico (IST), Queen Mary University of London (QMUL), University

of Augsburg, University of Sevilla (USE), University of St Andrews, Institute of Mathematics of the Polish Academy of Sciences (IMPAN), Université Paris-Est Marne-la-Vallée (MLV), Universidade de Sao Paulo (USP), Universidade Estadual de Campinas (UNICAMP), Universidade Federal do Rio de Janeiro (UFRJ), Instituto Nacional de Matematica Pura e Aplicada (IMPA), Universidade Federal Fluminense (UFF), Pontificia Universidade Católica do Rio de Janeiro (PUC-RIO), Universidade Estadual Paulista (UNESP), Universidade Federal da Bahia (UFBA), Universidade Federal de Minas Gerais (UFMG), Universidade Federal do Rio Grande do Sul (UFRGS), Universidade Federal de Alagoas (UFAL).

From: 2012- 2016

to:

Principal investigator: Jeroem Lamb. Imperial College (UK)

Number of researchers participating in the project:

TOTAL AMOUNT: 707 000 Euros

Title of the project: Jornades d'interacció entre els sistemes dinàmics i les EDP (JISD)

Funding agency: MEC, acción complementaria MTM2011-15475-E/MTM

Participant institutions: U. Barcelona, U. Politècnica de Catalunya

From: 29 May 2012

to: 1 June 2012

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 4

TOTAL AMOUNT: 12 000 Euros

Title of the project: Jornades d'interacció entre els sistemes dinàmics i les EDP (JISD)

Funding agency: AGAUR, 2012 ARCS1 00226

Participant institutions: U. Barcelona, U. Politècnica de Catalunya, Centre de Recerca Matemàtica

From: 1 January 2012

to: 31 December 2012

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 3

TOTAL AMOUNT: 5 000 Euros

Title of the project: Dinamica asociada a conexiones entre objetos invariantes, aplicaciones a astrodinamica, neurociencia y otros campos(DACOBIANO)

Funding agency: MTM2012-31714

Participant institutions: Universitat Politècnica de Catalunya

From: 2013

to: 2016

Principal investigator: Amadeu Delshams

Number of researchers participating in the project: 29

TOTAL AMOUNT: 281 600 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Red temática nº MTM2014-54516-REDT:

Participant institutions: Univ. Autònoma de Barcelona, Univ. Autònoma de Madrid, Univ. de Barcelona, Univ. Complutense de Madrid, Univ. de Extremadura, Univ. de Lleida, Univ. de Granada, Univ. de Huelva, Univ. de les Illes Balears, Univ. de Murcia, Univ. de Oviedo, Univ. Politècnica de Catalunya, Univ. Politècnica de Madrid, Univ. Politècnica de Valencia, Univ. de Sevilla, Univ. de Valencia, Univ. de Valladolid y Univ. de Zaragoza

From: 2015 **to:** 2016

Principal investigator: LLuis Alsedà i Soler (coordinador)

Number of researchers participating in the project: 209

TOTAL AMOUNT: 10 000 Euros

Title of the project: Sistemes Dinàmics de la UPC

Funding agency: Grup de Recerca Consolidats nº 2014SGR504

Participant institutions: Univ. Politècnica de Catalunya

From: 2014 **to:** 2016

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 26

TOTAL AMOUNT: 63 000 Euros

Title of the project: Dynamics and bifurcations of dissipative and conservative systems

Funding agency: Russian Scientific Foundation 14-41-00044

Participant institutions: Univ. Nizhny Novgorod e Imperial College

From: 2014 **to:** 2018

Principal investigator: Dmitry Turaev (Imperial College)

Number of researchers participating in the project: 9 univ. Eur. and USA

TOTAL AMOUNT: 640 000 Euros

Title of the project: Twelfth Workshop on Interactions between Dynamical Systems and Partial Differential Equations (JISD2014)

Funding agency: European mathematical Society

Participant institutions: U. Politècnica de Catalunya

From: 16 June 2014 **to:** 20 June 2014

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 4

TOTAL AMOUNT: 10 000 Euros

Title of the project: Twelfth Workshop on Interactions between Dynamical Systems and Partial Differential Equations (JISD2014)

Funding agency: Clay Institute

Participant institutions: U. Politècnica de Catalunya

From: 16 June 2014

to: 20 June 2014

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 4

TOTAL AMOUNT: 5 000 Euros

Title of the project: 14th Workshop on Interactions between Dynamical Systems and Partial Differential Equations (JISD2016)

Funding agency: European mathematical Society

Participant institutions: U. Politècnica de Catalunya

From: 11 July 2016

to: 15 July 2016

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 4

TOTAL AMOUNT: 6 000 Euros

Title of the project: DINAMICA ASOCIADA A CONEXIONES ENTRE OBJETOS INVARIANTES CON APLICACIONES A NEUROCIENCIA Y ASTRODINAMICA(DACOBIANA)

Funding agency: MTM2015-65715-P

Participant institutions: Universitat Politècnica de Catalunya

From: 2016

to: 2018

Principal investigator: Tere M-Seara

Number of researchers participating in the project: 21

TOTAL AMOUNT: 167 200 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: Red excelencia n° MTM2016-81902-REDT

Participant institutions: Univ. Autònoma de Barcelona, Univ. Autònoma de Madrid, Univ. de Barcelona, Univ. Complutense de Madrid, Univ. de Extremadura, Univ. de Lleida, Univ. de Granada, Univ. de Huelva, Univ. de les Illes Balears, Univ. de Murcia, Univ. de Oviedo, Univ. Politècnica de Catalunya, Univ. Politècnica de Madrid, Univ. Politècnica de Valencia, Univ. de Sevilla, Univ. de Valencia, Univ. de Valladolid y Univ. de Zaragoza

From: 2017

to: 2018

Principal investigator: Tere M-Seara (coordinadora)

Number of researchers participating in the project: 209

TOTAL AMOUNT: 11 000 Euros

Title of the project: Sistemes Dinàmics de la UPC

Funding agency: Grup de Recerca Consolidats n° 2017SGR1049

Participant institutions: Univ. Politècnica de Catalunya

From: 2017 to: 2019

Principal investigator: Tere Martinez-Seara

Number of researchers participating in the project: 26

TOTAL AMOUNT: 44 480 Euros

Title of the project: Dinámica Asociada a Conexiones entre Objetos Invariantes con Aplicaciones a la Neurociencia y la Mecánica (DACOBIANEM)

Funding agency: PGC2018-098676-B-I00 (AEI/FEDER/UE)

Participant institutions: Universitat Politècnica de Catalunya

From: 2019 to: 2021

Principal investigator: Tere M-Seara, Gemma Huguet

Number of researchers participating in the project: 13

TOTAL AMOUNT: 164.318,00 Euros

Title of the project: Dinámica, Atractores y Nolinealidad: Caos y Estabilidad

Funding agency: RED2018-102324-T

Participant institutions: Univ. Autònoma de Barcelona, Univ. de Barcelona, Univ. de Lleida, Univ. de les Illes Balears, Univ. de Murcia, Univ. de Oviedo, Univ. Politècnica de Catalunya, Univ. Politècnica de Madrid, Univ. de Sevilla, Univ. de Valladolid y Univ. Publica de Navarra, CSIC,

From: 2020 to: 2021

Principal investigator: Joan Torregrossa

Number of researchers participating in the project: 15

TOTAL AMOUNT: 21 000 Euros

Publications

(CLAVE: L = Book, CL = book chapter, A = paper, R = "review", E = editor,
S = restricted scientific document.)

Authors: A. Delshams, T.M. Seara

Title: On the existence of homoclinic orbits in a family of vector fields near an equilibrium point

Ref. ☐ journal ☒ book: *European Conference on Iteration Theory (ECIT 87)*, ISBN 981-02-0041-2

Clave: CL Volume: Pages, from: 167 to: 177 Date: 1989 MR 92c:58093

Editorial (si libro): World Sci. Publishing

Place of publication: Teaneck, NJ.

Authors: T. M.-Seara

Title: Estudi de fenomens homoclinics en sistemes propers a integrables

Ref. ☐ journal ☒ book: Tesis doctoral

Clave: L Volume: Pages, from: to: Date: 1991

Editorial (si libro): Pub. Ed. Univ. Barcelona

Place of publication: Barcelona

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Authors: C.Bonet, A.Jorba, T. M. Seara, J.Masdemont, M.Ollé, A.Susín y M.Valencia.

Title: Càlcul Numèric

Ref. ☐ journal ☒ book: Càlcul Numèric

Clave: L Volume: Pages, from: to: Date: 1991

Editorial (si libro): CPDA, ETSEIB-UPC. ISBN 84-7653-097-8

Place of publication: Barcelona

Authors: A. Delshams y T. M. Seara

Title: An asymptotic expression for the splitting of separatrices of the rapidly forced pendulum

Ref. ☒ journal ☐ book: Commun. Math. Phys.

Clave: A Volume: 150 Pages, from: 433 to: 463 Date: 1992 MR 93i:34084

Editorial (if book):

Place of publication:

Authors: A. Delshams y T. M. Seara

Title: Splitting of separatrices in Hamiltonian systems with one and a half degrees of freedom

Ref. ☒ journal ☐ book: Math. Phys. Electron. J.

Clave: A Volume: 3(1) Pages, from: 1 to: 40 Date: 1997 MR 98k:58197

Editorial (if book):

Place of publication:

Authors: A. Delshams, V.G. Gelfreich, A. Jorba, and T.M. Seara.

Title: Exponentially small splitting of separatrices under fast quasiperiodic forcing

Ref. ☒ journal ☐ book: Comm. Math. Phys.

Clave: A Volume: 189(1) Pages, from: 35 to: 71 Date: 1997 MR 98j:34087

Editorial (if book):

Place of publication:

Authors: A. Delshams, V.G. Gelfreich, A. Jorba, and T.M. Seara.

Title: Lower and upper bounds for the splitting of separatrices of the pendulum under a fast quasiperiodic forcing

Ref. ☒ journal ☐ book: ERA Amer. Math. Soc

Clave: A Volume: 3 Pages, from: 1 to: 10 Date: 1997 MR 98a:58135

Editorial (if book):

Place of publication:

Authors: C. Bonet, D. Sauzin, T.M. Seara y M. Valencia

Title: Adiabatic Invariant of the Harmonic Oscillator, Complex Matching and Resurgence

Ref. ☒ journal ☐ book: SIAM J. Math. An.

Clave: A Volume: 29(6) Pages, from: 1335 to: 1360 Date: 1998 MR 99h:34058

Editorial (if book):

Place of publication:

Authors: A. Delshams, R. Ramírez-Ros, T.M. Seara

Title: Splitting of separatrices for Hamiltonian systems and symplectic maps

Ref. ☐ journal ☒ book: C. Simó, editor, *Hamiltonian Systems with three or more degrees of freedom*, ISBN 0-7923-5710-8, colección *NATO Adv. Sci. Inst. Ser. C Math. Phys. Sci.*

Clave: CL Volume: 533 Pages, from: 39 to: 54 Date: 1999 MR 2000j:37075

Editorial (si libro): Kluwer

Place of publication: Dordrecht

Authors: A. Delshams, V. Gelfreich, À. Jorba, T.M. Seara

Title: Splitting of Separatrices for (fast) Quasiperiodic Forcing

Ref. ☐ journal ☒ book: C. Simó, editor, *Hamiltonian Systems with three or more degrees of freedom*, ISBN 0-7923-5710-8, colección *NATO Adv. Sci. Inst. Ser. C Math. Phys. Sci.*

Clave: CL Volume: 533 Pages, from: 367 to: 371 Date: 1999 MR 2001b:37087

Editorial (si libro): Kluwer

Place of publication: Dordrecht

Authors: A. Delshams, R. de la Llave y T.M. Seara

Title: A geometric approach to the existence of orbits with unbounded energy in generic periodic perturbations by a potential of generic geodesic flows of $\mathbf{T}^2$

Ref. ☒ journal ☐ book: Comm. Math. Phys.

Clave: A Volume: 209 Pages, from: 353 to: 392 Date: 2000 MR 2001a:37086

Editorial (if book):

Place of publication:

Authors: T. M. Seara i Jordi Villanueva

Title: Asymptotic Behaviour of the Domain of Analyticity of Invariant Curves of the Standard Map

Ref. ☒ journal ☐ book: Nonlinearity

Clave: A Volume: 13 Pages, from: 1699 to: 1744 Date: 2000 MR 2003a:37085

Editorial (if book):

Place of publication:

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Unbounded growth of energy in periodic perturbations of geodesic flows of the torus

Ref. ☐ journal ☒ book: J. Delgado, E.A. Lacomba, E. Pérez-Chavela y J. Llibre, editores, *Hamiltonian systems and celestial Mechanics (HAMSYS-98)*, ISBN 981-02-4463-0, colección *World Sci. Monograph Ser. Math.*

Clave: CL Volume: 6 Pages, from: 90 to: 110 Date: 2000 MR 2002a:37094

Editorial (si libro): World Scientific Publishing Co.

Place of publication: Singapur

Authors: C. Olivé, D. Sauzin, T. M. Seara

Title: Resurgence in a Hamilton-Jacobi Equation

Ref. ☒ journal ☐ book: Annales de l'Institut Fourier

Clave: A Volume: 53 Pages, from: 1185 to: 1235 Date: 2003 MR 2005b:37109

Editorial (if book):

Place of publication:

Authors: A. Delshams, R. de la Llave y T.M. Seara

Title: A geometric mechanism for diffusion in Hamiltonian systems overcoming the large gap problem: Announcement of results.

Ref. ☒ journal ☐ book: ERA Amer. Math. Soc

Clave: A Volume: 9 Pages, from: 125 to: 134 Date: 2003 MR 2004j:37118

Editorial (if book):

Place of publication:

Authors: D. Sauzin, T.M. Seara

Title: Resumació de Borel i teoria de la ressurgència.

Ref. ☒ journal ☐ book: Butlletí de la Societat Catalana de Matemàtiques
Clave: A Volume: 18(1) Pages, from: 131 to: 153 Date: 2003 MR 2005c:34179
Editorial (if book):
Place of publication:

Authors: N. Fagella, T. M. Seara i Jordi Villanueva

Title: Asymptotic Size of Herman Rings of the Complex Standard Family by Quantitative Quasiconformal Surgery.

Ref. ☒ journal ☐ book: Ergodic Theory and Dynamical Systems
Clave: A Volume: 24:3 Pages, from: 735 to: 766 Date: 2004 MR 2005c:37083
Editorial (if book):
Place of publication:

Authors: A. Delshams, Pere Gutiérrez y T.M. Seara

Title: Exponentially small splitting for whiskered tori in Hamiltonian Systems: Flow-box coordinates and upper bounds.

Ref. ☒ journal ☐ book: Discrete and Continuous Dynamical Systems A
Clave: A Volume: 11:4 Pages, from: 785 to: 826 Date: 2004 MR 2005j:37102
Editorial (if book):
Place of publication:

Authors: C. Olivé, D. Sauzin, T.M. Seara

Title: Two examples of resurgence.

Ref. ☒ journal ☐ book: Contemporary Mathematics
Clave: A Volume: 373 Pages, from: 355 to: 371 Date: 2005 MR 2005k:34343
Editorial (if book):
Place of publication:

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: A Geometric Mechanism for Diffusion in Hamiltonian Systems Overcoming the large Gap Problem: Heuristics and Rigorous Verification on a Model

Ref. ☒ journal ☐ book: Mem. Amer. Math. Soc.
Clave: A Volume: 179(844) Pages, from: 1 to: 141 Date: 2006 MR 2184276
Editorial (if book):
Place of publication:

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Orbits of unbounded energy in quasi-periodic perturbations of geodesic flows

Ref. ☒ journal ☐ book: Adv. Math.

Clave: A Volume: 202(1) Pages, from: 64 to: 188 Date: 2006 MR 2007a:37070

Editorial (if book):

Place of publication:

Authors: T. M. Seara, Jordi Villanueva

Title: On the numerical computation of Diophantine rotation numbers of analytic circle maps.

Ref. ☒ journal ☐ book: Physica D: Nonlinear Phenomena

Clave: A Volume: 217:2 Pages, from: 107 to: 120 Date: 2006 MR 2007d:37059)

Editorial (if book):

Place of publication:

Authors: I. Baldomá, T. M. Seara

Title: Breakdown of heteroclinic orbits for some analytic unfoldings of the Hopf-zero singularity.

Ref. ☒ journal ☐ book: Journal of Nonlinear Science

Clave: A Volume: 16:6 Pages, from: 543 to: 582 Date: 2006 MR (2008c:37073

Editorial (if book):

Place of publication:

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Geometric properties of the scattering map of a normally hyperbolic invariant manifold

Ref. ☒ journal ☐ book: Adv. Math.

Clave: A Volume: 217(3) Pages, from: 1096 to: 1153 Date: 2008 MR 2008m:37100

Editorial (if book):

Place of publication: doi: 10.1016/j.aim.2007.08.014

Authors: A. Delshams, M. Gidea, R. de la Llave, T.M. Seara

Title: Geometric approaches to the problem of instability in Hamiltonian systems. An informal presentation

Ref. ☐ journal ☒ book: W. Craig, editor, *Hamiltonian Dynamical Systems and Applications, NATO Sci. Peace Secur. Ser. B Phys. Biophys*

Clave: CL Volume: 24 Pages, from: 285 to: 336 Date: 2008

Editorial (si libro): Springer

Place of publication: Dordrecht

Authors: F. Angulo, E. Fossas, T.M. Seara, G. Olivar

Title: Bounding the Output Error in a Buck Power Converter Using Perturbation Theory

Ref. ☒ journal ☐ book: Mathematical Problems in Engineering
Clave: A Volume: ID 732039 Pages, from: 1 to: 20 Date: 2008 MR 2438667
Editorial (if book):
Place of publication:

Authors: I. Baldomá, T. M. Seara

Title: The inner equation for generic analytic unfoldings of the Hopf-zero singularity.

Ref. ☒ journal ☐ book: Discrete and Continuous Dynamical Systems-Series B.
Clave: A Volume: 10(2-3) Pages, from: 323 to: 347 Date: 2008 MR 2425046
Editorial (if book):
Place of publication:

Authors: T .M. Seara, J. Villanueva

Title: Numerical Computation of the Asymptotic Size of the Rotation Domain for the Arnold Family

Ref. ☒ journal ☐ book: Physica D
Clave: A Volume: 238 Pages, from: 197 to: 208 Date: 2009 MR 2003a:37085
Editorial (if book):
Place of publication: DOI: 10.1016/j.physd.2008.09.002

Authors: E. Fossas, S. J. Hogan, T .M. Seara

Title: Two-parameter bifurcation curves in power electronic converters

Ref. ☒ journal ☐ book: International Journal Of Bifurcation And Chaos In Applied Sciences And Engineering
Clave: A Volume: 19(1) Pages, from: 349 to: 357 Date: 2009 MR 2511091
Editorial (if book):
Place of publication:

Authors: M. Guardia, S.J. Hogan, T. M. Seara

Title: An analytical approach to codimension-2 sliding bifurcations in the dry friction oscillator

Ref. ☒ journal ☐ book: SIAM J. Applied Dynamical Systems
Clave: A Volume: 9(3) Pages, from: 769 to: 798 Date: 2010 MR 2665450
Editorial (if book):
Place of publication: DOI:10.1137/090766826

Authors: M. Guardia, C. Olive, T. M. Seara

Title: Exponentially small splitting for the pendulum: a classical problem revisited

Ref. ☒ journal ☐ book: Journal of Nonlinear Science

Clave: A Volume: 20(5) Pages, from: 595 to: 685 Date: 2010 MR 2726524

Editorial (if book):

Place of publication: DOI: 10.1007/s00332-010-9068-8

Authors: M. Guardia, T. M. Seara, M. A. Teixeira

Title: Generic bifurcations of low codimension of planar Filippov Systems

Ref. ☒ journal ☐ book: Journal of Differential equations

Clave: A Volume: 250 Pages, from: 1967 to: 2023 Date: 2011 MR 2763562

Editorial (if book):

Place of publication: DOI:10.1016/j.jde.2010.11.016

Authors: J. M. Olm, X. Ros-Oton, T. M. Seara

Title: Periodic solutions with nonconstant sign in Abel equations of the second kind

Ref. ☒ journal ☐ book: Journal of mathematical analysis and applications

Clave: A Volume: 381(2) Pages, from: 582 to: 589 Date: 2011 MR 2802096

Editorial (if book):

Place of publication:

Authors: P. Martín, D. Sauzin, T. M. Seara

Title: Resurgence of inner solutions for perturbations of the McMillan map

Ref. ☒ journal ☐ book: Discrete and continuous dynamical systems A

Clave: A Volume: 31(1) Pages, from: 165 to: 207 Date: 2011 MR 2805805

Editorial (if book):

Place of publication: doi:10.3934/dcds.2011.31.165

Authors: P. Martín, D. Sauzin, T. M. Seara

Title: Exponentially small splitting of separatrices in the perturbed McMillan map

Ref. ☒ journal ☐ book: Discrete and continuous dynamical systems A

Clave: A Volume: 31(2) Pages, from: 301 to: 371 Date: 2011 MR 2805811

Editorial (if book):

Place of publication: doi:10.3934/dcds.2011.31.301

Authors: M. Guàrdia, T. M. Seara

Title: Exponentially and non-exponentially small splitting of separatrices for the pendulum with a fast meromorphic perturbation

Ref. ☒ journal ☐ book: Nonlinearity

Clave: A Volume: 25 Pages, from: 1367 to: 1412 Date: 2012 MR 2914145

Editorial (if book):

Place of publication: DOI:10.1088/0951-7715/25/5/1367

Authors: A. Granados, S.J. Hogan, T.M. Seara

Title: The Melnikov method and subharmonic orbits in a piecewise smooth system

Ref. ☒ journal ☐ book: SIAM J. Applied Dynamical Systems

Clave: A Volume: 11(3) Pages, from: 801 to: 830 Date: 2012 MR 3022051

Editorial (if book):

Place of publication: DOI:10.1137/110850359

Authors: I. Baldomá, E. Fontich, M. Guàrdia, T. M. Seara

Title: Exponentially small splitting of separatrices beyond Melnikov analysis: rigorous results

Ref. ☒ journal ☐ book: Journal of Differential equations

Clave: A Volume: 253 Pages, from: 3304 to: 3439 Date: 2012 MR 2981260

Editorial (if book):

Place of publication: DOI:10.1016/j.jde.2012.09.003

Authors: M. Guardia, P. Martin, T.M. Seara

Title: Homoclinic solutions to infinity and Oscillatory motions in the restricted planar circular three body problem

Ref. ☐ journal ☒ book: Progress and challenges in Dynamical Systems

Clave: CL Volume: 54 Pages, from: 265 to: 280 Date: 2013 MR 3111784

Editorial (si libro): Springer

Place of publication: Dordrecht

Authors: I. Baldomá, O. Castejón, T. M. Seara

Title: Exponentially Small Heteroclinic Breakdown in the Generic Hopf-Zero Singularity

Ref. ☒ journal ☐ book: Journal of Dynamics and Differential equations

Clave: A Volume: 25 (2) Pages, from: 335 to: 392 Date: 2013 MR 3054640

Editorial (if book):

Place of publication:

Authors: A. Granados, S.J. Hogan, T.M. Seara

Title: The scattering map in two coupled piecewise-smooth systems, with numerical application to rocking blocks .

Ref. ☒ journal ☐ book: Physica D: Nonlinear Phenomena

Clave: A Volume: 269 Pages, from: 1 to: 20 Date: 2014 MR 3151299

Editorial (if book):

Place of publication: DOI:10.1016/j.physd.2013.11.008

Authors: M. Guardia, P. Martin, T.M. Seara

Title: Oscillatory motions for the restricted planar circular three body problem.

Ref. ☒ journal ☐ book: Inventiones Mathematicae

Clave: A Volume: 203 (2) Pages, from: 417 to: 492 Date: 2016 MR 3455155

Editorial (if book):

Place of publication: DOI: 10.1007/s00222-015-0591-y

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Instability of high dimensional Hamiltonian Systems: Multiple resonances do not impede diffusion.

Ref. ☒ journal ☐ book: Adv. Math.

Clave: A Volume: 294 Pages, from: 689 to: 755 Date: 2016 MR

Editorial (if book):

Place of publication: doi:10.1016/j.aim.2015.11.010

Authors: C. Bonet-Revés, T. M-Seara

Title: Regularization of sliding global bifurcations derived from the local fold singularity of Filippov systems.

Ref. ☒ journal ☐ book: Discrete and continuous dynamical systems A

Clave: A Volume: 36(7) Pages, from: 3545 to: 3601 Date: 2016 MR

Editorial (if book):

Place of publication: doi:10.3934/dcds.2016.36.3545

Authors: M. Guardia, P. Martin, T.M. Seara, L. Sabbagh

Title: Oscillatory orbits in the restricted elliptic planar three body problem.

Ref. ☒ journal ☐ book: Discrete and continuous dynamical systems A

Clave: A Volume: 37 (1) Pages, from: 229 to: 256 Date: 2017

Editorial (if book):

Place of publication: DOI: 10.3934/dcds.2017009

Authors: M. Aguareles, I. Baldomá, T.M. Seara

Title: On the asymptotic wavenumber of spiral waves in $\lambda - \omega$ systems

Ref. ☒ journal ☐ book: Nonlinearity

Clave: A Volume: 30 Pages, from: 90 to: 114 Date: 2017

Editorial (if book):

Place of publication: doi:10.1088/1361-6544/30/1/90

Authors: C. Bonet-Revés, E. Fossas, M. Jeffrey, T.M. Seara

Title: A unified approach to explain contrary effects of hysteresis and smoothing in non-smooth systems

Ref. ☒ journal ☐ book: Communications in Nonlinear Science and Numerical Simulation

Clave: A Volume: 50 Pages, from: 142 to: 168 Date: 2017

Editorial (if book):

Place of publication: doi:10.1016/j.cnsns.2017.02.014

Authors: Yu. A. Kubyshin, O. Larreal, R. Ramírez-Ros, T. M. Seara.

Title: Stability of the phase motion in race-track microtons

Ref. ☒ journal ☐ book: Physica D: Nonlinear Phenomena

Clave: A Volume: 349 Pages, from: 12 to: 26 Date: 2017

Editorial (if book):

Place of publication: doi:10.1016/j.physd.2017.03.001

Authors: C. Bonet-Revés, J. Larrosa, T. M. Seara.

Title: Regularization around a generic codimension one fold-fold singularity

Ref. ☒ journal ☐ book: Journal of Differential Equations

Clave: A Volume: 265 Pages, from: 1761 to: 1838 Date: 2018

Editorial (if book):

Place of publication: doi: https://doi.org/10.1016/j.jde.2018.04.047

Authors: I. Baldomá, O. Castejón, T. M. Seara.

Title: Breakdown of a 2D Heteroclinic Connection in the Hopf-Zero Singularity (I)

Ref. ☒ journal ☐ book: Journal of Nonlinear Science

Clave: A Volume: 28 (5) Pages, from: 1551 to: 1627 Date: 2018

Editorial (if book):

Place of publication: doi: https://doi.org/10.1007/s00332-018-9458-x

Authors: I. Baldomá, Castejón, T. M. Seara.

Title: Breakdown of a 2D Heteroclinic Connection in the Hopf-Zero Singularity (II)

Ref. ☒ journal ☐ book: Journal of Nonlinear Science
Clave: A Volume: 28 (4) Pages, from: 1489 to: 1549 Date: 2018
Editorial (if book):
Place of publication: doi:<https://doi.org/10.1007/s00332-018-9459-9>

Authors: A. Delshams, V. Kaloshin, A. de la Rosa, T. M-Seara.

Title: Global Instability in the Restricted Planar Elliptic Three Body Problem

Ref. ☒ journal ☐ book: Communication in Mathematical Physics (CMP)
Clave: A Volume: 366(3) Pages, from: 1173 to: 1228 Date: 2019
Editorial (if book):
Place of publication: doi:<https://doi.org/10.1007/s00220-018-3248-z>

Authors: M. Gidea, R. de la Llave, T. M-Seara.

Title: A General Mechanism of Diffusion in Hamiltonian Systems: Qualitative Results

Ref. ☒ journal ☐ book: Communications on pure and applied mathematics (CPAM)
Clave: A Volume: 73(1) Pages, from: 110 to: 149 Date: 2019
Editorial (if book):
Place of publication: doi:<https://doi.org/10.1002/cpa.21856>

Authors: A. Pérez-Cervera, P. Ashwin, G. Huguet, T. M-Seara, J. Rankin

Title: The uncoupling limit of identical Hopf bifurcations with an application to perceptual bistability

Ref. ☒ journal ☐ book: The Journal of Mathematical Neuroscience
Clave: A Volume: 9 Pages, from: 7 to: 40 Date: 2019
Editorial (if book):
Place of publication: doi:<https://doi.org/10.1186/s13408-019-0075-2>

Authors: A. Pérez-Cervera, T. M-Seara, G. Huguet

Title: A Geometric Approach to Phase Response Curves and Its Numerical Computation Through the Parameterization Method

Ref. ☒ journal ☐ book: Journal of Nonlinear Science
Clave: A Volume: 29(6) Pages, from: 2877 to: 2910 Date: 2019
Editorial (if book):
Place of publication: doi:<https://doi.org/10.1007/s00332-019-09561-4>

Authors: A. Pérez-Cervera, T. M-Seara, G. Huguet

Title: Phase-locked states in oscillating neural networks and their role in neural communication.

Ref. ☒ journal ☐ book: Communications in Nonlinear Science and Numerical Simulation

Clave: A Volume: 80 Pages, from: to: Date: 2020

Editorial (if book):

Place of publication: doi:<https://doi.org/10.1016/j.cnsns.2019.104992>

Authors: I. Baldomá, S. Ibañez, T. M-Seara

Title: Hopf-Zero singularities truly unfold chaos.

Ref. ☒ journal ☐ book: Communications in Nonlinear Science and Numerical Simulation

Clave: A Volume: 84 Pages, from: to: Date: 2020

Editorial (if book):

Place of publication: doi:<https://doi.org/10.1016/j.cnsns.2019.105162>

Authors: Marian Gidea, Rafael de la Llave, T. M-Seara

Title: A general mechanism of instability in Hamiltonian systems: Skipping along a normally hyperbolic invariant manifold.

Ref. ☒ journal ☐ book: Discrete and continuous dynamical systems 2020.

Clave: A Volume: 40(12) Pages, from: 6795 to: 6813 Date: 2020

Editorial (if book):

Place of publication: doi:<https://doi.org/10.3934/dcds.2020166>

Authors: Otávio M. L. Gomide, Marcel Guardia, Tere M-Seara

Title: Critical velocity in kink-defect interaction models: rigorous results.

Ref. ☒ journal ☐ book: Journal of Differential Equations

Clave: A Volume: 269(4) Pages, from: 3282 to: 3346 Date: 2020

Editorial (if book):

Place of publication: doi:<https://doi.org/10.1016/j.jde.2020.02.030>

Authors: D. D. Novaes, T. M-Seara, M. A. Teixeira, I. O. Zeli.

Title: Study of Periodic Orbits in Periodic Perturbations of Planar Reversible Filippov Systems Having a Twofold Cycle.

Ref. ☒ journal ☐ book: SIAM Journal on Applied Dynamical Systems (SIADS)

Clave: A Volume: 19(2) Pages, from: 1343 to: 1371 Date: 2020

Editorial (if book):

Place of publication: doi:<https://doi.org/10.1137/19M1289959>

Authors: A. Pérez-Cervera, T. M-Seara, G. Huguet

Title: Global phase-amplitude description of oscillatory dynamics via the parameterization method.

Ref. ☒ **journal** ☐ **book:** Chaos: An Interdisciplinary Journal of Nonlinear Science

Clave: A **Volume:** 30(8) **Pages, from:** **to:** **Date:** 2020

Editorial (if book):

Place of publication: doi:<https://doi.org/10.1063/5.0010149>

Visits to other universities

(with duration of a month or more)

CLAVE: D = PhD, P = postdoc, I = invitation, C = contract, O = otther .

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: February 1997 weeks: 2
Subject: Orbits with unbounded energy in perturbed geodesis flows
Clave: I

University: IMA,Univ. of Minnesota
Cicy: Minneapolis Country: USA Date: November 1997 weeks: 2
Subject: Emerging Applications of Dynamical Systems
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: September 1998 weeks: 2
Subject: Stability and Diffusion in Dynamical Systems
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: April 2000 weeks: 2
Subject: Diffusion in Geodesic flows
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: February 2001 weeks: 2
Subject: Overcoming the large gaps problem
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: April 2002 weeks: 2
Subject: Overcoming the large gaps problem
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: March 2003 weeks: 2
Subject: Diffusion in a large gaps problem
Clave: I

University: Univ. of GATECH
Cicy: Atlanta Country: USA Date: April 2003 weeks: 2
Subject: Diffusion in a large gaps problem
Clave: I

University: IMCCE, CNRS
Cicy: Paris Country: Francia Date: October 2003 weeks: 1
Subject: Resurgence Theory and Exponentially small phenomena
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: March 2004 weeks: 2
Subject: Orbits with unbounded energy in quasiperiodic geodesic flows
Clave: I

University: IMCCE, CNRS
Cicy: Paris Country: Francia Date: October 2004 weeks: 1
Subject: Resurgence Theory and Exponentially small phenomena
Clave: I

University: IMCCE, CNRS
Cicy: Paris Country: Francia Date: March 2005 weeks: 1
Subject: Resurgence Theory and Exponentially small phenomena
Clave: I

University: Dpt. Engineering Mathematics, U. Bristol
Cicy: Bristol Country: U.K Date: June 2005 weeks: 1
Subject: Visita para conocer el Master en Engineering Mathematics
Clave: I

University: Universidad Sergio arboledal
Cicy: Bogotá Country: Colombia Date: August 2005 weeks: 1
Subject: Visita para dar un curso de iniciación a la resurgencia
Clave: I

University: Dpt. Engineering Mathematics, U. Bristol
Cicy: Bristol Country: U.K Date: October 2005 weeks: 1
Subject: Bifurcation curves in power converters regulation
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: April 2006 weeks: 1
Subject: Scattering maps on normally hyperbolic orbits
Clave: I

University: Dpt. Engineering Mathematics, U. Bristol
Cicy: Bristol Country: U.K Date: May 2006 weeks: 1
Subject: Bifurcation curves in power converters regulation
Clave: I

University: Dpt. Engineering Mathematics, U. Bristol
Cicy: Bristol Country: U.K Date: October 2006 weeks: 1
Subject: Theoretical aspects in Nonsmooth Dynamical Systems
Clave: I

University: Instituto Wolfgang Pauli
Cicy: Vienna Country: Austria Date: January 2007 weeks: 2
Subject: Arnold Diffusion in higher dimensional Systems
Clave: I

University: Dpt. Mathematics, U. Maryland
Cicy: Maryland Country: USA Date: November 2007 weeks: 1
Subject: Arnold diffusion in the restricted three body problem
Clave: I

University: IMCCE, CNRS
Cicy: Paris Country: Francia Date: December 2007 weeks: 1
Subject: Arnold diffusion in Celestial Mechanics
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: July 2008 weeks: 1
Subject: Arnold Diffusion in higher dimensional Mechanical Systems
Clave: I

University: Univ. Penn State
Cicy: State College Country: USA Date: November 2009 weeks: 1
Subject: Arnold Diffusion in the restricted three body problem
Clave: I

University: Univ. Texas at Austin
Cicy: Austin Country: USA Date: January 2010 weeks: 1
Subject: Arnold Diffusion in higher dimensional Mechanical Systems
Clave: I

University: Univ. Northeastern Illinois
Cicy: Chicago Country: USA Date: January 2010 weeks: 1
Subject: Lambda lemma for normally hyperbolic manifolds
Clave: I

University: Dpt. Mathematics, U. Maryland
Cicy: Maryland Country: USA Date: April 2010 weeks: 1
Subject: Arnold diffusion in the restricted three body problem
Clave: I

University: Dpt. Engineering Mathematics, U. Bristol
Cicy: Bristol Country: U.K Date: June 2010 weeks: 1
Subject: Arnold diffusion in non-smooth systems
Clave: I

University: Dpt. Engineering Mathematics, U. Bristol
Cicy: Bristol Country: U.K Date: February 2011 weeks: 1
Subject: Arnold diffusion in non-smooth systems
Clave: I

University: Fields Institute
Cicy: Toronto Country: Canada Date: May 2011 weeks: 1
Subject: Thematic Program on Dynamics and Transport in Disordered Systems
Clave: I

University: Georgia Institute of technology
Cicy: Atlanta Country: USA Date: September 2011 weeks: 1
Subject: Instabilities in Hamiltonian Systems
Clave: I

University: University of Stuttgart
Cicy: Stuttgart Country: Germany Date: October 2011 weeks: 1
Subject: The scattering map in the rocking block problem.
Clave: I

University: Dpt. Engineering Mathematics, U. Bristol
Cicy: Bristol Country: U.K Date: May 2012 weeks: 1
Subject: Oscillatory integrals in the restricted three body problem
Clave: I

University: IMECC, Universidad de Campinas
Cicy: Campinas Country: Brazil Date: February 2013 weeks: 1
Subject: Homoclinic orbits in the unfoldings of a singularity in dimension 4
Clave: I

University: Dpt. Mathematics, U. Maryland
Cicy: Maryland Country: USA Date: April 2013 weeks: 1
Subject: Oscillatory motions in the circular restricted three body problem
Clave: 2

University: IMECC, Universidad de Campinas
Cicy: Campinas Country: Brazil Date: February 2014 weeks: 1
Subject: Homoclinic orbits in the unfoldings of a singularity in dimension 4
Clave: I

University: Yeshiva U.
Cicy: New York Country: USA Date: April 2014 weeks: 1
Subject: General mechanism of diffusion
Clave: I

University: Georgia Tech
Cicy: Atlanta Country: USA Date: April 2016 weeks: 1
Subject: General mechanism of diffusion
Clave: I

University: Georgia Tech
Cicy: Atlanta Country: USA Date: February 2018 weeks: 1
Subject: Shilnikov bifurcations in the Hopf-zero singularity
Clave: I

University: Mathematical Science Research Institute
Cicy: Berkeley, CA Country: USA Date: fall 2018 weeks: 16
Subject: Hamiltonian systems, from topology to applications through analysis
Clave: C

University: Georgia Tech

City: Atlanta

Country: USA

Date: October 2019

weeks: 3

Subject: Arnold diffusion

Clave: I

University: Yeshiva U.

City: New York

Country: USA

Date: December 2019

weeks: 3

Subject: General mechanism of diffusion

Clave: I

Conferences

Authors: T. M. Seara

Title: Un atractor extraño en el problema de Silnikov simétrico

Participation: comunicación

Conference: VIII Congreso de Ecuaciones Diferenciales y Aplicaciones

Publication: No

Place: Santander

Date: 23–26 September 1985

Authors: M. Ollé y T.M. Seara

Title: Orbitas periodicas en el problema de Silnikov perturbado

Participation: Comunicación

Conference: IX Congreso de Ecuaciones Diferenciales y Aplicaciones

Publication: Actas IX CEDYA, pág. 275–280

Place: Valladolid

Date: 22–25 September 1986

Authors: A. Delshams, T.M. Seara

Title: On the existence of homoclinic orbits in a family of vector fields near an equilibrium point

Participation: Comunicación

Conference: European Conference on Iteration Theory (ECIT 87)

Publication: C. Alsina, J. Llibre, Ch. Mira, C. Simó, G. Targonski, R. Thibault, editores, *European Conference on Iteration Theory*, pág. 167–177, World Sci. Publishing, Teaneck, NJ, 1989, ISBN 981–02–0041–2, ix + 469 pág. MR 92c:58093

Place: Caldes de Malavella, Barcelona

Date: 20 al 26 September 1987

Authors: A. Delshams, T.M. Seara

Title: Medida de la rotura de variedades invariantes en campos del plano

Participation: Comunicación

Conference: XI Congreso de Ecuaciones Diferenciales y Aplicaciones/I Congreso de Matemática Aplicada

Publication: Actas XI CEDYA/I Congreso de Matemática Aplicada, pág. 329–333, Univ. Málaga, Málaga, 1990 MR 1096044

Place: Málaga

Date: 25 al 29 September 1989

Authors: A. Delshams, T.M. Seara
Title: Splitting of separatrices in rapidly forced systems
Participation: Conferencia invitada
Conference: EQUADIFF-91

Publication: C. Perelló, C. Simó y J. Solà-Morales, editores, *International Conference on Differential Equations*, Vol. 1, pág. 103–113, World Sci. Publishing, River Edge, NJ, 1993, ISBN 981-02-1023-X, xix + 992 pág. MR 94k:34067
Place: Barcelona **Date:** 26 al 31 August 1991

Authors: A. Delshams, T.M. Seara
Title: Exponentially Small Expressions for Separatrix Splittings
Participation: Conferencia invitada
Conference: S. Kuksin, V. Lazutkin, J. Pöschel, editors, *Seminar on Dynamical Systems*, pág. 68–80, Birkhäuser, Basel, 1993, ISBN 3-7643-2980-7 MR 95f:34057
Publication: Dynamical Systems Semester, Workshop 2

Place: San Petersburgo, Rusia **Date:** 17 al 30 November 1991

Authors: A. Delshams, T.M. Seara
Title: Exponentially Small Splitting in Hamiltonian Systems
Participation: Comunicación
Conference: NATO Advanced Research Workshop on Hamiltonian Mechanics
Publication: J. Seimenis, editor, *Hamiltonian Mechanics: Integrability and Chaotic Behaviour*, pág. 181–188, volumen 331 de *NATO Adv. Sci. Inst. Ser. B Phys.*, Plenum, New York, 1994, ISBN 0-306-44808-4, x + 422 pág. MR 95k:34066
Place: Toruń, Polonia **Date:** 28 June al 2 July 1993

Authors: A. Delshams, T.M. Seara
Title: Exponentially small splitting in $1 + 1/2$ degrees of freedom Hamiltonian systems
Participation: Comunicación
Conference: Workshop on Dynamical Systems

Publication: No

Place: CRM, Bellaterra **Date:** 3 al 7 October 1994

Authors: A. Delshams, T.M. Seara
Title: Splitting of separatrices for fast periodic and quasiperiodic excitations
Participation: Conferencia invitada
Conference: 1st meeting of the European Network on *Stability and Universality in Classical Mechanics*

Publication: No

Place: Observatorio de París **Date:** 1011 February 1995

Authors: A. Delshams, R. Ramírez Ros, T.M. Seara

Title: Splitting of separatrices for Hamiltonian systems and symplectic maps

Participation: Conferencia invitada

Conference: NATO Advanced Study Institute on Hamiltonian Systems with three or more degrees of freedom

Publication: C. Simó, editor, *Hamiltonian Systems with three or more degrees of freedom*, pág. 39–54, volumen 533 de *NATO Adv. Sci. Inst. Ser. C Math. Phys. Sci.*, Kluwer, Dordrecht, 1999, ISBN 0–7923–5710–8, xxiv + 658 pág. MR 2000j:37075

Place: s'Agaró, Gerona

Date: 19-30 June 1995

Authors: A. Delshams, V. Gelfreich, à. Jorba, T.M. Seara

Title: Splitting of Separatrices for (fast) Quasiperiodic Forcing

Participation: Comunicació

Conference: NATO Advanced Study Institute on Hamiltonian Systems with three or more degrees of freedom

Publication: C. Simó, editor, *Hamiltonian Systems with three or more degrees of freedom*, pág. 367–371, volumen 533 de *NATO Adv. Sci. Inst. Ser. C Math. Phys. Sci.*, Kluwer, Dordrecht, 1999, ISBN 0–7923–5710–8, xxiv + 658 pág. MR 1720914

Place: s'Agaró, Gerona

Date: 19 – 30 June 1995

Authors: C. Bonet, T. M. Seara y M. Valencia

Title: Teoría del Matching complejo y técnicas de resurgencia aplicadas al cálculo de invariantes adiabáticos

Participation: Comunicació

Conference: IV Congreso de Matemática Aplicada

Publication: Actas XIV CEDYA/IV Congreso de Matemática Aplicada (Vic, 1995), pág. 167–168

Place: Vic, Barcelona

Date: 18 – 22 September 1995

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Some geometric approaches to problems in diffusion

Participation: Conferencia invitada

Conference: Celestial Mechanics, Separatrix Splitting, Diffusion

Publication: No

Place: Aussois, Francia

Date: 21 – 27 June 1998

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Unbounded growth of energy in periodic perturbations of geodesic flows of the torus

Participation: Conferencia invitada

Conference: Third International Symposium on Hamiltonian Systems and Celestial Mechanics (HAMSYS-98)

Publication: J. Delgado, E.A. Lacombe, E. Pérez-Chavela y J. Llibre, editores, *Hamiltonian systems and celestial mechanics (HAMSYS-98)*, pág. 90–110, volumen 6 de *World Sci. Monograph Ser. Math.*, World Sci. Publishing, Singapur, 2000, ISBN 981–02–4463–0, 372 pág.

Place: Pátzcuaro, Michoacán, México

Date: 7 – 11 December 1998

Authors: T.M. Seara, J. Villanueva

Title: Asymptotic Behaviour of the Domain of Analyticity of Invariant Curves of the Standard Map

Participation: Comunicación

Conference: XVI CEDYA

Publication: Actas IX CEDYA, pág 451–456

Place: Las Palmas de Gran Canaria

Date: 21–24 September 1999

Authors: C. Olivé, T.M. Seara

Title: Matching Complejo y Resurgencia en el problema de la escisión de separatrices

Participation: Comunicación

Conference: XVI CEDYA

Publication: Actas IX CEDYA, pág 419–426

Place: Las Palmas de Gran Canaria

Date: 21–24 September 1999

Authors: T.M. Seara, J. Villanueva

Title: Asymptotic behaviour of the Domain of Analyticity of Invariant Curves of the Standard map

Participation: Comunicación

Conference: 953 AMS meeting

Publication: No

Place: Notre Dame University, Indiana, USA.

Date: 8–9 April 2000

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: órbitas con energía no acotada en perturbaciones periódicas de flujos geodésicos en el toro

Participation: Comunicación

Conference: Nolineal 2000

Publication: No

Place: Almagro, Ciudad Real

Date: 31 May – 3 June 2000

Authors: T.M. Seara, J. Villanueva

Title: Matching complejo aplicado al estudio del dominio de analiticidad de las curvas invariantes de la aplicación Standard

Participation: Comunicación

Conference: Nolineal 2000

Publication: No

Place: Almagro, Ciudad Real

Date: 31 May – 3 June 2000

Authors: C. Olivé, T.M. Seara

Title: Using Equational Resurgence In Hamilton-Jacobi Equation to Compute Splitting Of Separatrices In The Singular Case

Participation: Poster

Conference: Third European Congress of Mathematics,

Publication: No

Place: Barcelona

Date: 9 –13 July de 2000

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Orbits of unbounded energy in geodesic flows and time dependent potential and in other mechanical systems

Participation: Comunicación

Conference: 2000 Fall Southeastern AMS Section Meeting

Publication: No

Place: Birmingham, Alabama, U.S.A.

Date: 10 – 12 November 2000

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: A geometric mechanism for diffusion in Hamiltonian systems

Participation: Conferencia invitada

Conference: Fourth International Symposium on Hamiltonian Systems and Celestial Mechanics (HAMSYS 2001)

Publication: No

Place: Guanajuato, México

Date: 19 –1 24 March 2001

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Overcoming the Large Gap Problem

Participation: Conferencia invitada

Conference: Sixth SIAM Conference on Applications of Dynamical Systems (DS01)

Publication: No

Place: Snowbird, Utah, U.S.A.

Date: 20 – 24 May 2001

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: How to increase the energy (in a geodesic flow) with a small (quasiperiodic) forcing

Participation: comunicación

Conference: XVII Congreso de Ecuaciones Diferenciales y Aplicaciones

Publication: Actas XVII CEDYA. Publicadas en CD-ROM (2001). Editores L. Ferragut y A. Santos

Place: Salamanca

Date: 24–1 28 September 2001

Authors: C. Olivé, T.M. Seara

Title: Resurgencia ecuacional en el estudio de una ecuación de Hamilton-Jacobi

Participation: comunicación

Conference: XVII Congreso de Ecuaciones Diferenciales y Aplicaciones

Publication: Actas XVII CEDYA. Publicadas en CD-ROM (2001). Editores L. Ferragut y A. Santos

Place: Salamanca

Date: 24 – 28 September 2001

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Arnold Diffusion: Overcoming the large gaps problem

Participation: Comunicación

Conference: Workshop on Hamiltonian Dynamical Systems

Publication: No

Place: Imperial College, London

Date: 11–15 February 2002

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Geometric mechanisms for diffusion in mechanical systems

Participation: Comunicación

Conference: 976 AMS Meeting

Publication: No

Place: Montréal, Québec, Canada

Date: May 3–5, 2002

Authors: N. Fagella, T. M. Seara, J. Villanueva

Title: Limits of Herman Rings of the Complex Standard Family

Participation: Conferencia Invitada

Conference: Holomorphic Iteration and Non-Uniform Hyperbolicity

Publication: No

Place: Varsovia, Polonia

Date: 22 – 26 May de 2002

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Geometric methods for instability in Hamiltonian Systems

Participation: Conferencia Invitada

Conference: The four international conference on Dynamical Systems and Differential Equations

Publication: No

Place: Wilmington, USA

Date: 24 – 1 27 May de 2002

Authors: P. Gutiérrez, A. Delshams, T.M. Seara

Title: Splitting exponencialmente pequeño y continuación de la transversalidad en un sistema hamiltoniano

Participation: Comunicación

Conference: No Lineal 2002

Publication: No

Place: Cuenca

Date: 5-8 June 2002

Authors: C. Olivé, D. Sauzin y T. M. Seara

Title: Existencia de soluciones resurgentes de una ecuación en derivadas parciales

Participation: Comunicación

Conference: Nolineal 2002

Publication: No

Place: U. de Castilla-la Mancha, Cuenca

Date: 05-08 June, 2002

Authors: A. Delshams, R. de la Llave y T. M. Seara

Title: Métodos geométricos de inestabilidad en sistemas hamiltonianos

Participation: Conferencia invitada

Conference: Nolineal 2002

Publication: No

Place: U. de Castilla-la Mancha, Cuenca

Date: 05-08 June, 2002

Authors: C. Olivé, D. Sauzin y T. M. Seara

Title: Two examples of resurgence

Participation: Comunicación

Conference: Singularités, équations différentielles et aspects mathématiques de la physique quantique. Colloque en l'honneur de Frédéric PHAM

Publication: No

Place: Lab. J. A. Dieudonné, Sophia-Antipolis Univ.

Date: 03-05 July, 2002

Authors: A. Delshams, Pere Gutiérrez, Tere M. Seara

Title: Exponentially small splitting for separatrices of whiskered tori in Hamiltonian systems

Participation: Conferencia invitada

Conference: Workshop on Differential Equations dedicated to the memory of Vladimir Lazutkin

Publication: No

Place: St.-Petersburg, Russia

Date: 18 – 20 de August de 2002

Authors: N. Fagella, T. M. Seara, J. Villanueva
Title: Asymptotic Size of Herman Rings of the Complex Standard Family
Participation: Comunicación
Conference: International Conference on Dynamical Methods for Differential Equations (dmde'02)

Publication: No

Place: Medina del Campo, Valladolid **Date:** 4 – 7 September de 2002

Authors: A. Delshams, R. de la Llave y T. M. Seara
Title: Geometric mechanisms for topological instability in Hamiltonian Systems
Participation: Conferencia invitada
Conference: International Conference on Dynamical Methods for Differential Equations (dmde'02)

Publication: No

Place: Medina del Campo, Valladolid **Date:** 4 – 7 September de 2002

Authors: C. Olivé, D. Sauzin y T. M. Seara
Title: Existence of resurgent solutions in a partial differential equation
Participation: Conferencia invitada
Conference: resurgence, alien calculus, resumations and transseries

Publication: No

Place: CIRM, Marseille-Luminy **Date:** 18-22 november, 2002

Authors: A. Delshams, R. de la Llave, T.M. Seara
Title: Geometric mechanisms for instability in Hamiltonian dynamical systems
Participation: Conferencia invitada
Conference: AMS sectional meeting

Publication: No

Place: Wisconsin **Date:** 2002

Authors: C. Olivé, D. Sauzin, T.M. Seara
Title: Two examples of resurgence
Participation: Invited Talk
Conference: Analyzable functions and applications

Publication: No

Place: Edinburgh **Date:** 2002

Authors: C. Olivé, D. Sauzin, T.M. Seara

Title: Resurgence in Hamilton–Jacobi equation

Participation: Invited Talk

Conference: Singularités, équations différentielles et aspects mathématiques de la physique quantique

Publication: No

Place: Nice

Date: 2002

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: A Rigorous Proof of the Existence of Diffusion in a Problem with Large Gaps

Participation: Conferencia invitada

Conference: Workshop on Hamiltonian Dynamics

Publication: No

Place: GATECH, Georgia, Atlanta

Date: 5 – 6 April 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Orbits of unbounded energy in generic quasi-periodic perturbations of geodesic flows for certain manifolds

Participation: Comunicación

Conference: Dynamical Systems, Denton

Publication: No

Place: Denton, Texas

Date: 25 – 29 May 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Geometric mechanism for instability in Hamiltonian systems

Participation: Conferencia invitada

Conference: Dynamical Systems, Denton

Publication: No

Place: Denton, Texas

Date: 25 – 29 May 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Diffusion in Hamiltonian systems using geometrical methods

Participation: Comunicación

Conference: SIAM Conference of Applications of Dynamical Systems (DS03)

Publication: No

Place: Snowbird, Utah

Date: 27 – 31 May 2003

Authors: N. Fagella, T. M. Seara, J. Villanueva

Title: Asymptotic Size of Herman Rings of the Complex Standard Family

Participation: Conferencia Invitada

Conference: Dynamics in the Complex Plane, An international symposium in honour of Bodil Branner

Publication: No

Place: Sominestationen Holbaek, Dinamarca

Date: 19 – 21 June 2003

Authors: N. Fagella, T. M. Seara, J. Villanueva

Title: Quantitative Estimates on the Size of Herman Rings of the Complex Standard Family using Geometrical Methods

Participation: Comunicación Invitada

Conference: First Joint Meeting RSME-AMS

Publication: No

Place: Sevilla

Date: 18 – 21 June 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: A geometric mechanism for diffusion in Hamiltonian Systems overcoming the large gaps problem

Participation: Comunicación Invitada

Conference: First Joint Meeting RSME-AMS

Publication: No

Place: Sevilla

Date: 18 – 21 June 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Geometric mechanisms for diffusion in Hamiltonian Systems

Participation: Comunicación Invitada

Conference: First Joint Meeting RSME-AMS

Publication: No

Place: Sevilla

Date: 18 – 21 June 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Geometric mechanisms for Arnold diffusion

Participation: Comunicación Invitada

Conference: International conference of Differential equations, Equadiff-2003

Publication: No

Place: Hasselt- Bélgica

Date: 22-26 July 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara
Title: Orbits of unbounded energy in generic quasi-periodic perturbations of geodesic flows
Participation: Comunicación Invitada
Conference: International conference of Differential equations, Equadiff-2003

Publication: No

Place: Hasselt- Bélgica **Date:** 22-26 July 2003

Authors: C. Olivé, D. Sauzin, T.M. Seara
Title: Existence of Resurgent Solutions in a Nonlinear First Order Partial Differential Equation
Participation: Comunicación
Conference: International conference of Differential equations, Equadiff-2003

Publication: No

Place: Hasselt- Bélgica **Date:** 22-26 July 2003

Authors: A. Delshams, R. de la Llave, T.M. Seara
Title: A geometric method for instability in Hamiltonian Systems
Participation: conferencia invitada
Conference: XVIII Congreso de Ecuaciones Diferenciales y Aplicaciones

Publication: No

Place: Tarragona **Date:** 15 a – 19 September 2003

Authors: N. Fagella, T.M. Seara, J. Villanueva
Title: Tamaño asintótico de los anillos de Herman de la familia estandar de Arnold
Participation: comunicación
Conference: XVIII Congreso de Ecuaciones Diferenciales y Aplicaciones

Publication: No

Place: Tarragona **Date:** 15 – 19 September 2003

Authors: I. Baldomá y T. M. Seara
Title: Estudio de la ecuacion “inner” en un problema de escision de separatrices exponencialmente pequeño en R^3 .
Participation: Comunicación
Conference: nolineal 2004

Publication: No

Place: U. de Castilla-la Mancha, Toledo **Date:** 01-04 June, 2004

Authors: N. Fagella, T. M. Seara, J. Villanueva

Title: Quantitative Estimates on the Size of Herman Rings of the Complex Standard Family using Geometrical and Numerical Methods

Participation: Comunicación Invitada

Conference: AIMS' Fifth International Conference on Dynamical Systems and Differential Equations, Special Session on The Role of the Bruno Condition in Local Analytic Linearization Problems

Publication: No

Place: Cal Polytech, Pomona, CA (USA)

Date: 16 – 19 June 2004

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Arnold Diffusion in Near Integrable Hamiltonian Systems

Participation: conferencia invitada

Conference: Pan-American Advanced Studies Institute 2005-Americas VI

Publication: No

Place: Santiago de Chile

Date: 10 – 21 January 2005

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: A geometric method for instability in Hamiltonian systems

Participation: Conferencia invitada

Conference: Dynamics, Bifurcation and Chaos. International conference dedicated to 70th anniversary of L.P. Shilnikov

Publication: No

Place: Nizhny Novgorod, Rusia

Date: 30 January – 4 February 2005

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Mechanisms of diffusion in near integrable Hamiltonian systems

Participation: Conferencia plenaria

Conference: Saarifest. International conference dedicated to 65th anniversary of D. Saari

Publication: No

Place: Guanajuato, Mexico

Date: 3 – 9 de April 2005

Authors: T.M.Seara

Title: Introducción a la Teoría de la Resurgencia

Participation: Curso invitado

Conference: XV Congreso Nacional de Matemáticas

Publication: No

Place: Bogotá, Colombia

Date: 8 – 12 August 2005

Authors: F. Angulo, E. Fossas, T. M. Seara
Title: Applied perturbation Theory to power converters regulation
Participation: Comunicació Invitada
Conference: ENOC-2005

Publication: Proceedings

Place: Eindhoven, Netherlands

Date: 7 a – 12 August 2005

Authors: I. Baldomà, T. M. Seara
Title: Exponentially small splitting of heteroclinic orbits in a family in R^3
Participation: Comunicació
Conference: International Conference of non-autonomous and stochastic Dynamical Systems

Publication: No

Place: Sevilla, Spain

Date: 27 September – 1 October 2005

Authors: A. Delshams, R. de la Llave, T.M. Seara
Title: The scattering map to a normally hyperbolic invariant manifold
Participation: Conferencia invitada
Conference: NSDS05: International Conference of non-autonomous and stochastic Dynamical Systems

Publication: No

Place: Sevilla

Date: 27 Sep – 1 October 2005

Authors: I. Baldomà, T.M. Seara
Title: The inner equation of generic analytic unfoldings of the Hopf-zero singularity
Participation: Conferencia invitada
Conference: Carles Sim'o fest

Publication: No

Place: Sagaro, Spain

Date: 29 May – 3 June 2006

Authors: A. Delshams, R. de la Llave, T. M-Seara
Title: Existence of diffusion in a-priori unstable models: higher order resonances do not impede diffusion
Participation: Conferencia plenaria
Conference: Carles Sim'o fest

Publication: No

Place: Sagaro, Spain

Date: 29 May – 3 June 2006

Authors: Tere M. Seara, Jordi Villanueva
Title: Numerical computation of rotation numbers for analytic maps
Participation: Conferencia invitada
Conference: Carles Sim'o fest

Publication: No

Place: Sagaro, Spain

Date: 29 May – 3 June 2006

Authors: Pau Martín, Tere M Seara, David Sauzin
Title: Splitting of separatrices in perturbations of the McMillan map
Participation: Conferencia invitada
Conference: Carles Sim'o fest

Publication: No

Place: Sagaro, Spain

Date: 29 May – 3 June 2006

Authors: A. Delshams, R. de la Llave, T.M. Seara
Title: Scattering maps of a normally hyperbolic invariant manifold:geometric properties and examples
Participation: Conferencia invitada
Conference: 6 Conference Internationale AIMS, Systemes Dynamiques, Equations differentielles et Applications
Publication: No

Place: Poitiers, France

Date: 25-28 June 2006

Authors: A. Delshams, R. de la Llave, T.M. Seara
Title: Detecting global instability in Hamiltonian systems by means of geometric methods
Participation: Conferencia invitada
Conference: 6 Conference Internationale AIMS, Systemes Dynamiques, Equations differentielles et Applications
Publication: No

Place: Poitiers, France

Date: 25-28 June 2006

Authors: I. Baldomá, T.M. Seara
Title: Escisión de una órbita heteroclínica y sistema "inner" en despliegues de la singularidad "Hopf-cero"
Participation: Conferencia invitada
Conference: DDays-2006

Publication: No

Place: Sevilla-Islantilla, Huelva

Date: 18-21 dOctober 2006

Authors: I. Baldomá, T.M. Seara

Title: Exponentially small phenomena and complex matching at the "Hopf-zero" bifurcation

Participation: Conferencia invitada

Conference: Workshop: Long-time phenomena evolution and shocks: from quantum mechanics to PDEs through dynamical systems

Publication: No

Place: Vienna, Austria

Date: 15 – 19 January 2007

Authors: T.M. Seara

Title: Resurgence and exponentially small phenomena

Participation: Tutorial

Conference: Thematic program: Long-time phenomena evolution

Publication: No

Place: Vienna, Austria

Date: 8 a – 12 January 2007

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Mechanisms of instability in near integrable Hamiltonian Systems

Participation: Conferencia plenaria

Conference: First Iberic Mathematical Meeting.

Publication: No

Place: Lisboa, Portugal

Date: 9-11 February 2007

Authors: E. Fossas, S.J. Hogan, T.M. Seara

Title: Bifurcation curves in Power electronic converters

Participation: Comunicación

Conference: SIAM Conference on Applications of Dynamical Systems (DS07)

Publication: No

Place: Snowbird, Utah, U.S.A.

Date: 28 de May – 1 June 2007

Authors: Pau Martín, Tere M Seara, David Sauzin

Title: Exponentially small phenomena and Resurgence in analytic perturbations of the McMillan map

Participation: Conferencia invitada

Conference: Primer congreso hispano-francés de matemáticas

Publication: No

Place: Zaragoza

Date: 9 – 13 July 2007

Authors: Inmaculada Baldomá, Tere M Seara

Title: Heteroclinic breakdown beyond all orders in the Hopf-zero singularity

Participation: Conferencia invitada

Conference: *International Conference on Differential Equations (EQUADIFF-07)*

Publication: No

Place: Vienna

Date: 5 – 11 August 2007

Authors: M. Guàrdia, C. Olivé, Tere M Seara

Title: Exponentially small splitting of the rapidly forced pendulum via Hamilton-Jacobi equation and Resurgence: a proof of the singular case

Participation: Comunicació

Conference: *International Conference on Differential Equations (EQUADIFF-07)*

Publication: No

Place: Vienna

Date: 5 – 11 August 2007

Authors: A. Delshams, R. de la Llave, T.M. Seara

Title: Instability in multidimensional a priori-unstable Hamiltonian Systems: Multiple resonances do not impede diffusion.

Participation: Conferencia plenaria

Conference: International Conference on Dynamical methods and Mathematical Modelling.

Publication: No

Place: Valladolid, España

Date: 18-22 September 2007

Authors: M. Guàrdia, S. J. Hogan, Tere M Seara

Title: Bifurcation of sliding periodic orbits for a discontinuous model of the dry friction oscillator.

Participation: Comunicació

Conference: International Conference on Dynamical methods and Mathematical Modelling.

Publication: No

Place: Valladolid, España

Date: 18-22 September 2007

Authors: C. Olivé, Tere M Seara

Title: Complex matching techniques in the Hamilton-Jacobi equation.

Participation: Comunicació

Conference: International Conference on Dynamical methods and Mathematical Modelling.

Publication: No

Place: Valladolid, España

Date: 18-22 September 2007

Authors: E. Fossas, S. J. Hogan, Tere M Seara
Title: Smooth and non-smooth bifurcation curves in power electronic converters.
Participation: Conferencia invitada
Conference: XX Congreso de Ecuaciones Diferenciales y Aplicaciones.

Publication: No

Place: Sevilla, España

Date: 24-28 September 2007

Authors: M. Guardia, Tere M Seara, M.A. Teixeira
Title: Generic bifurcations of planar Filippov vector fields by topological equivalence
Participation: Conferencia invitada
Conference: British Applied Mathematics Colloquium

Publication: No

Place: Manchester, England

Date: 31 de March – 3 April 2008

Authors: P. Martín, T. M. Seara, D. Sauzin
Title: Exponentially Small Splitting of Separatrices in the McMillan Map
Participation: Comunicación
Conference: Nolineal 2008

Publication: No

Place: Barcelona, Spain

Date: 16 – 18 June 2008

Authors: Y. Kubyshin, O. Larreal, R. Ramírez, T. M. Seara
Title: Stability of the Phase Motion in Race-track Microtrons
Participation: Comunicación
Conference: Nolineal 2008

Publication: No

Place: Barcelona, Spain

Date: 16 – 18 June 2008

Authors: M. Guardia, S.J. Hogan, T. M. Seara
Title: Discontinuity Induced Bifurcations of Periodic Orbits in Filippov Systems
Participation: Comunicación
Conference: Nolineal 2008

Publication: No

Place: Barcelona, Spain

Date: 16 – 18 June 2008

Authors: A. Delshams, V. Kaloshin, T. M. Seara

Title: Arnold diffusion along nearly parabolic orbits for the planar restricted planar 3-body problem

Participation: Conferencia plenaria

Conference: HAmSys-2008

Publication: No

Place: Guanajuato, Mexico

Date: 7 – 11 July 2008

Authors: D. Sauzin, P. Martín, T.M. Seara

Title: Resurgent splitting in a perturbed McMillan map

Participation: invited conference

Conference: Conference on Stability and Instability in Mechanical Systems: Recent Progress and Mathematical Theory

Publication: No

Place: Bellaterra, Spain

Date: 22–26 Sep 2008

Authors: M. Guardia, T. M. Seara, M. A. Teixeira

Title: Generic bifurcations of planar Filippov vector fields by topological equivalence

Participation: Conferencia invitada

Conference: Problems in Nonsmooth Dynamical Systems

Publication: No

Place: Bristol, UK

Date: 28 – 29 November 2008

Authors: Inmaculada Baldomá, Tere M Seara

Title: Heteroclinic breakdown beyond all orders in the Hopf-zero singularity

Participation: Conferencia plenaria

Conference: *Bifurcations: Mathematical and Quantum Aspects and Applications (BIFUR08)*

Publication: No

Place: Madrid

Date: 8 – 12 December 2008

Authors: A. Delshams, V. Kaloshin, R. de la LLave, T. M. Seara

Title: Mechanisms of Instability in Nearly Integrable Hamiltonian Systems

Participation: Conferencia plenaria

Conference: 2009 SIAM Conference on Applications of Dynamical Systems (DS09)

Publication: No

Place: Snowbird, Utah, U.S.A.

Date: 17 – 21 May 2009

Authors: M. Guardia, T. M. Seara, M. A. Teixeira
Title: Codimension-2 singularities with infinitely many codimension-1 bifurcation branches
Participation: Conferencia plenaria
Conference: International Workshop on Resonance Oscillations and Stability of Nonsmooth Systems

Publication: No

Place: Imperial College, London, UK

Date: 16 – 26 June 2009

Authors: Pau Martín, Tere M Seara, David Sauzin
Title: Resurgence of inner solutions for analytical perturbations of the McMillan map
Participation: Conferencia plenaria
Conference: Workshop on Finiteness Problems in Dynamical Systems

Publication: No

Place: Fields Institute, Toronto, Canada

Date: 22 – 26 June, 2009

Authors: Pau Martín, Tere M Seara, David Sauzin
Title: Exponentially small splitting and resurgence for analytical perturbations of the McMillan map
Participation: Conferencia invitada
Conference: Semi-annual Workshop in Dynamical Systems and Related Topics

Publication: No

Place: Penn State Univ. State College, USA

Date: October 29- November 1, 2009

Authors: A. Delshams, R. de la Llave, T. M. Seara
Title: Mechanisms of Instability in Hamiltonian Systems
Participation: Conferencia plenaria
Conference: Conference on Celestial Mechanics and Hamiltonian Systems

Publication: No

Place: U. Maryland, Maryland, U.S.A.

Date: 15 – 18 April 2010

Authors: R. de la Llave, A. Luque, T. M. Seara, J. Villanueva
Title: Regularity of Diophantine Arnold Tongues at the Critical Point
Participation: Comunicación
Conference: DSPDEs'10, Joint SIAM/RSME-SCM-SEMA Meeting Emerging Topics in Dynamical Systems and Partial Differential Equations
Publication: No

Place: Barcelona, España

Date: 31 de May – 4 June 2010

Authors: A. Delshams, A. de la Rosa, V. Kaloshin, T. M. Seara
Title: The scattering map associated to a normally parabolic manifold of infinity in the planar restricted 3-body problem
Participation: Comunicación invitada
Conference: 3rd Conference on Nonlinear Science and Complexity

Publication: No

Place: Kankaya Univ., Ankara, Turquía **Date:** 28- 31 July 2010

Authors: A. Delshams, A. de la Rosa, V. Kaloshin, T. M. Seara
Title: M. Parabolic orbits in the restricted three-body problem
Participation: Conferencia plenaria
Conference: VI International Symposium HAMSYS-2010. Honouring E.A. Lacombe in his 65th Anniversary.
Publication: No

Place: Mexico DC, Mexico **Date:** 29 November – 3 December 2010

”Abstracts of the VI International Symposium HAMSYS-2010”. 2010.

Authors: I. Baldomá, O. Castejón, T. M. Seara
Title: Heteroclinic breakdown beyond all orders in generic analytic unfoldings of the Hopf-zero singularity
Participation: Comunicación
Conference: SIAM conference of applied dynamical systems

Publication: No

Place: SnowBird, Salt Lake City, USA **Date:** 22 – 26 May 2011

Authors: A. Delshams, R. de la LLave, T. M. Seara
Title: A geometric mechanism of diffusion in a priori unstable Hamiltonian systems of Instability in Hamiltonian Systems
Participation: Conferencia plenaria
Conference: Workshop on Instabilities in Hamiltonian Systems

Publication: No

Place: Fields Institute, Toronto, Canada **Date:** 13 – 17 June 2011

Authors: I. Baldomá, O. Castejón, T. M. Seara
Title: Breakdown of Heteroclinic Orbits for Analytic Unfoldings of the Hopf-Zero Singularity. The Singular Case.
Participation: Conferencia invitada
Conference: Equadiff-2011

Publication: No

Place: Loughborough U., Loughborough, UK

Date: 1 – 5 August 2011

Authors: Y. Kubyshin, O. Larreal R. Ramirez, T. M. Seara

Title: Stability of the phase motion in race-track microtons.

Participation: Conferencia invitada

Conference: Dual year Russia-Spain. Particle Physics, Nuclear Physics and Astroparticle Physics

Publication: No

Place: U. P. C. , Barcelona, Spain

Date: November 8-11, 2011

Authors: M. Guardia, T. M. Seara, M. A. Teixeira

Title: On generic bifurcations in planar Filippov Systems.

Participation: Tutorial, 3h

Conference: Doc-course IMUS 2012

Publication: No

Place: E.T. S. Ingeniería de Sevilla, Spain

Date: January 30 – February 10, 2012

Authors: M. Guardia, P. Martin, T. M. Seara

Title: Oscillatory orbits in the circular restricted planar three body problem for big values of the Jacobi constant and any mass ratio.

Participation: Conferencia plenaria

Conference: Recent progress in Lagrangian and Hamiltonian dynamics:

A conference in honor of John Mather's 70th birthday

Publication: No

Place: E.N. S. de Lyon, France

Date: June 4-9, 2012

Authors: A. Delshams, R. de la LLave, T. M. Seara

Title: Instability in nearly integrable Hamiltonian Systems: geometric methods

Participation: Conferencia invitada

Conference: International Conference on Mathematical Physics (ICMP12)

Publication: No

Place: Aalborg, Dinamarca

Date: 6 – 11 August 2012

Authors: M. Guardia, P. Martin, T. M. Seara

Title: Oscillatory motions in the Restricted Circular Planar Three Body Problem.

Participation: Conferencia plenaria

Conference: New trends in Dynamical Systems

Publication: No

Place: Salou, Tarragona, Spain

Date: 1-5 October 2012

Authors: A. Delshams, A. de la Rosa, V. Kaloshin, T. M. Seara

Title: Orbits with increasing angular momentum in the elliptic restricted three body problem: combining two scattering maps

Participation: Conferencia plenaria

Conference: New Perspectives on the N -body Problem

Publication: No

Place: Banff, Calgary, Canada

Date: 13 - 18 January, 2013

Authors: T. M. Seara

Title: Exponentially small phenomena and resurgence.

Participation: Curso 8h

Conference: CIMPA-UNESCO-MESR-MINECO-COLOMBIA research school: Differential Galois Theory and Multisummability

Publication: No

Place: Univ. del Norte, Barranquilla, Colombia

Date: 21 - 26 January, 2013

Authors: M. Guardia, P. Martin, T. M. Seara

Title: Oscillatory motions in the restricted circular planar three body problem.

Participation: Conferencia plenaria

Conference: ICMC Summer Meeting on Differential Equations - 2013 Chapter celebrating the 70th birthday of Hildebrando Munhoz Rodrigues

Publication: No

Place: ICMC Sao Carlos, Sao Paulo, Brazil

Date: 4-7 February 2013

Authors: M. Guardia, P. Martin, T. M. Seara

Title: Oscillatory motions in the circular restricted three body problem

Participation: Conferencia plenaria

Conference: Spring 2013 Meeting of the Workshop on Dynamical Systems and Related Topics

Publication: No

Place: U. Maryland, Maryland, U.S.A.

Date: 4 - 7 April 2013

Authors: C. Bonet, T. M. Seara

Title: Singular Matching Near a Visible Fold-regular Point: Asymptotics of the Return Map

Participation: Conferencia invitada

Conference: SIAM conference of applied dynamical systems

Publication: No

Place: SnowBird, Salt Lake City, USA

Date: 18 – 23 May 2013

Authors: C. Bonet, T. M. Seara

Title: Regularizing non-smooth systems near a visible tangency using singular perturbation theory: The Poincaré Map

Participation: Conferencia plenaria

Conference: Workshop On Slow-Fast Dynamics: Theory, Numerics, Application to Life and Earth Sciences

Publication: No

Place: CRM, Bellaterra, Barcelona

Date: 3 – 7 June 2013

Authors: C. Bonet, T. M. Seara

Title: Regularisation of non-smooth systems using singular perturbation theory.

Participation: Conferencia invitada

Conference: Informal meeting on slow-fast dynamics and large-scale systems

Publication: No

Place: INRA-INRIA, Montpellier

Date: 30 deSeptember – 2 October 2013

Authors: C. Bonet, T. M. Seara

Title: Regularisation of non-smooth systems using singular perturbation theory.

Participation: Conferencia invitada

Conference: ICMC Summer Meeting on Differential Equations - 2014 Chapter celebrating the 80th birthday of Djairo Guedes de Figueiredo

Publication: No

Place: ICMC Sao Carlos, Sao Paulo, Brazil

Date: 3-7 February 2014

Authors: C. Bonet, T. M. Seara

Title: Sliding bifurcations after SotoMayr-Teixeira regularization: an application of singular perturbation theory to Filippov systems.

Participation: Conferencia plenaria

Conference: VI Workshop on Dynamical Systems - MAT 70

An International Conference on Dynamical Systems celebrating the 70th birthday of Marco Antonio Teixeira

Publication: No

Place: Unicamp, Campinas, Brazil

Date: 25-29 May 2014

Authors: A. Delshams, A. de la Rosa, V. Kaloshin, T. M. Seara
Title: Arnold diffusion in the restricted planar three body problem
Participation: Conferencia plenaria
Conference: HAMSYS 2014
celebrating the 70th birthday of Clark Robinson
Publication: No

Place: CRM, Barcelona

Date: 2 - 6 June, 2014

Authors: M. Guardia, P. Martin, T. M. Seara
Title: Oscillatory motions in the planar circular restricted three body problem
Participation: Conferencia plenaria
Conference: First join international meeting RSME-SCM-SEMA-SIMAI-UMI

Publication: No

Place: Bilbao

Date: 30 June – 4 July 2014

Authors: C. Bonet, T. M. Seara
Title: Sliding bifurcations after SotoMayor-Teixeira regularization: an application of singular perturbation theory to Filippov systems.
Participation: Conferencia invitada
Conference: Barcelona Mathematical Days

Publication: No

Place: IEC, Barcelona

Date: 7-8 November 2014

Authors: I. Baldomá, O. Castejón, T. M. Seara
Title: Shilnikov bifurcation in the Hopf-Zero Singularity.
Participation: Conferencia plenaria
Conference: International conference-school: Shilnikov workshop 2014

Publication: No

Place: Lobachevskii State U. Nizhni Novgorod

Date: 16-18 December 2014

Authors: A. Delshams, A. de la Rosa, V. Kaloshin, T. M. Seara
Title: Global instability in the elliptic restricted three body problem
Participation: Conferencia plenaria
Conference: Workshop on Hamiltonian dynamical systems

Publication: No

Place: Fudan University, Shanghai

Date: 3 - 10 January, 2015

Authors: C. Bonet, T. M. Seara
Title: Regularization of bifurcations in Filippov systems.
Participation: Conferencia invitada
Conference: XXIV CEDYA, XIV CMA

Publication: No

Place: Universidad de Cadiz, Cadiz

Date: June 8-12, 2015

Authors: A. Delshams, A. de la Rosa, V. Kaloshin, T. M. Seara
Title: Orbits with increasing angular momentum in the elliptic restricted three body problem
Participation: Conferencia plenaria
Conference: Dynamics and Geometry

Publication: No

Place: Lorentz Center, Leiden

Date: June 15-19, 2015

Authors: M. Guardia, P. Martin, T. M. Seara
Title: Oscillatory orbits in the restricted elliptic planar three body problem
Participation: Conferencia invitada
Conference: EQUADIFF2015

Publication: No

Place: U. Claude Bernard Lyon, Lyon

Date: 6-11 de julio 2015

Authors: M. Guardia, P. Martin, T. M. Seara
Title: Existence of Oscillatory orbits in the restricted planar three body problem
Participation: Conferencia invitada
Conference: The 17th EWM General Meeting

Publication: No

Place: Cortona

Date: 31 august-4 september 2015

Authors: M. Guardia, P. Martin, T. M. Seara
Title: Oscillatory orbits in the restricted planar elliptic three body problem
Participation: Conferencia plenaria
Conference: Hamiltonian Systems and Celestial Mechanics, CMO-BIRS workshop

Publication: No

Place: Oaxaca

Date: 7-11 september 2015

Authors: M. Guardia, P. Martin, T. M. Seara
Title: Oscillatory orbits in the elliptic restricted planar three body problem
Participation: Conferencia plenaria
Conference: Warwick Dynamical Systems Workshop

Publication: No

Place: Mathematics Institute, University of Warwick **Date:** 6th - 8th June 2016

Authors: M. Guardia, P. Martin, T. M. Seara
Title: Oscillatory orbits in the elliptic restricted planar three body problem
Participation: Conferencia invitada
Conference: Dynamics, Bifurcations and Strange Attractors

Publication: No

Place: Nizhny Novgorod University **Date:** 18-22 July 2016

Authors: C. Bonet, J.F. Larrosa, T. M. Seara
Title: Regularization of a Filippov vector field near visible-invisible fold point
Participation: Conferencia plenaria
Conference: IV Brazilian School of Dynamical Systems

Publication: No

Place: Uni. Estadual de Campinas **Date:** 3-7 October 2016

Authors: Yu. A. Kubyshin, O. Larreal, R. Ramírez-Ros, T. M. Seara.
Title: Stability of the phase motion in race-track microtons
Participation: Conferencia plenaria
Conference: Beam Dynamics

Publication: No

Place: IPAM, UCLA **Date:** January 23-27 2017

Authors: M. Guardia, P. Martin, L. Sabbagh, T. M. Seara
Title: Oscillatory orbits in the elliptic restricted planar three body problem
Participation: Conferencia invitada
Conference: Chaos 2017

Publication: No

Place: Barcelona **Date:** May 30- June 2 2017

Authors: A. Delshams, M. Gidea, R. de la Llave, T.M. Seara
Title: A general mechanism of diffusion in Hamiltonian Systems: qualitative results
Participation: Conferencia plenaria
Conference: Llavefest: A broad perspective on finite and infinite dynamical systems (FIDDS-17)

Publication: No

Place: Barcelona **Date:** June 12-16 2017

Authors: M. Guardia, P. Martin, L. Sabbagh, T. M. Seara
Title: Oscillatory orbits in the restricted planar three body problem
Participation: Conferencia plenaria
Conference: The Seventh International Meeting on Celestial Mechanics (CEMEC VII)

Publication: No

Place: San Martino al Cimino, Viterbo, Italy **Date:** September 3-8 2017

Authors: M. Gidea, R. de la llave, T. M. Seara
Title: A General Mechanism of Diffusion in Hamiltonian Systems
Participation: Conferencia plenaria
Conference: Analysis and Dynamics

Publication: No

Place: San Gregorio, Italy **Date:** October 12-15 2017

Authors: M. Gidea, R. de la Llave, T. M-Seara
Title: A General Mechanism of Instability in Hamiltonian Systems
Participation: Conferencia plenaria
Conference: Workshop on Hamiltonian Systems

Publication: No

Place: Congressi Stefano Franscini (CSF), Ascona, SZ **Date:** October 29 - November 3, 2017

Authors: I. Baldomá, O. Castejón, S. Ibañez, T. M-Seara
Title: Shilnikov bifurcations in the Hopf-zero singularity
Participation: Conferencia plenaria
Conference: Geometry and Dynamics in interaction

Publication: No

Place: Observatoire de Paris, IMCCE, Paris **Date:** 15-17 January 2018

Authors: M. Gidea, R. de la Llave, T. M-Seara

Title: A General Shadowing result for normally hyperbolic invariant manifolds and its application to Arnold diffusion

Participation: Conferencia plenaria

Conference: Emerging Topics: Emerging interactions of geometric and variational methods

Publication: No

Place: Institute of Advanced Study, Princeton, US

Date: April 8-13, 2018

Authors: C. Bonet, E. Fossas, M. R. Jeffrey, T. M-Seara

Title: A unified approach to explain contrary effects of hysteresis and smoothing in nonsmooth systems

Participation: Conferencia plenaria

Conference: MURPHYS 2018

Publication: No

Place: CRM, Barcelona

Date: May 28-June 1, 2018

Authors: M. Gidea, R. de la Llave, T. M-Seara

Title: A General Mechanism of Diffusion in Hamiltonian Systems

Participation: Conferencia plenaria

Conference: Perspectives in Hamiltonian Systems 2018

Publication: No

Place: Centro don Orione, Venize, Italy

Date: June 18-22, 2018

Authors: M. Gidea, R. de la Llave, T. M-Seara

Title: A General Mechanism of Diffusion in Hamiltonian Systems

Participation: Conferencia plenaria

Conference: Weak KAM, Rio 2018ICM satellite conference

Publication: No

Place: PUC-Rio, Rio de Janeiro, Brazil

Date: July 23-27, 2018

Authors: T. M-Seara

Title: Introduction to Arnold Diffusion I

Participation: Conferencia plenaria

Conference: Introductory Workshop: Hamiltonian systems, from topology to applications through analysis

Publication: No

Place: MSRI, Berkeley, USA

Date: August 20 - 24, 2018

Authors: M. Gidea, R. de la Llave, T. M-Seara
Title: A General Mechanism of Instability in Hamiltonian Systems
Participation: Conferencia plenaria
Conference: Dynamical Systems, from geometry to Mechanics

Publication: No

Place: Dpt. Math. Univ. Tor Vergata, Rome, Italy **Date:** February 5-8, 2019

Authors: M. Guardia, P. Martin, L. Sabbagh, T. M-Seara
Title: Oscillatory orbits in the planar three body problem for all values of the masses
Participation: Conferencia invitada
Conference: Symplectic Dynamics

Publication: No

Place: Lorentz center, Leiden **Date:** April 8-12, 2019

Authors: M. Guardia, P. Martin, T. M- Seara
Title: Oscillatory orbits in the planar three body problem for all values of the masses
Participation: Conferencia invitada
Conference: New trends in Celestial Mechanics

Publication: No

Place: Cogne, Valle d'Aosta, Italy **Date:** June 24-28, 2019

Authors: M. Gidea, R. de la Llave, T. M-Seara
Title: Recent results in geometric methods for Arnol'd difusion
Participation: Conferencia invitada
Conference: Dynamische Systeme

Publication: No

Place: Oberwolfach, Germany **Date:** July 7-13, 2019

Authors: O. Gomide, M. Guàrdia, T. M-Seara, C. Zeng
Title: On the breakdown of small amplitude breathers for the reversible Klein-Gordon equation
Participation: Conferencia invitada
Conference: Dynamics, Equations and Applications

Publication: No

Place: AGH, UST; Krakow **Date:** September 16-20, 2019

Authors: O. Gomide, M. Guàrdia, T. M-Seara, C. Zeng

Title: Breakdown of small amplitude breathers for the reversible Klein-Gordon equation

Participation: Conferencia invitada

Conference: Dynamic Day

Publication: No

Place: Nice

Date: February 4th, 2020

Graduate students

Title: Càlcul de l'escissió de separatrius usant tècniques de matching complex i ressurgència aplicades a l'equació de Hamilton-Jacobi

Student: Carme Olivé Farré

University: Universitat Politècnica de Catalunya

Faculty/School: FME

Date: July 10th, 2006

Title: From non-smooth to analytical Dynamical Systems: low codimension bifurcations and exponentially small splitting of separatrices

Student: Marcel Guàrdia Munárriz

University: Universitat Politècnica de Catalunya

Faculty/School: FME

Date: July 19th, 2010

Title: Calculo de la escisión de separatrices y regiones de estabilidad usando multiprecisión: El microtrón y la singularidad Hopf-Zero

Student: Oswaldo Larreal Barreto

University: Universitat Politècnica de Catalunya

Faculty/School: FME

Date: July 21, 2011

Title: Local and global phenomena in piece-wise defined systems: from big bang bifurcations to splitting of heteroclinic manifolds

Student: Albert Granados Corsellas

University: Universitat Politècnica de Catalunya

Faculty/School: FME

Date: September 17th, 2012

Title: Global instability in the elliptic restricted three body problem

Student: Abraham de la Rosa Ibarra

University: Universitat Politècnica de Catalunya

Faculty/School: FME

Date: June 16th, 2014

Title: Study of invariant manifolds in two different problems: the Hopf-zero singularity and neural synchrony

Student: Oriol Castejón Company

University: Universitat Politècnica de Catalunya

Faculty/School: FME

Date: 16 de julio de 2015

Title: Generic bifurcations in planar Filippov systems

Student: Juliana Fernandes Larrosa

University: Univeridade estatual de Campinas

Faculty/School: Instituto de matematica, estadistica a computçao cientifica

Date: 27 de noviembre de 2015

Title: On the role of oscillatory dynamics in neural communication

Student: Alberto Perez Cervera

University: Universitat Politècnica de Catalunya

Faculty/School: FME

Date: 4 de Abril de 2019

Title: Sobre Condições de Estabilidade para Sistemas de Filippov e Sistemas Hamiltonianos

Student: Otávio Marçal Leandro Gomide

University: Univeridade estatual de Campinas

Faculty/School: Instituto de matematica, estadistica a computçao cientifica

Date: 1 de Julio de 2019

Participation in committees

Committee name: SIAG-DS Advisory Committee

Institution: SIAM

Subject: Dynamical Systems

Date: 01-2012 to 12-2013

Organizing committees

Organizing international committees: conferences, courses, etc.,

Título: Jornadas de Introducción a los Sistemas Dinàmicos. JISD2002

Activity: Organizer

scope: International

Date: Barcelona, Jun. 2002

Título: Segundas Jornadas de Introducción a los Sistemas Dinàmicos. JISD2003

Activity: Organizer

scope: International

Date: Barcelona, Jun.-Jul. 2003

Título: XVIII CEDYA, Congreso de Ecuaciones Diferenciales y Aplicaciones

Activity: Scientific Committee

scope: International

Date: Tarragona, September de 2003

Título: Special Session of Dynamical Systems, First Joint International Meeting between the American Mathematical Society (AMS) and the Real Sociedad Matematica Espanola (RSME)

Activity: Organizer

scope: International

Date: Sevilla, 18-21 June 2003

Título: Terceras Jornadas de Introducción a los Sistemas Dinàmicos. JISD2004

Activity: Organizer

scope: International

Date: Barcelona, Jun.-Jul. 2004

Título: RTNS, cursos organizados por la red Dance

Activity: Scientific committee

scope: International

Date: Palma de Mallorca, February 2004.

Título: Special Session of Dynamical Systems, EMS-SCM JOINT MATHEMATICAL WEEKEND, International Meeting between the European Mathematical Society (EMS) and the Societat Catalana de matemàtiques (SCM)

Activity: Organizing Committee

scope: International

Date: Barcelona, 16-18 September 2005

Título: Quintas Jornadas de Introducción a los Sistemas Dinàmicos y a la EDP. JISD2006

Activity: Organizer

scope: International

Date: Barcelona, Jun.-Jul. 2006

Título: D DAYS, congreso de la red Dance,

Activity: Scientific Committee

scope: National

Date: Sevilla-Islantilla (Huelva), October 2006.

Título: Research Thematic Trimester: Complex Nonsmooth Dynamical Systems.

Activity: Organizing Committee

scope: International

Date: Centre de Recerca Matemàtica (CRM), January to March 2007

Título: Minisymposium: Open Questions in the Theory of Nonsmooth Dynamical Systems. SIAM Conference on Applications of Dynamical Systems (DS07)

Activity: Co-Organizer

scope: International

Date: Snowbird, Utah, U.S.A., 28 de May – 1 June 2007

Título: Sextas Jornadas de Introducción a los Sistemas Dinàmicos y a la EDP. JISD2007

Activity: Co-Organizer

scope: International

Date: Barcelona, Jun. 2007

Título: Séptimas Jornadas de Introducción a los Sistemas Dinàmicos y a la EDP. JISD2008

Activity: Co-Organizer

scope: International

Date: Barcelona, Feb. 2008

Título: Research Thematic Trimester: Stability and Instability in Mechanical Systems (SIMS08)

Activity: Organizing Committee

scope: International

Date: Centre de Recerca Matemàtica (CRM), September to December 2008

Título: Advanced Course on Stability and Instability in Mechanical Systems

Activity: Organizing Committee

scope: International

Date: Centre de Recerca Matemàtica (CRM), 15-19 September, 2008

Título: Conference on Stability and Instability in Mechanical Systems: Recent Progress and Mathematical Theory (CSIMS08)

Activity: Organizing Committee

scope: International

Date: Centre de Recerca Matemàtica (CRM), 22-26 September, 2008

Título: Minisymposium: Instability in mechanical systems. SIAM Conference on Applications of Dynamical Systems (DS09)

Activity: Co-Organizer

scope: International

Date: Snowbird, Utah, U.S.A., 17-21 de May 2009

Título: Emerging Topics in Dynamical Systems and Partial Differential Equations

Activity: Organizing Committee

scope: International

Date: Barcelona, May 31- June 4, 2010

Título: Minisimposium: Rigorous and Heuristic Methods in Exponentially Small Phenomena. Emerging Topics in Dynamical Systems and Partial Differential Equations. DSPDEs'10 Joint SIAM/RSME-SCM-SEMA Meeting.

Activity: Organizing Committee

scope: International

Date: Barcelona, May 31- June 4, 2010

Título: Octavas Jornadas de Introducción a los Sistemas Dinámicos y a la EDP. JISD2010

Activity: Organizing Committee

scope: International

Date: Barcelona, June 2010

Título: Primera trobada de la Societat Catalana de matemàtiques i la Societat Matemàtica Sueca

Activity: Organizing Committee

scope: International

Date: Barcelona, September 2010

Título: RTNS2011, cursos organitzados por la red Dance

Activity: Organizing Committee

scope: International

Date: Vilanova i la Geltru, January de 2011.

Título: Minisymposium: Exponentially small phenomena. EQUADIFF2011.

Activity: Co-Organizer

scope: International

Date: Loughborough, U.K., August 1-5 2011.

Título: International Congress on Industrial and Applied Mathematics (ICIAM2011)

Activity: Scientific Committee

scope: International

Date: Vancouver, BC, July, 2011

Título: Novenas Jornadas de Interacción entre los Sistemas Dinámicos y a la EDP. JISD2011

Activity: Organizing Committee

scope: International

Date: Barcelona, June - July 2011

Título: 15th general meeting of European Women in Mathematics (EWM)

Activity: Organizing Committee

scope: International

Date: Barcelona, September 2011

Título: Sesión de dinámica no lineal. Nolineal 2012

Activity: Organizing Committee

scope: National

Date: Zaragoza, June de 2012.

Título: Tenth workshop on interactions between dynamical systems and partial differential equations (JISD2012)

Activity: Organizing Committee

scope: International

Date: Barcelona, May- June 2012

Título: Special session: Global Dynamics in Hamiltonian Systems. The 9th AIMS Conference on Dynamical Systems, Differential Equations and Applications

Activity: Organizing Committee

scope: International

Date: Orlando, USA, 1-5 July 2012

Título: Dynamical Systems: 100 years after Poincaré

Activity: Scientific Committee

scope: Internacional

Date: Gijón, 3-7 September, 2012

<http://www.uniovi.es/ds100Poincare/>

Título: DDDAYS, congreso de la red Dance,

Activity: Scientific Committee

scope: National

Date: Benicàssim, October de 2012.

Título: SIAM meeting for the Applications of Dynamical Systems

Activity: Organizing Committee

scope: International

Date: Snowbird, Utah, May de 2013.

Título: Eleventh workshop on interactions between dynamical systems and partial differential equations (JISD2013)

Activity: Organizing Committee

scope: International

Date: Barcelona, July 2013

Título: XXIII CEDYA/XIII CMA

Activity: Scientific committee

scope: International

Date: Castellon, 9 – 13 September 2013

Título: Twelfth workshop on interactions between dynamical systems and partial differential equations (JISD2014)

Activity: Organizing Committee

scope: Internacional

Date: Barcelona, June 2014

Título: Special session: Celestial mechanics. The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications

Activity: Organizing Committee

scope: International

Date: Madrid, 7-11 July 2014

Título: 13th workshop on interactions between dynamical systems and partial differential equations (JISD2015)

Activity: Co-Organizer

scope: Internacional

Date: Barcelona, 1-5 June 2015

Título: Global Dynamics in hamiltonian Systems (GDHAM)

Activity: Organizing Committee

scope: Internacional

Date: Nuria, Girona, 28 June -4 July, 2015

Título: 14th workshop on interactions between dynamical systems and partial differential equations (JISD2016)

Activity: Co-Organizer

scope: Internacional

Date: Barcelona, 11-15 July 2016

Título: 15th workshop on interactions between dynamical systems and partial differential equations (JISD2017)

Activity: Co-Organizer

scope: Internacional

Date: Barcelona, 26-30 June 2017

Título: A broad perspective on finite and infinite dimensional Dynamical Systems (FIDDS-17)

Activity: Co-Organizer

scope: Internacional

Date: Barcelona, 12-16 June 2017

Título: Special session: Nuevos métodos en sistemas hamiltonianos y mecánica celeste, IV ENCuentro Conjunto RSME-SMM

Activity: Organizing Committee

scope: International

Date: Valladolid, June 19-22 2017

Título: 16th workshop on interactions between dynamical systems and partial differential equations (JISD2018)

Activity: Co-Organizer

scope: Internacional

Date: Barcelona, 25-29 June 2018

Título: Advances in Nonsmooth Dynamics 2018

Activity: Scientific Committee

scope: Internacional

Date: Bristol, UK, 13-15 June 2018

Título: CIMPA school: DYNAMICAL SYSTEMS AND APLICATIONS: GEOMETRICAL, TOPOLOGICAL AND NUMERICAL ASPECTS

Activity: Co-Organizer

scope: Internacional

Date: Dangbo, Benin, 1-14 July 2018

Título: Scientific program: HAMILTONIAN SYSTEMS, FROM TOPOLOGY TO APPLICATIONS THROUGH ANALYSIS

Activity: Co-Organizer

scope: Internacional

Date: MSRI; Berkeley, USA, 13th August- 14 December 2018

Título: Connections for Women: Hamiltonian Systems, from topology to applications through analysis

Activity: Co-Organizer

scope: Internacional

Date: MSRI; Berkeley, USA, 16-17 August 2018

Título: 17th workshop on interactions between dynamical systems and partial differential equations (JISD2019)

Activity: Co-Organizer

scope: Internacional

Date: Barcelona, 16-21 June 2019

Título: Colloque International de Dynamique Hamiltonienne

Activity: Scientific Committee

scope: Internacional

Date: París, France, 13-13 June 2020

Título: 18th workshop on interactions between dynamical systems and partial differential equations (JISD2020)

Activity: Co-Organizer

scope: Internacional

Date: Barcelona, June 29-July 3 2020

Título: Special session: Hamiltonian Systems from real world models. The 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications

Activity: Organizing Committee

scope: International

Date: Atlanta, 5-9 June, 2020

Leadership

Research programs, plans and actions

Title: Programa de Doctorado de matemàtica Aplicada, UPC

Activity: Coordinator

Date: 2004-2007

Title: Comisión para la elaboración del Màster de Matemàtica Aplicada de la UPC

Activity: President

Date: 2004-2005

Title: Màster de Matemàtica Aplicada de la UPC

Activity: Director

Date: 2006-2007

Title: Societat Catalana de Matemàtiques

Activity: Treasurer

Date: 2007-2011

Title: Comisión de Doctorado de la Universitat Politècnica de Catalunya

Activity: Member

Date: 2007-2009

Title: Departament de Matemàtica Aplicada I (UPC)

Activity: Director

Date: 2009-2012

Title: Comisión de Investigación de la Universitat Politècnica de Catalunya

Activity: Member

Date: 2010-2012

Title: Comisión de Economía e infraestructuras de la Universitat Politècnica de Catalunya

Activity: Member

Date: 2010-2012

Title: Consell de Govern de la Universitat Politècnica de Catalunya

Activity: Member

Date: 2010-2012

Title: Comité de Selecció i d'Avaluació del Personal Docent i Investigador de la UPC (CSAPDIU)

Activity: Member

Date: 2013-2017

Title: Scientific committee of the BGSM

Activity: Member

Date: 2013-2016

Title: Committee of the "Premi Evariste Galois"

Activity: President

Date: 2016

Title: Committee of the "Premio Antonio Valle al Joven investigador"

Activity: Member

Date: 2017

Title: Red DANCE (<http://www.dance-net.org/>)

Activity: Coordinator

Date: 2014-2017

Title: Scientific committee of the Catalan Mathematical Society

Activity: Member

Date: 2016–

Title: Comité de Selecció i d'Avaluació del Personal Docent i Investigador de la UPC (CSAPDIU)

Activity: President

Date: 2016-2017

Title: Committee of the "Premio Antonio Valle al Joven investigador"

Activity: President

Date: 2018-2019

Title: Committe of the "premi Ferran Sunyer i Balaguer 2019", Institut d'Estudis Catalans

Activity: member

Date: 2019-

Title: Committee of the "Premi Emmy Noether"

Activity: President

Date: 2019

Other activities

Awards and Prizes

- Barcelona Dynamical Systems Prize 2015, for the paper:
Oscillatory motions for the restricted planar circular three body problem.
M. Guàrdia, P. Martín, T. M. Seara.
Inventiones Mathematicae. 203, 417-492, 2016. DOI: 10.1007/s00222-015-0591-y, 2015.
- Eisenbud Professor position at MSRI: August 13 to December 15, 2018
- Icrea Academia Award 2019-2024

Actual PhD students

Jaime Paradela Díaz.
Instabilities in Hamiltonian Systems and celestial mechanics
Roman Moreno González
The role of resonances in Arnold diffusion
José Lamas Rodríguez
Collisions in the three body problem

Editor of the journals:

- Nonlinearity
- Siam Journal of Applied Dynamical Systems (SIADS)
- SEMA-SIMAI Springer series.
- Nonlinear Differential Equations and Applications (NoDEA) since 2018

Research evaluation committees

ANEP (Agencia Nacional de Evaluación y prospectiva. 2010)
AGAUR (Agència de Gestió d'Ajuts Universitaris i de Recerca). 2011
Proyectos de Investigación de la Dirección General de Investigación y Gestión del Plan Nacional de I+D+i
Ministerio de Ciencia e Innovación. 2011
EPSRC, Research Councils UK: Excellence with Impact
The Netherlands Organisation for Scientific Research (NWO): Research grants to stimulate most promising research.
Comité Asesor de la Comisión Nacional Evaluadora de la Actividad Investigadora (CNEAI) de Matemáticas y física. January 2012- January 2014.
ANECA: Comisión de acreditación nacional para el acceso al Cuerpo de Catedráticos de Universidad (prog. ACADEMIA). January 2013-December 2016
ACPUA - Agencia de Calidad y Prospectiva Universitaria de Aragón
Agencia de Calidad del Sistema Universitario Vasco (UNIBASQ): Comité de acreditación de Profesorado de Ciencias Experimentales. From December 2016.
Comisión de evaluación de proyectos del plan nacional MTM: retos y excelencia, 2017

Research Accreditations

Acreditació de Recerca Avançada de AQU Catalunya, February 2007.

Habilitación al cuerpo de catedráticos de universidad, May 2007.

Preprints

Juliana Larrosa, Marco A. Teixeira, Tere M-Seara

Generic behavior of a piecewise smooth vector field with non-smooth switching surface

Preprint:

<https://arxiv.org/find/all/1/all:+larrosa/0/1/0/all/0/1>

Douglas Novaes, Tere M-Seara, Marco Teixeira, Iris Zeli

On bifurcations from typical cycles in nonsmooth dynamical systems

Preprint:

<https://arxiv.org/abs/1910.01954>

Invited Advanced courses

- Curso de Introducción a los sistemas dinámicos y a la teoría de perturbaciones. *Primeras Jornadas de Introducción a los Sistemas Dinámicos*

(<http://www.ma1.upc.edu/recerca/seminaris/JISD2002/indexjisd2002.html>).

Universitat Politècnica de Catalunya. June 2002.

- Introducción a la Resumación de Borel y a la Teoría de la Resurgencia. **Tutorial course (6 hours)** at *Primera escuela de verano de la escuela de matemáticas*.

Universidad Sergio Arboleda. Bogotá, Colombia. August 2005.

- Resurgence and exponentially small Phenomena. **Tutorial (4.5 horas)** at *Long Time Semiclassical Evolution*

(http://www.mat.univie.ac.at/wpi/theme_view.php?id_theme=14)

Institut Wolfgang Pauli, Vienna. January de 2007.

- On generic bifurcations in planar Filippov Systems. **Doc course (3h) IMUS 2012.**

(<http://www.imus.us.es/DC/2012sBPLS/php/index.php>).

Escuela Técnica Superior de Ingeniería de Sevilla (SPAIN). January- February 2012.

- Exponentially small phenomena and resurgence. **Tutorial course (8 hours) CIMPA-UNESCO-MESR-MINECO-COLOMBIA research school: Differential Galois Theory and Multisummability.**

Universidad del Norte. Barranquilla (Colombia), January 13-26, 2013.

- Instabilities in the three body problem through geometric methods. **Tutorial course (8 hours)**

CIMPA research school: Hamiltonian and Lagrangian Dynamics.

Salto, Uruguay, 10 - 19 March 2015.

- Arnold diffusion: old and new geometric methods. **Tutorial course (4 hours)**

Advanced School: Stable and Chaotic Motions in the Planetary Problem

10-15 June, 2018, Astrophysical Observatory of Asiago, Asiago.

- Invariant manifolds, splitting of separatrices and exponentially small phenomena. **Tutorial course (6 hours)**

CIMPA research school: Dynamical Systems and Applications: geometrical, topological and numerical aspects.

1-14 July 2018, Institute de Mathematiques et de sciences physiques, Dangbo, Benin.

- Intersection between stable and unstable invariant manifolds. **Tutorial course (6 hours)**

CIMPA research school: Dynamical Systems.

October 25- November 6 2018, Tribhuvan University, Katmandu, Nepal.

- Shilnikov orbits unfolded by Hopf-zero singularities. **Tutorial course (4 hours)**

X Workshop on Dynamical Systems.

July 1-4 2019, Instituto de Ciências Matemáticas e de Computação da Universidade de São Paulo (ICMC/USP), U. Sao carlos, Sao carlos, Brazil.

- Exponentially small splitting of separatrices. **Tutorial course (6 hours)**

Summer school 2019: Multiscale Phenomena in Geometry and Dynamics

July 22-26, 2019, Technical University of Munich, Munich, Germany.

Invited Talks and Seminars

- Exponentially small splitting of separatrices. *UB-UPC seminar.*

Universidad de Barcelona. : February 1994.

- A geometric method to compute the splitting of separatrices. *Dynamics seminar.*

U. Texas at Austin. : March 1997.

- Pertorbacions Singulares: resumació de Borel i una mica de resurgència. *Aula de Sistemes Dinàmics.*

(<http://www.ma1.upc.edu/recerca/seminaris/aula99-00.html>)

Facultat de Matemàtiques i Estadística (UPC). February 2000.

- Complex matching and refined Newton method to study the domain of analyticity of invariant curves.

Mathematical Physics Seminar

(<http://www.math.utexas.edu/cgi-pub/seminar/calendar>).

U. Texas at Austin. April 2000.

- Órbitas de energía no acotada en perturbaciones quasiperiódicas de flujos geodésicos sobre una variedad.

Seminario UB-UPC

(<http://www.maia.ub.es/ssd.00-01.html>).

Universidad de Barcelona. January 2001.

- Diffusion in quasiperiodically perturbed mechanical systems. *Mathematical Physics seminar*

(<http://www.math.utexas.edu/cgi-pub/seminar/calendar>).

U. Texas at Austin. February 2001.

- Curso de Introducción a la teoría de la resurgencia d'Ecalé. Aplicación a algunos problemas de ecuaciones diferenciales. *Seminari de Sistemes Dinàmics de la UAB*

(http://www.gsd.uab.es/seminar_pas).

Centre de Recerca Matemàtica. January de 2002.

- Resurgent solutions to Hamilton-Jacobi equations. *Mathematical Physics Seminar*

(<http://www.math.utexas.edu/cgi-pub/seminar/calendar>).

U. Texas at Austin. April 2002.

- Existencia de difusión en un problema con "gaps". *Seminario UB-UPC*

(<http://www.maia.ub.es/ssd.02-03.html>).

Universidad de Barcelona. December de 2002.

- An introduction to Borel resummation of divergent series and its application to differential equations. *colloquium*

(<http://www.math.utexas.edu/cgi-pub/seminar/calendar>).

U. Texas at Austin. Mars 2003.

- Quantitative surgery on the standard Arnold family (Asymptotic estimates on Herman rings). *Séminaire de l'équipe Astronomie et Systèmes Dynamiques, IMCCE.*

Bureau de longitudes, Paris. October 2003.

- Quantitative surgery: a way to estimate the size of a Herman ring for a complex map. *Mathematical Physics Seminar*

(<http://www.math.utexas.edu/cgi-pub/seminar/calendar>).

U. Texas at Austin. Mars 2004.

- Exponentially small heteroclinic splitting in a family of fields of R^3 . *Séminaire de l'équipe Astronomie et Systèmes Dynamiques, IMCCE*
(<http://www.imcce.fr/page.php?nav=fr/formation/seminaires/index.php>).
Boureau de longitudes, Paris. Mars 2005.
- A geometric method for instability in Hamiltonian systems. *Formal Seminar of Bristol Center for Applied Nonlinear Mathematics*
(<http://www.enm.bris.ac.uk/anm/seminars/diary-summer05.html>).
University of Bristol, UK. June 2005.
- Existence of (microscopic) homoclinic orbits in the bifurcation of a critical point for conservative vector fields. *Mathematical Physics/Working Dynamical systems*
(<http://www.math.utexas.edu/cgi-pub/seminar/calendar>).
U. Texas at Austin. April 2006.
- Heteroclinic breakdown beyond all orders in the Hopf-zero singularity. *Formal Seminar del Bristol Center for Applying Nonlinear Mathematics*.
(<http://www.enm.bris.ac.uk/anm/seminarprogramme.html>)
U. Bristol. October 2006.
- Mechanisms of Instability in Nearly Integrable Hamiltonian Systems. *Mathematical Physics/Working Dynamical systems*.
(<http://www.math.utexas.edu/cgi-pub/seminar/calendar>).
U. Texas at Austin. January 2010.
- Using two scattering maps to increase the angular momentum in the planar restricted 3-body problem. *Thematic Program on Dynamics and Transport in Disordered Systems January - June 2011 (Winter/Spring)*
(<http://www.fields.utoronto.ca/programs/scientific/10-11/disorderedsys/seminars/index.html>)
Fields Institute, May 2011.
- Diffusion in a-priori unstable systems in high dimension. *CDSNS colloquium*.
(<http://www.math.gatech.edu/seminars-colloquia/by-date/2011-W40/September>).
Georgia institute of technology. September 2011.
- Exponentially small heteroclinic splitting in the Hopf-zero singularity. *Séminaire de géométrie Hamiltonienne*.
(<http://www.math.gatech.edu/seminars-colloquia/by-date/2011-W40/September>).
Université Paris VI, Pierre et Marie Curie, Paris December 2012.
- Oscillatory motions and Arnold diffusion in the restricted planar three body problem. *Seminar at Yeshiva U*.
Yeshiva U., April 9, 2014.
- Oscillatory motions and Arnold diffusion in the restricted planar three body problem. *Dynamics Seminar*
Courant Institute, April 11, 2014.
- Oscillatory motions in the restricted planar three body problem. *Mathematics Colloquium*
Uppsala U., May 8, 2015.
- Oscillatory motions in the restricted planar three body problem. *Hausdorff Colloquium*
Hausdorff center for mathematics, November 4, 2015.
- Oscillatory orbits in the restricted planar three body problem
Séminaire Dynamique et Géométrie
9 Février 2016, Laboratoire Dieudonné, Université Nice Sophia Antipolis, Nice
- A General Mechanism of Instability in Hamiltonian Systems
CDSNS Colloquium
Monday, January 30, 2017 - 11:00, Georgia Tech, Atlanta
- Shilnikov bifurcations in the Hopf-zero singularity

CMUP (Center of Mathematics of University of Porto)

Friday, 20 November 2017, Univ. Porto, Porto

- Shilnikov bifurcations in the Hopf-zero singularity

CDSNS Colloquium

February 26, 2018 - 11:00, Georgia Tech, Atlanta

bullet Oscillatory orbits in the planar three body problem for all values of the masses

Hamiltonian Seminar

December 7, 2018, MSRI, Berkeley

- New mechanisms of instability in Hamiltonian systems

CDSNS Colloquium

October 21, 2019 - 11:15, Georgia Tech, Atlanta

- On the breakdown of small amplitude breathers for the reversible Klein-Gordon equation

Mathematical Physics Seminar

December 11, 2019, Yeshiva U., New York

- Mechanism of instability in Hamiltonian Systems: Skipping along a normally hyperbolic invariant manifold

Seminario di Analisi ed Equazioni Differenziali

June 30, 2020, Webminar at U. Rome Tor Vergata

Referee of the journals:

- Acta Mathematica
- Advances of mathematics
- Communications in Mathematical Physics
- Communications in Nonlinear Science and Numerical Simulations
- Discrete and Continuous Dynamical Systems A
- Discrete and Continuous Dynamical Systems B
- Ergodic Theory and Dynamical Systems
- Foundations of Computational Mathematics
- Journal of Dynamics and Differential equations
- Journal of the European Mathematical Society
- Journal of Nonlinear Science
- Journal of Physics A: Mathematical and General
- Mathematical Reviews
- Nonlinearity
- Physica D
- Siam Journal of Applied Dynamical Systems (SIADS)

grants:

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Seminarios para la Formación Integral en Sistemas Dinámicos, dentro del programa de *Ayudas para la Formación Complementaria de Alumnos de Tercer Ciclo y Profesores Universitarios* (Ministerio de Educación, Cultura y Deporte); número de referencia: AFC2001-0432-CO; importe total concedido: 9015,18 euros.

Ajuts per a la organització de congressos de la Universitat Politècnica de Catalunya 2005, for the EMS - SCM Joint Mathematical Weekend. Barcelona, 16-18 de September of 2005.

PhD Committees

- *Contribució a l'estudi de fenòmens homoclinics fent servir desenvolupaments en psi-sèries*. A. Mir Torres. U. de Barcelona. Director: Amadeu Delshams. 1994.
- *Splitting of separatrices for maps*. R. Ramírez Ros. U. de Barcelona. Director: Amadeu Delshams. 1994.
- *Arnold diffusion in perturbations of analytic Hamiltonian systems and symplectic maps*. Pau Martín. U. de Barcelona. Director: Ernest Fontich. 1998.
- *The primitive function of an exact symplectomorphism*. A. Haro Provinciale. U. de Barcelona (Suplente). Director: Carles Simó. 1998.
- *The classical Arnold example of diffusion with two equal parameters*. C. Valls. U. de Barcelona (Suplente). Director: Carles Simó. 1999.
- *Contribution to the study of invariant manifolds and the splitting of separatrices of hyperbolic points*. I. Baldomá. U. de Barcelona. Director: Ernest Fontich. 2001.
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