

Roger Casals Gutiérrez

PERSONAL INFORMATION

Citizenship: Spain
Date of Birth: 18th May 1988
E-mail: casals@ucdavis.edu

RESEARCH INTERESTS Symplectic topology, contact topology, h–principles, flexible–rigid dichotomy, orderability, groups of contactomorphisms, geometric topology, pseudoholomorphic curves.

EMPLOYMENT

University of California, Davis
Department of Mathematics, Davis, US
Assistant Professor (July 2018 – Present)

University College London
Department of Mathematics UCL, London, UK
Assistant Professor (Lecturer in Pure Mathematics),
(September 2017 – June 2018)

Massachusetts Institute of Technology
Department of Mathematics MIT, Massachusetts, US
NSF Research Affiliate (September 2017 – June 2018)
CLE Moore Instructor (June 2015 – August 2017)

Severo Ochoa Postdoctoral Fellow (April – August 2015)
Institute of Mathematics ICMAT–CSIC, Madrid, Spain

SELECTED PUBLICATIONS

Non-simplicity of isocontact embeddings in all higher dimensions,
R. Casals, J. Etnyre,
Geom. Funct. Anal., Volume 30 (2020), 1-33.

Geometric Criteria for Overtwistedness,
R. Casals, E. Murphy and F. Presas,
J. Amer. Math. Soc., Volume 32 (2019) 563-604.

Legendrian Fronts for Affine Varieties,
R. Casals, E. Murphy,
Duke Math. Journal, Volume 168 (2019), 1-136.

Classification of Engel Knots,
R. Casals, A. del Pino,
Math. Ann. Issue 1, Volume 371 (2018) 391-404.

Existence h-principle for Engel structures,
R. Casals, J.L. Pérez, A. del Pino and F. Presas.
Invent. Math., Volume 210, Issue 2, (2017) 417-451.

Almost contact 5-folds are contact,
R. Casals, D. Pancholi, F. Presas,
Annals of Mathematics, Volume 182, Issue 2 (2015) 429-490.

PUBLISHED
ARTICLES (23)

The Legendrian Whitney Trick,
R. Casals, D.M. Pancholi, F. Presas,
Geometry & Topology, to appear.

Lagrangian Skeleta and Plane Curve Singularities,
R. Casals, **J. Fixed Point Theory and App. (Viterbo 60)**, to appear.

Branched covering simply-connected 4-manifolds,
D. Auckly, R. I. Baykur, R. Casals, S. Kolay, T. Lidman, D. Zuddas,
MSP Open Book Series, to appear.

Contact and Symplectic Topology,
R. Casals, **Notices Amer. Math. Soc.**, Volume 68 (2021) 697-706.

Non-simplicity of isocontact embeddings in all higher dimensions,
R. Casals, J. Etnyre,
Geom. Funct. Anal., Volume 30 (2020), 1-33.

Overtwisted Disks and Exotic Symplectic Structures,
R. Casals, **Proc. Amer. Math. Soc.**, Volume 148, (2020) 825-834.

Geometric Criteria for Overtwistedness,
R. Casals, E. Murphy and F. Presas,
J. Amer. Math. Soc., Volume 32 (2019) 563-604.

Legendrian Fronts for Affine Varieties,
R. Casals, E. Murphy,
Duke Math. Journal, Volume 168 (2019), 1-136.

Loose Engel structures,
R. Casals, A. del Pino, F. Presas,
Compositio Mathematica, In Press (2019).

Transverse Universal Links,
R. Casals, J. Etnyre,
Proc. Sympos. Pure Math., Volume 102 (2019).

Differential algebra of cubic planar graphs,
R. Casals, E. Murphy,
Advances in Math. Volume 338 (2018) 401-446.

Classification of Engel Knots,
R. Casals, A. del Pino,
Math. Ann. Issue 1, Volume 371 (2018) 391-404.

Symplectomorphisms of exotic discs,
R. Casals, A. Keating and I. Smith,
J. École Polytechnique, Volume 5 (2018) 289-316.

Existence h-principle for Engel structures,
R. Casals, J.L. Pérez, A. del Pino and F. Presas.
Invent. Math., Volume 210, Issue 2, (2017) 417-451.

Higher Maslov indices,
R. Casals, V.L. Ginzburg and F. Presas,

J. Geom. Phys., Volume 115 (2017) 167-177.

On the strong orderability of overtwisted 3-folds,
R. Casals, F. Presas,
Comment. Math. Helv. Volume 91, Issue 2, (2016), 305-316.

Chern–Weil theory and the group of strict contactomorphisms,
R. Casals, O. Spacil,
Journal of Topology and Analysis, Volume 08, Issue 1 (2016).

Contact topology from the loose viewpoint,
R. Casals, E. Murphy,
Gökova Geom&Top. Volume 22 (2016), 81-115.

Small loops on overtwisted manifolds,
R. Casals, F. Presas, S. Sandon
J. Symp. Geom., Volume 14, Issue 2 (2016).

Almost contact 5-folds are contact,
R. Casals, D. Pancholi, F. Presas,
Annals of Mathematics, Volume 182, Issue 2 (2015) 429-490.

h–principle for 4-dimensional contact foliations,
R. Casals, Á. Pino, F. Presas,
Int. Math. Research Notices, Volume 20 (2015) 176-207.

Contact Blow-up,
R. Casals, D. Pancholi, F. Presas,
Expositiones Mathematicae, Volume 33, Issue 1, (2015) 78–100.

A Remark on the Reeb flow for Spheres,
R. Casals, F. Presas,
J. Symp. Geom., Volume 12, Number 4, (2014) 657–671.

AVAILABLE
PREPRINTS (7)

Positroid Links and Braid varieties,
R. Casals, E. Gorsky, M. Gorsky and J. Simental,
[arXiv:2105.13948](https://arxiv.org/abs/2105.13948) (2021), Submitted.

Braid Loops with infinite monodromy on the Legendrian contact DGA,
R. Casals, L. Ng,
[arXiv:2101.02318](https://arxiv.org/abs/2101.02318) (2021), Submitted.

Dynamical Quantization of Contact Structures,
R. Casals, G. Herczeg, A. Waldron,
[arXiv:2103.16645](https://arxiv.org/abs/2103.16645) (2021), Submitted.

Algebraic Weaves and Braid Varieties,
R. Casals, E. Gorsky, M. Gorsky and J. Simental,
[arXiv:2012.06931](https://arxiv.org/abs/2012.06931) (2020), Submitted.

Legendrian Weaves,
R. Casals, E. Zaslow,
[arXiv:2007.04943](https://arxiv.org/abs/2007.04943) (2020), Submitted.

Sharp Ellipsoid Embeddings and Toric Mutations,
R. Casals, R. Vianna,
arXiv:2004.13232 (2020), Submitted.

Infinitely many Lagrangian fillings,
R. Casals, H. Gao,
arXiv:2001.01334 (2020), Submitted.

AWARDS AND RECOGNITIONS

National Science Foundation CAREER Award,
Project: “Legendrian And Contact Topology in Higher Dimensions”,
Principal Investigator: Roger Casals.
Award Amount: Est. \$450,000.00,
Period: September 2020-July 2025.

2020 Sloan Research Fellow,
Awarding Entity: Alfred P. Sloan Foundation,
Principal Investigator: Roger Casals.
Award Amount: \$75,000.00,
Period: September 2020-September 2022.

National Science Foundation Award,
Project: “Constructions in Higher-Dimensional Contact Topology”,
Principal Investigator: Roger Casals.
Award Amount: \$153,624.00,
Period: June 2016-July 2020.

Starting Grant Fundación BBVA,
Principal Investigator: Roger Casals.
Award Amount: \$40,000.00, starting November 2016.

Research Project MTM2016-79400,
joint with ICMAT Geometry & Topology Research Group,
Department for Universities and Science, Spanish Government,
Award Amount: 61000€, starting January 2017.

Explora Project MTM2015-72876,
joint with ICMAT Geometry & Topology Research Group,
Department for Universities and Science, Spanish Government,
Award Amount: 15000€, starting September 2016.

Vicent Caselles 2016 Award,
Royal Spanish Mathematical Society & Fundación BBVA.

José Luis Rubio de Francia 2015 Award,
Royal Spanish Mathematical Society.

Outstanding Thesis Award 2014-2016,
Red Española de Topología.

Extraordinary Thesis Prize 2014–2015,
Universidad Autónoma de Madrid.

EDUCATION

Institute of Mathematics ICMAT–CSIC

Department of Mathematics UAM, Madrid, Spain
PhD Thesis: Contact fibrations over the 2-disk,
Thesis Period: September 2012 – March 2015,

Stanford University

Stanford Department of Mathematics, California, US
Visiting Professor Y. Eliashberg, Winter-Spring 2014.

Universidad Complutense de Madrid (UCM)

Facultad de Ciencias Matemáticas, Madrid, Spain
Master in Mathematics Research (1st of Class),
Master Period: September 2011 – September 2012

University of California, Berkeley

Department Mathematics, UC Berkeley, California US
Summer Semester 2008

Universitat Politècnica de Catalunya (UPC)

Facultat de Matemàtiques i Estadística (FME), Catalonia, Spain
Degree in Mathematics (2006–2010).

MATHEMATICAL
SERVICE

- I referee and provide quick opinions for the following journals:
Annals of Mathematics, Duke Math. Journal, Geometry & Topology, J. Amer. Math. Soc., J. Differential Geometry, J. École Polytechnique, Selecta Mathematica, and others, such as Advances in Mathematics, Algebraic & Geometric Topology, Bulletin SMF, Commentarii Math. Helvetici, International J. Math., Israel Journal of Math., J. Symplectic Geometry, J. Topology, and Quantum Topology.
- Thesis Advisor of James Hughes at the Department of Mathematics UC Davis. First part of his thesis is in the 2021 article “Weave Realizability for D-type” on (arXiv:2101.10306), which is submitted for publication.
- (2018-2020) Advisor of several Undergraduate Research Projects at UC Davis, including students O. Yau, U. Jaime-Yepez (Winter 2019), W. Xu (Spring 2019), P. Brady (Fall 2019), C. Nguyen, T.D. Oliveira-Smith, A.R. Jajeh, S. Wang, W. Tang, Z. Zhao and J. Shen (Spring 2020).
- Member of the Faculty Representative Committee (FRC) at the Department of Mathematics UC Davis (May 2021–present).
- Reviewer for the Internal Fellowships for the Graduate Studies Faculty Review Committee in Academic Year 2020-21 at UC Davis.
- Krener Assistant Professor (KAP) Search Committee in Academic Years 2019-20 and 2020-21 at UC Davis.
- Organizer of the Geometry&Topology Seminar (Fall 2018), the Quantum Mathematics and Physics Seminar (Winter 2020), and the Algebraic Geometry Seminar (Fall 2020) at UC Davis.
- Organizer of the AiM Square “Legendrian Knots and Cluster Algebras” at the American Institute of Mathematics (June 2021, US).
- Organizer of the Symplectic Techniques Conference (Madrid 2019, Spain), and Scientific Organizer of the Spanish Royal Society Conference (Spain 2019).

- (2017-2018) Advisor of Master Thesis "Lefschetz Fibration for Cuspidal Complements" by Angela Wu (UCL-LSGNT). Advisor of Undergraduate Students at University College of London.
- Scientific Mentor at the NSF funded conference "Symplectic fillings of contact manifolds", celebrated in Truckee in May 2017.
- Organizer of the NSF funded conference "Lefschetz Workshop in Symplectic and Contact Geometry", New Orleans in January 2016.
- (2015-2017) I organized the [Geometry & Topology Seminar](#) at the Department of Mathematics of the Massachusetts Institute of Technology in four consecutive semesters.
- (2015-2017) Advisor of the following Undergraduate Research Projects at MIT with students Laura J. Koemmpel (2nd year, MIT), Adan Medrano (4th year, MIT) and Gregory Parker (4th year, Harvard), and several undergraduate advisees at MIT.

SELECTED
TALKS

2021

Algebraic Geometry Seminar,
Nottingham University, Zoom (05/2021).

Legendrian Knots and Surfaces,
AMS Spring Sectional Meeting, Zoom (04/2021).

Geometry and Topology Seminar,
Michigan State University, Zoom (03/2021).

Legendrians, Cluster algebras, and Mirror symmetry Conference,
IBS Center for Geometry and Physics, Zoom (01/2021).

2020

Geometry and Representation Theory,
University of Vienna, GRT at Home Zoom (12/2020).

Singularity of Plane Curves Seminar,
Singularity Theory Group, Seminar Zoom (11/2020).

Northwestern Geometry and Physics Seminar,
Northwestern University, Seminar Zoom (10/2020).

Western Hemisphere Virtual Symplectic Seminar,
Columbia University, Ellipsoid Day, Symplectic Zoominar (05/2020).

2019

Geometric Methods in Symplectic Topology,
ICMAT, Madrid (12/2019).

Escuela Fico González Acuna de Nudos y 3-Variedades,
CIMAT, Universidad Nacional Autónoma de México (UNAM) (11/2019).

International Conference on Symplectic Topology,
IMPA, Rio de Janeiro (8/2019).

Geometry Topology Seminar,
Georgia Institute of Technology, Atlanta (5/2019).

Northwestern Geometry and Physics Seminar,
Northwestern University, Evanston (5/2019).

Symplectic Geometry Seminar,
Eidgenössische Technische Hochschule (ETH), Zurich (4/2019).

Categorical Symplectic Topology Conference,
Cambridge University, Cambridge UK (3/2019).

Nantes-Orsay Seminar on Symplectic and Contact Geometry,
Université de Nantes, Berkeley (3/2019).

Northern California Symplectic Geometry Seminar,
UC Berkeley, Berkeley (2/2019).

2018

Berkeley Topology Seminar,
UC Berkeley, Berkeley (11/2018).

Conference in honor of Yakov Eliashberg 70,
Asilomar Conference Grounds, Monterey (8/2018).

Symplectic four-manifolds through branched coverings,
American Institute of Mathematics, San Jose (5/2018).

Arborealization of singularities of Lagrangian skeleta,
American Institute of Mathematics, San Jose (3/2018).

Geometry and Topology Seminar,
Rice University, Houston (1/2018).

Geometry and Topology Seminar,
Columbia University, New York (1/2018).

Colloquium Seminar,
University of British Columbia, Vancouver (2/2018).

Geometry and Topology Seminar,
University of Oregon, Eugene (1/2018).

Geometry Seminar,
University of Washington, Seattle (1/2018).

Geometry and Topology Seminar,
University of Georgia, Athens (1/2018).

2017

Embedding Questions in Symplectic Topology,
Tsinghua Sanya International Mathematics Forum, Sanya, China (12/2017).

A_∞ -structures in geometry and representation theory,

Hausdorff Research Institute for Mathematics, Universität Bonn, Germany (12/2017).

Differential Geometry and Topology Seminar,
Cambridge University, Cambridge UK (11/2017).

Northern California Symplectic Geometry Seminar,
Stanford University, Palo Alto (11/2017).

Symplectic Geometry, Gauge Theory, and Categorification Seminar.
Columbia University, New York (11/2017).

Joint Meeting EMS-SCM,
International Center for Mathematical Sciences, ICMS Edinburgh (9/2017).

Third Japanese-Spanish Differential Geometry Meeting,
Consejo Superior de Investigaciones Científicas (9/2017).

Spanish Royal Society Meeting,
Universitat de València (9/2017).

Holomorphic curves and symplectic topology,
Mittag-Leffler Institute, Djursholm (8/2017).

Lecture Series: Distributions and the h-principle,
Universitat de Barcelona (7/2017).

AIM Square “Sheaf Theory and Legendrian Knots”,
American Institute of Mathematics, San José CA (6/2017).

A Celebration of Symplectic Geometry: 15 years of JSG,
Centre of Mathematical Sciences and Applications, Harvard University MA (6/2017).

Symplectic fillings of contact manifolds Conference,
Lake Tahoe Manor, Truckee CA (5/2017)

Geometry & Topology Seminar,
Stony Brook University, New York NY (5/2017)

AIM Workshop on Engel Structures,
American Institute of Mathematics, San José CA (4/2017).

Geometry & Topology Seminar,
University of Massachusetts Amherst, Amherst MA (4/2017).

Geometry & Physics Seminar,
Boston University, Boston MA (4/2017).

Geometry & Topology Seminar,
Georgia Tech, Atlanta GA (3/2017).

Geometry & Topology Seminar,
Boston College, Boston MA (2/2017).

FME-UPC Colloquium,
Universitat Politècnica de Catalunya (2/2017).

Spanish Royal Society Bianual Conference,
Universidad de Zaragoza (1/2017).

American Math. Soc. & Indian Math. Soc. Joint Conference,
Banaras Hindu University, Varanasi (12/2016).

2016

Philadelphia Area Geometry & Topology Seminar,
Bryn Mawr, Philadelphia (9/2016).

Workshop on Legendrian Submanifolds and Generating Families,
Centre Recherche Mathématique, Montréal (6/2016).

Symplectic Techniques in Hamiltonian Dynamics,
ICMAT, Madrid, (06/2016).

Georgia Topology Conference,
University of Georgia, Athens, Georgia, (05/2016).

2016 Spring Lecture Series,
University of Arkansas, Arkansas, (04/2016).

Topological and Quantitative Aspects of Symplectic Manifolds,
(Dusa McDuff Birthday Conference)
Columbia University, New York, (03/2016).

Augmentations and Legendrians,
Institute of Advanced Studies, Princeton, (02/2016).

Lefschetz Fibrations: Rigidity and Flexibility,
Kerlerec Manor, New Orleans, (01/2016).

2015

Legendrian presentation of Weinstein domains, Math. Physics Seminar,
Harvard University, (S.T. Yau, 11/2015).

Legendrian Fronts in Contact Topology, Princeton/IAS Symplectic Geom.,
Institute of Advanced Studies, Princeton (H. Hofer, 11/2015).

Teoría de Morse Convexa, XXII Encuentro de Topología,
Universidad de València (C. Costoya, 10/2015).

Contact topology from the Legendrian viewpoint, Diff. Geometry Sem.,
Cambridge University UK (I. Smith, 10/2015).

h-principles in symplectic topology, XXIV Int. W. Geometry and Physics,
Centro Universitario de la Defensa Zaragoza (M. de León, 09/2015).

Equivalent characterizations of flexibility, h-principle workshop,
Ile de Houat, (V. Colin, 06/2015).

Geometric criteria for overtwistedness, AMS-EMS-SPM Intern. Meeting,
University of Porto, Portugal (M. Abreu, 06/2015).

Negative stabilizations and loose legendrians, Hamiltonian Dynamics Day,
ICMAT, Madrid (F. Presas, 06/2015).

Overtwisted contact manifolds, Columbia Symplectic Geometry Seminar,
Columbia University, New York (A. Keating, 04/2015).

Characterization of flexible contact structures, Topology Seminar,
State University New York, Stony Brook (O. Plamenevskaya, 04/2015).

Lefschetz fibrations d'après Giroux-Pardon, Workshop on Fukaya Categories,
Massachusetts Institute of Technology, Boston (P. Seidel, 03/2015).

Overtwisted contact manifolds, Séminaire Nantes-Orsay Symp. Geometry
Univ. de Nantes, Nantes, (V. Colin, 03/2015).

Geometric criteria for overtwistedness, Symp. and Contact Geom.,
École Normale Supérieure de Lyon, Lyon (E. Giroux, 01/2015).

2014

Equivalent notions of overtwistedness, ICTS Discussion Meeting,
Tata Institute of Fundamental Research, Mumbai (Mahan Mj, 12/2014).

Thick neighbourhoods of contact manifolds, Oberseminar Geometrie,
Universität München, (T. Vogel, 12/2014).

Contact structures on almost contact manifolds, High dim. contact top.,
Alfred Rényi Institute (A. Stipsicz, 11/2014).

Stability of existence h–principle, 3rd Spanish Young Topologists Meeting.
Univ. Santiago, Santiago de Compostela (10/2014).

Flexible phenomena in contact topology, Sémin. Topologie Dynamique.
Univ. Orsay, Paris (R. Leclercq, 10/2014).

Contact fibrations over the 2–disk, Short Communication.
International Congress of Mathematicians, Seoul (08/2014).

Contact structures on 5–folds, Contact Geometry in Dim. Three and Higher.
Univ. College of London, London (06/2014).

On strong orderability, Flexibility in Symplectic Topology and Dynamics,
Lorentz Center, Leiden (06/2014).

Rigidity for positive loops in contact geometry, GESTA Summer School.
ICMAT, Madrid (06/2014).

Mirror Symmetry from the Mediterranean viewpoint, Stanford $S^2 \times S^2$.
Stanford University, US (A. Zamorzaev, 05/2014).

Overtwisted disks and applications, Geometry and Topology Sem.
Massachusetts Institute of Technology, US (E. Murphy, 05/2014).

Lower bounds on the energy of a positive loop, North. Cal. Symp. Geom. Sem.
Stanford University, US (E. Ionel, 05/2014).

Topologically stable distributions, Cartan Seminar.
Stanford University, US (J. Madnick, 03/2014).

Exotic symplectic structures, Seminari de geometria.
Univ. Politècnica de Catalunya, Barcelona (X. Gràcia, 02/2014).

Fibraciones sobre el disco, Seminario de geometría.
Univ. Complutense de Madrid (V. Muñoz, 02/2014).

Contact Fibrations over a 2-Disk, Sémin. de géométrie et dynamique.
UMPA-ENS Lyon (E. Giroux et M. Mazzucchelli, 01/2014).

2013

On the contactomorphism groups of spheres, 2nd Spanish Young Top. Meet.
Univ. Politècnica de Catalunya, Barcelona (12/2014).

Non-trivial homotopy in the contactomorphism groups, Sémin. Top. et Géom.
Univ. Nantes (B. Chantraine, 11/2013)

Contact structures on 5-folds, Sem. Geom. Alg.
Univ. Barcelona (I. Mundet, 10/2013).

Non-trivial homotopy for contact transformations of the sphere,
Geometry and Dynamics of Integrable Systems,
Centre de Recerca Matemàtica, Barcelona (09/2013).

2012

Flexibility of Geometric Structures, Seminario Iniciación a la Investigación.
Univ. Santiago, Santiago de Compostela (H. Barge, 11/2012).

h-Principle for contact 5-folds, Seminario de Geometría.
Universidad Complutense de Madrid (V. Muñoz, 11/2012).

Blow-up constructions in contact topology, Seminario de Geometría.
ICMAT, Madrid (T.L. Gómez, 10/2012).

Construction of contact structures on 5-manifolds, Symplectic Geom.
Stanford University (Y. Eliashberg, 05/2012).

TEACHING EXPERIENCE

Mathematical Quantum Mechanics MAT265 at UC Davis, Fall 2020.

Introduction to Abstract Mathematics MAT108 at UC Davis, Fall 2020.

Euclidean Geometry MAT141 at UC Davis, Winter 2020.

Algebraic Topology II MAT215B at UC Davis, Winter 2020.

Differential Equations MAT22B at UC Davis, Fall 2019.

Combinatorics MAT145 at UC Davis, Winter 2019.

Introduction to Abstract Mathematics MAT108 at UC Davis, Fall 2018.

Representation Theory of Lie groups M206 at University College London, Fall 2017.

Real Analysis 18.100 at MIT, Spring 2017.

Riemann Surfaces 18.116 at MIT, Fall 2016.

Differential Equations 18.03 at MIT, Spring 2016.

Real Analysis 18.100C at MIT, Fall 2015.

Mathematical Appendices [d'après Arnol'd](10 hours)

Research Course for Undergraduates,
ICMAT JAE Intro. School Summer 2014.

Mathematics in the Biology BSc. (35 hours),
Univ. Autónoma de Madrid, Fall 2014.

Morse theory and symplectic topology (10 hours)

Research Course for Undergraduates,
ICMAT JAE Intro. School Summer 2014, Madrid

Mathematics in the Chemistry BSc. (35 hours),
Univ. Autónoma de Madrid, Spring 2013.

Contact and symplectic topology (10 hours).

Univ. Mascara, Argelia, Spring 2013.

Problem Solving in the Mathematics BSc. (40 hours),

Univ. Politècnica de Catalunya,
Academic year 2010–2011.

Problem Solving in the Mathematics BSc. (40 hours),

Univ. Politècnica de Catalunya,
Academic year 2009–2010.

I have also been a **teaching assistant** at Univ. Politècnica de Catalunya in the academic year 2010–2011 for the courses:

- Calculus in one variable (35 hours), Fall 2010.
- Vector Calculus and Differential Forms (35 hours), Fall 2010.
- Real Analysis and Fourier Series (35 hours), Spring 2011.
- Complex Analysis (35 hours), Spring 2011.

FELLOWSHIPS

Internships from **Centro Superior de Investigaciones Científicas**
Instituto de Ciencias Matemáticas (ICMAT), Madrid, Spain.

- JAE Introduction **REU Program 2009**,
Project: Subvarieties of Abelian Varieties over the complex field,
under the supervision of Vicente Muñoz.
- JAE Introduction **REU Program 2010**,
Project: Open books and convex contact structures,
under the supervision of Francisco Presas.
- **Universidad Autónoma de Madrid, Neuroscience Program 2010**
Project: Modeling cortical circuits in working memory systems

under the supervision of Néstor Praga.

Graduate Student Scholarship La Caixa

awarded by *Fundació Obra Social La Caixa*. The program takes place at Universidad Complutense de Madrid during the academic year 2011–2012.

Internship from **Scuola Matematica Interuniversitaria (SMI)**.

Summer Courses 2010 in Perugia.

COLAB Grant awarded by Education State Department of Spain to join a research project in *ma2* at Univ. Politècnica de Catalunya, Fall 2010.

LANGUAGES AND
OTHER ACTIVITIES

- Catalan and Spanish: Native.
French (DELF A1,A2,A3,A4): fluent speaking, reading and writing.
English (FCC): fluent speaking, reading and writing.
- **Conservatori de Música del Liceu**, Barcelona, Spain,
Professional Degree in Classical Music (graduated 2009),
Specialty: Piano, with Professor Alba Ventura.

REFERENCES

Yakov Eliashberg,

HL and CL Ritch Professor,
Stanford University,
450 Serra Mall Bldg. 380,
Stanford CA 94305, USA

Viktor L. Ginzburg,

Professor Dept. of Mathematics,
University of California,
4111 McHenry Bldg. 4124,
Santa Cruz CA 95064, USA

John B. Etnyre,

Professor Dept. of Mathematics,
Georgia Institute of Technology,
686 Cherry Street, School Math.,
Atlanta, GA 30332-0160, USA

Francisco Presas,

Professor of Science CSIC,
Institute of Mathematics,
Campus de Cantoblanco,
Madrid 28049, Spain