

Maria J. ESTEBAN

Born at Alonsotegi (Basque Country) on April 6th, 1956.

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Present and previous positions :

- CNRS Director of research (senior researcher) of *classe exceptionnelle* since 2011 (First class director between 2002 and 2011).
- CNRS Research Director (senior researcher) at C.N.R.S. since October 1991.
- *Chargée de recherche* (junior researcher) at CNRS from October 1981 to September 1991.

Studies and doctoral degrees :

1978 : Spanish "Licenciatura de Matemáticas", (M.A. Level). University of Bilbao.

1979 : French D.E.A. in Numerical Analysis, University Pierre et Marie Curie, Paris.

1981 : French Doctorat of 3^e cycle at the University P. et M. Curie, Paris.

Title : "Problèmes semilinéaires dans des ouverts non bornés".

Advisor : H. Brezis.

1987 : "Doctorat d'Etat" at the University P. et M. Curie, Paris.

Title : "Sur quelques problèmes variationnels et équations aux dérivées partielles non linéaires de la Physique mathématique".

Advisor : P. L. Lions.

Awards and distinctions :

2018 : Invited speaker at ICM 2018 (Rio de Janeiro).

2017 : Corresponding Member of *Academia Cearense de Matemática*.

2017 : Member of the European Academy of Sciences (EURASC).

2017 : Honorary Degree, University of Valencia.

2017 : CAF-Elhuyar "Merezimendu saria" (Merit Prize).

2016 : Honorary Degree, University of the Basque Country.

2016 : SIAM Fellow.

2015 : Member of Jakiunde, Basque Academy of Sciences, Arts and Letters.

2015 : Mary Cartwright Lecture (LMS) 2015.

2015 : Honorary member of RSME (Real Sociedad Matemática Española).

2013-14 : Eisele Stiftung Fellow.

2012 : Chevalière de l'Ordre National du Mérite (Knight of the Merit National Order).

2008 : Conference 'Ladyzhenskaya' at Leipzig University.

2008 : Invited speaker at the European Congress of Mathematics, Amsterdam.

2003 : Plenary speaker at the International Congress of Mathematics Physics (Lisbonne).

Administration and management activities and responsibilities (current or recent) :

2017 : Member of the search committee for the director of INSMI (CNRS).
 2016 - : Member of the Scientific Board of the City of Paris.
 2015-19 : President of ICIAM (International Council for Industrial and Applied Mathematics). President-elect and member and of the executive committee between 2013 and 2015.
 2015 - : Member of the International Advisory Board of Charles University (Prague).
 2014 - : Member of the French delegation at the IMU GA (Gyeongjou).
 2014 - : Member of the Scientific Board of CNRS.
 2013-2016 : Founder and member of the Board of EU-MATHS-IN.
 2013 : Chair of the search committees for the directors of INSMI (CNRS) and AMIES (French agency for industrial mathematics).
 2013 - : Member of the Scientific Board of Institute for Science and Technology, IST-Austria.
 2012 - : President of the Scientific Board of the Basque Center for Applied Mathematics (BCAM), Bilbao.
 2012 - : President of the Scientific Board of IFCAM, a French-Indian center in applied mathematics.
 2010 - : Member of the French delegation at the IMU GA (Bangalore).
 2008-2017 : Member of the Board of the Dauphine Foundation.

Participation in evaluation, expert and hiring committees (current or recent) :

2017 : Member of the jury for the Italian program of excellence centers.
 2017 : SIMAI Young researcher Prize.
 2017 : Evaluation ICREA applications (Catalonia).
 2017, 2015 : Evaluation of several centers for the Severo Ochoa and Maria de Maeztu Spanish excellence programs.
 2014 : President of the ERC (European Research Council) PE1 panel (Advanced grants).
 2012, 2010, 2008 : Member of the ERC (European Research Council) PE1 panel (Advanced grants).
 2013-15 : Member of the Advisory Committee of the Faculty of Mathematics, University of Vienne.
 2013 : Member of the evaluation committee of the Einstein Center in Mathematics in Berlin.
 2013 : Member of the evaluation committee of the Norwegian Research Agency.
 2012-2013 : Member of the "Mathematics and Computer Science" Committee of the ANVUR evaluation of the Italian research.
 2010 : Member of the evaluation committee of Swedish Mathematics between 2002 and 2006.
 2007-2010 : Member of the programme committee of the ECOS-Nord French-Central American scientific exchanges.
 Member of recruiting committees in Mathematics and Mathematical Physics at KTH (Stockholm), University of Oslo, University of Trondheim (2010), Ikerbasque (Bilbao) in 2009, Ecole Polytechnique (Applied Mathematics) (since 2010), University of Aalborg (Danemark) (2012), University of Gotheborg (2017) and University of Munich (2017).

Editorial work (current or recent) :

- Co-editor in chief (with E. Séré) of the *Annales de l'Institut Henri Poincaré - Analyse non-linéaire*.
- Member of the editorial boards of *NoDeA*, of the *Journal de l'Ecole Polytechnique- Mathématiques* and of *MADDMaths*.
- Referee for various mathematical journals (Communications in Partial Differential Equations, Transactions of the AMS, Calculus of Variations, Inventiones Math., Acta Math., Annales de l'Institut Henri Poincaré, Journal of Differential Equations, Nonlinear Analysis T.M.A., Communications on Pure and Applied mathematics, Journal des Mathématiques pures et appliquées, Applicable Analysis, Annales

de l'Institut Fourier, Zeitschrift, Applicable Analysis, Nonlinearity, Archive Rat. Mech. Anal., J. Func. Anal., J. Math. Physics, J. Phys. A, etc.)

Scientific or program committees of conferences, schools and scientific events (current or recent) :

- Member of the program committee of the conference "Analysis of relativistic and non-relativistic models in Quantum Mechanics", Roma (Italy), 14-18 April 2014.
- Member of the program committee of the conferences Second Caucasian Mathematics Conference 2017, RSME 2017, ICMP 2015, 2013 SIAM conference on materials' science, ICIAM 2011, CEDYA 2009, CEDYA 2011, QMath11 (Hradec Kralove, Czech Republic, 2010), Abel Symposium 2010, 10th "Forum des jeunes mathématiciennes" (femmes et maths - Mission pour la place des femmes du CNRS), of the "Euskadi-Kyushu Workshop on Applied Mathematics" (Euskadi-Kyushu 2011), of the "Forum des jeunes mathématiciennes" 2010, EMS-RSME joint Mathematical Weekend in 2011 (Bilbao) and of the International Conference of Women mathematicians (Seoul, 2014).

Organization of conferences, schools and scientific events (current recent) :

- "ICIAM 2014 Scientific Workshop" (Columbus, Ohio, USA, 15-16 May 2014).
- "Consensus Conference" of the Forward Look de l'ESF "Mathematics and industry", Madrid, Avril 2010.
- Workshop "Optimal Constants in the Theory of Sobolev Spaces and PDEs", Oberwolfach (Allemagne), February 2010 (with B. Kawohl and A. Cianchi).
- Mini-symposium SIMAI-SMAI on the modelling of cancer in the Euroscience Open Forum (ESOF 2010), Torino, 2010 (with N. Bellomo).
- Member of the organizing committee of the Transfer and Industrial Mathematics Day of RSME - Santiago de Compostela, Spain.
- Thematic program "Spectral theory of relativistic operators" at the Newton Institute, Cambridge, 2012 (with M. Brown, K. Schmidt and H. Siedentop).
- Thematic quarter "Variational and spectral methods in Quantum Mechanics" at the Institut Henri Poincaré, Paris, 2013 (with M. Lewin).
- Co-organization of the workshops : "Numerical challenges in relativistic quantum mechanics", "Variational and spectral methods in quantum field theory", "Mathematical challenges in Quantum Electrodynamics" (April 2013).
- Co-organization of the workshops : "The mathematics of interacting quantum systems in a random environment", "Mathematical properties of large quantum systems" and "Mathematical and numerical challenges in quantum chemistry" (June 2013).
- Co-organization of a summerschool at CIRM (Marseille) on "Variational & Spectral Methods in Quantum Mechanics", September 2013.

Prize committees (current or recent) :

- 2017-19 : Member of the SIAM Fellows selection committee.
- 2017 : SIMAI (Italy) young researcher prize.
- 2017 : SIAM Reid prize.
- 2016, 2014 : Euskadi Prize.
- 2014 and 2015 : Abel Prize.
- 2015, 2014 : AWM-SIAM Sonia Kovalevsky Lecture prize.
- 2013 : "La recherche" prize.
- 2012 : European prizes of the EMS.
- 2009 : SEMA prize for a young researcher.

2009, 2010 : Audin prize.

2010 : Rubio de Francia prize (RSME).

Participation in funded projects (current or recent) :

2017-2021 : ANR MolQED.

2010-2014 : ANR NONAP.

2009-2012 : MathAmSud project “Nonlinear Analysis and Partial Differential Equations” (NAPDE), with main groups at University Paris-Dauphine, INRIA, Santiago (Chile), IMPA (Brésil) and Buenos Aires (Argentina) .

2004-2009 : ANR ACCQUAREL.

2002-2005 : ECOS-Sud projects “EQUATIONS AUX DERIVEES PARTIELLES DE LA PHYSIQUE MATHEMATIQUE” (Contract ECOS no. C02E0) et “LIMITES SINGULIERES ET EQUATIONS ELLIPTIQUES” (Contract ECOS no. C02E08).

Member of GDRs GREFI-MEFI (2876), AEDP (2434).

Member of the learned societies : SMAI, SIAM, EMS, SEMA, IAMP.

Student advisory work :

- PhD (*co-tutelle* with Patricio Felmer, Universidad de Chile) of Alexander Quaas (2003), currently professor at the Universidad Técnica Federico Santa María, Valparaiso, Chile.
- PhD of Jacques Giacomoni (1997), currently professor at the l’université de Pau.
- PhD of Mohamed Bouguecha (1999), professor at l’university of Tunis (Tunisia).
- Advising several European and non-European post docs. The last one : An Zhang (2015-2016).
- A larger number of master thesis.

Previously :

- President of SMAI (Société de mathématiques appliquées et industrielles (2009-2012)).
- Chair of the E.M.S. (European Mathematical Society) Committee on Applied Mathematics (2012-2013) (vice-chair since 2010).
- Member of the scientific advisory committee of the Ecole Nationale des Ponts et Chaussées.
- Member of the Abel Committee (2014 and 2015).
- Director of CEREMADE (UMR 7534) from July 96 to December 2004.

- Member of the Board of University Paris-Dauphine.
- Member of the scientific and organization committee of ESF Forward Look on “Mathematics and industry”.
- Vice-President of SMAI in charge of external relations, since june 2007 to june 2009.
- Secretary general of SMAI between June 2004 and June 2007.
- Member of the CNRS national committee (Section 01) between September 2004 and June 2008.
- Member of the program committee of the Institut E. Borel (I.H.P.)
- Member of the scientific committee of C.I.R.M.
- Membre du Comité Scientifique du réseau européen HYKE between 2001 and 2004.

- Member and coordinator of an evaluation committee of 4 departments of the Oulu University (Finland) in 2007.
- Member of the “Mathematics panel of the Research Frontiers Programme of Science Foundation Ireland (SFI)” in 2005.
- Member of the grants committee of the spanish ministry of research ant technology.

- Organization (with C. Le Bris and G. Scuseria) of the workshop "Mathematical and Numerical Aspects of Quantum Chemistry Problems", Oberwolfach (Allemagne), October 2006.
- Co-organization of the "Topological and variational methods in P.D.Es. 5-9 December 2005, Guanajuato (Mexico).
- Organization (with A. Ambrosetti, C.A. Stuart and J. Toland) of the Programme (6 months, 2 workshops) of the Bernoulli Center, Lausanne : "Nonlinear Analysis and Applications : Variational Methods and Nonlinear Waves".
- Member of the program committee of the 'Partial Differential Equations : Concentration Phenomena, Phase Transitions and Non-linear Dynamics' which took place in PIMS (Vancouver) during the summer of 2001 (4 workshops) and co-organization of one of the workshops (with P. Rabinowitz).
- Organization (with J. Ball and J. Toland) of a 'ICMS Instructional Course on nonlinear PDE', ICMS, Edinburgh, January 2001.
- Co-organization of the PDE mini-symposium at the first french-canadian conference, Toulouse, July 2004.
- Co-organization (with B. Helffer and T. Ramond) of the 'Fourth european meeting on PDEs and applications to Quantum Mechanics', Paris, January 2000.
- Member of the program committee of the Latin conference on PDEs, Versailles, June 98.
- French coordination of a French-Indian research project 1999 to 2002.
- French coordinator of an ECOS France-Chili project, between 1999 and 2001.
- Participation at the Picasso project no. 07222TG Equations de diffusions non-linéaires et problèmes d'interaction fluide-structures (French-Spanish cooperation).
- Co-PI of the parisian team in the EU TMR project "Partial Differential Equations and Applications to Quantum Mechanics", 1997-2000.

Invited lectures in international conferences :

- July 1981 : "University Basque d'été (U.E.U.)". Pamplona-Iruinea, Spain.
- December 1981 : "Colloque franco-espagnol sur les équations aux dérivées partielles non-linéaires". University Complutense, Madrid.
- July 1983 : "Nonlinear functional analysis and its applications". University of Berkeley.
- December 1985 : "Second Colloque franco-espagnol sur les équations aux dérivées partielles non-linéaires". University Paris-Dauphine.
- September 1986 : "Nonlinear variational problems". Organisé par l'University of Pise at Elba Island.
- December 1986 : "Journées d'analyse non linéaire de Villeteuse". University of Paris Nord.
- July 1987 : "Nonlinear fields". Bielefeld.
- January 1988 : "College on variational problems". International Center of Theoretical Physics, Trieste.
- June 1988 : "Problèmes variationnels". Paris.
- November 1989 : "Seminario de otoño de E.D.P. no lineales". University Autonoma of Madrid.
- December 1989 : "Problèmes variationnels". University of Metz.
- May 1989 : Rencontre franco-Italienne sur "Equations aux dérivées partielles non linéaires", University of Rome 1.
- June 1991 : First European Conference on Elliptic and Parabolic Equations, Pont-à-Mousson.
- October 1992 : Second French-Taiwanese conference on Nonlinear PDEs and Applications, Paris.
- April 1993 : Paris-Pisa-Roma PDE meeting, Paris.
- September 1993 : Exotic applications for kinetic equations. Kaiserslautern, Germany.
- December 1993 : AMS-SMM joint meeting, Merida, Mexico.

- March 1994 : The UAB-GT International conference on Differential equations and Mathematical Physics, Birmingham, Alabama.
- June et juillet 1994 : French-Indian conference on Partial Differential Equations, Bangalore and Pondicherry, India.
- June 1995 : PDE Workshop, Annual meeting of the canadian math society, Toronto.
- August 1995 : Nonlinear PDE and Geometry. I.C.T.P. Trieste.
- July 1996 : Recent Developments in Calculus of Variations. Oberwolfach
- September 1996 : Second Brazilian conference on PDE and Numerical Analysis, Rio de Janeiro.
- December 1996 : Problèmes d'EDP non-linéaires et Théorie de la bifurcation. Oberwolfach
- March 1997 : 1997 GATECH-UAB International conference on differential equations and mathematical physics. Atlanta.
- November 1997 : Second European meeting on Partial differential equations and applications in Quantum Mechanics. Regensburg.
- November 1997 : Journée "Equations aux dérivées partielles non linéaires et applications à l'environnement", Toulouse.
- February 1998 : Workshop on Variational methods and Differential equations of Mathematical Physics, Pisa.
- June 1998 : Conference on Nonlinear Equations and Continuum Mechanics, Minneapolis.
- October 1998 : Conference on Quantum Mechanics and PDE, Regensburg, Germany.
- January 1999 : International school in P.D.E. (Ecole d'été CIMPA). Temuco, Chili.
- February 1999 : Topological and Variational Methods in Nonlinear Analysis, Cuernavaca, Mexico.
- March 1999 : 1999 GATECH-UAB International conference on differential equations and mathematical physics. Birmingham, USA.
- June 1999 : Effets relativistes dans la Chimie et la Physique des éléments lourds. Kassel, Germany.
- July 1999 : ICIAM 99 (The Fourth International Congress on Industrial and Applied Mathematics), Edinburgh, Grande-Bretagne.
- August 1999 : Large Coulomb Systems. Oberwolfach, Germany.
- October 1999 : Calculus of Variations and Partial Differential Equations, Elbea Island, Italy.
- January 2000 : USA-Chili Workshop on nonlinear analysis, Viña del Mar, Chili.
- February 2000 : Variational and Topological Methods in the Study of Nonlinear Phenomena, Pisa, Italy.
- September 2000 : Analysis and spectral theory. "Geometry, Analysis and Mathematical Physics" ESF Conference Series, San Feliu de Guixols, Spain.
- November 2000 : Journées d'E.D.P. non-linéaires, Lyon.
- July 2001 : Workshop in Nonlinear differential equations, Bergamo, Italy.
- August 2001 : Variational methods and PDE, Vancouver, Canada.
- September 2001 : Asymptotic Methods and Applications in Kinetic and Quantum-Kinetic Theory, Granada, Spain.
- Décembre 2001 : French-Chilean Conference on Applied Mathematics, Santiago de Chile.
- March 2002 : Swedish Mathematical Society Day. University of Umeaa.
- March 2002 : Journées EDP d'Orléans.
- April 2002 : Variational and viscosity methods in partial Differential equations, Austin, USA.
- May 2002 : Workshop on nonlinear models and Analysis, Vienna.
- August 2002 : Conférence in nonlinear analysis, Wuhan, China.

August 2002 : ICM2002, Satellite Conference on the Nonlinear Functional Analysis, Taiyuan, China.

September 2002 : Spectral analysis and PDE. Stockholm.

June 2003 : First joint AMS-RMSE meeting, Sevilla.

July 2003 : Plenary talk in the international Congress of Mathematical Physics (ICMP2003), Lisbon.

September 2003 : New Challenges in Applied Mathematics, Castro Urdiales, Spain.

December 2003 : Multiscale problems in quantum mechanics and averaging techniques, Leipzig, Germany.

January 2004 : Ecole EDF-CEA-INRIA sur "Nonlinear Processes in Molecules and Lasers. Theory, Numerics and Applications"

February 2004 : 'Variational Methods and the Nonlinear Schrödinger Equation'. Bernoulli Center, Lausanne, Switzerland.

May 2004 : BIRS Workshop on 'New developments on variational methods and their applications'. Banff, Canada.

June 2004 : WEDP, Campinas, Brazil.

December 2004 : International Workshop on Nonlinear PDEs – Teheran, Iran.

January 2005 : Symposium on Variational Methods and Nonlinear Differential Equations, Rome (Italy).

January 2005 : Fourth Indo-French workshop on Partial Differential Equations and Applications, Bangalore (India).

February 2005 : "Two weeks in Global Analysis", Pisa (Italy).

April 2005 : Workshop on Spectral Theory, Warwick (UK).

April 2005 : Variational methods in nonlinear analysis, Erice (Italy).

June 2005 : Classics in PDE, Stockholm (Sweden).

June 2005 : Global Methods for Nonlinear Differential Equations, Lausanne (Switzerland).

July 2005 : "Taiwan-France Joint Conference on Nonlinear Partial Differential Equations and Related Topics", Taipei (Taiwan).

August 2005 : High dimensional PDEs, Montréal (Quebec).

September 2005 : EMS-SCM Joint Mathematical Weekend, Barcelona.

December 2005 : Topological and variational methods in PDE, Guanajuato (Mexico).

March 2006 : "Analysis & Quantum" 5th Network meeting, Vienna.

June 2006 : "Current trends in Nonlinear Analysis", Otranto (Italy).

July 2006 : First Joint Meeting SIMAI-SMAI-SMF-UMI on "Mathematics and its Applications" July 2006 : VII Girona Seminar "On the nature of the chemical bond"

September 2006 : Workshop on "Nonlinear Differential Equations", Como (Italy)

September 2006 : "Mathematical problems for kinetic equations and applications", Cartagena de Indias (Colombia)

October 2006 : Organization (avec C. Le Bris and G. Scuseria) du workshop "Mathematical and Numerical Aspects of Quantum Chemistry Problems", Oberwolfach (Germany).

March 2007 : "Modélisation, asymptotique, dynamique non-linéaire", Journées du GDR CNRS 2948.

July 2007 : "Des equations aux derivees partielles au calcul scientifique", Congrès en l'honneur de Luc Tartar, Paris.

July 2007 : ICIAM 2007, Minisymposium 'Computational issues in relativistic quantum chemistry', Zürich.

- July 2007 : "VII Conferencia de las Américas en Ecuaciones Diferenciales y Análisis no lineal", Cartagena de Indias, Colombia.
- September 2007 : "10th Quantum Mathematics International Conference", Moeciu (Rumania).
- Décembre 2007 : "Spectral Theory and Partial Differential Equations" Vienna (Autria).
- February 2008 : "Ecuaciones en Derivadas Parciales y Aplicaciones", La Havana (Cuba).
- March 2008 : "Variational Methods for Nonlinear PDE and their Applications", Haifa (Israel).
- May 2008 : Colloque en l'honneur de Mikel Bilbao, Bilbao.
- June 2008 : 2ème Congrès franco-canadien de Mathématiques (session EDP), Montreal (Canada).
- June 2008 : Geometric Analysis, Elasticity and PDE, Edinburgh, Grande Bretagne.
- June 2008 : Equations de la Mécanique des fluides. Analyse, analyse spectrale, méthodes numériques, Paris.
- July 2008 : Spectral and Scattering Theory for Quantum Magnetic Systems, CIRM, Luminy.
- July 2008 : 5ème Congrès Européen de Mathématiques , minisymposium "théorie spectrale", Amsterdam (The Netherlands).
- August 2008 : Workshop on Nonlinear Waves and Hyperbolic Equations, Oslo, Norway.
- December 2008 : Congrès franco-indien de mathématiques, Chennai, India.
- January 2009 : Ecole CIMPA "Développements récents en théorie des EDP elliptiques", Alexandrie, Egypt.
- September 2009 : Mathematics of Complex Quantum Systems, Oberwolfach, Germany.
- September 2009 : Equations aux Dérivées Partielles et Physique Mathématique. Colloque en l'honneur de Bernard Helffer. Orsay.
- September 2009 : International Conference Variational and Topological Methods in Nonlinear Analysis. San Antonio, U.S.A.
- October 2009 : "Loss of compactness in nonlinear problems : new trends and applications", CIRM, Luminy, France.
- October 2009 : "VIII Americas Conference on Differential Equations", Veracruz, Mexico.
- February 2010 : "Complex Quantum Systems", Singapore National University, Singapour.
- July 2010 : 2nd St.Petersburg Conference in Spectral Theory, dedicated to the memory of M.Sh.Birman. St. Petersburg, Russie.
- September-October 2010 : The Abel Symposium 2010, Oslo, Norway.
- October 2010 : Workshop on Variational Methods in Nonlinear Differential Equations, Oaxaca, Mexico.
- January 2011 : Nonlinear Partial Differential Equations, Valparaiso, Chili.
- January 2011 : Density Functional Theory : Fundamentals and Applications in Condensed Matter Physics, Banff (round table coordination).
- April 2011 : Jornada Científica RSME-RSEQ, Matemática y Química, Sevilla, Spain.
- June 2011 : Fronts et EDP non linéaires, Paris
- July 2011 : RSME Conference on Industrial Mathematics and technological transfer, Santiago de Compostela
- September 2011 : Workshop to mark the 80th anniversary of M. Solomyak, Londres
- October 2011 : Plenary talk at the EMS-RSME joint Mathematical Weekend in Bilbao, 7-9 octobre, 2011
- November 2011 : Workshop on Nonlinear Differential Equations, Pienza (Italy).
- January 2012 : Nonlinear functional analysis, Chennai, India.

April 2012 : Spectral days 2012, Munich, Germany.

May 2012 : "International Conference on Partial Differential Equations : Theory, Control and Approximation", Shanghai, China.

June 2012 : "Workshop on Mathematics and Numerical Analysis of Electronic Structure Models", Beijing, China.

July 2012 : "Advances in Mathematical Analysis of Partial Differential Equations", Institut Mittag-Leffler, Stockholm, Sweden.

May 2013, "Worskhop in industrial and applied mathematics", Pekin, China.

May 2013 : "Concentration phenomena and compactness issues in nonlinear PDE", IML, Sweden ?

July 2013 : "Analysis and PDE", Vancouver (Canada).

September 2013 : International Conference on Nonlinear and Multiscale Partial Differential Equations : Theory, Numerics and Applications, Shanghai, Chine.

October 2013 : EDP-Normandie 2013, Caen, France.

January 2014 : Keynote speaker at the opening of the Mathematical Year 2014.

February 2014 : ICMC Summer meeting on differential equations, Sao Carlos (Brazil).

July 2014 : Effective equations in Mathematical Physics, Institut Mittag-Leffler (Sweden).

May 2015 : "Numerical Algebra, Matrix Theory, Differential-Algebraic Equations, and Control Theory", TU Berlin, Berlin (Germany).

June 2015 : Nonlinear Meeting in Turin 2015", Turin, Italy.

June 2015 : "Méthodes variationnelles et topologiques dans l'étude de problèmes non linéaires", University of Besançon, France.

June 2015 : "An afternoon of Mathematics at Tor Vergata with Louis Nirenberg", University of Tor Vergata, Rome, Italy.

July 2015 : "Science in Georgie, perspectives of development and the role of the Humboldt foundation", Tbilissi, Georgia.

July 2015 : "IWOTA 2015", Tbilissi, Georgia.

October 2015 : "Complex Analysis and Differential Equations", St Petersburg (Russia).

December 2015 : First Joint meeting of Sociedade brasileira de Matematica and RSME (Espagne). Fortaleza (Brazil).

January 2016 : "International Conference on the occasion of Silver Jubilee of the Indian Society of Industrial & Applied Mathematics (ISIAM)". Greater Noida, Inde.

March 2016 : "7th Nordic Congress of mathematicians", Stockholm, Suède.

June 2016 : "Achievements and Perspectives in Nonlinear Analysis. A tribute to Donato Fortunato" Bari, Italy.

June 2016 : "Nonlinear Partial Differential Equations and Applications", Paris.

July 2016 : "Non-linear PDEs, mathematical physics, and stochastic analysis", Trondheim (Norway).

August 2016 : Mathematical Analysis for Stability in Nonlinear Dynamics, Sapporo (Japan).

September 2016 : Interactions between Partial Differential Equations & Functional Inequalities, Stockholm (Sweden).

December 2016 : Nonlinear Partial Differential Equations and Mathematical Physics, Sanya (Chine).

December 2016 : Analysis, Probability, and their Applications. Qhyn Nhon (Vietnam).

May 2017 : TWSIAM annual meeting, Taipei (Taiwan)

May 2017 : Meeting of the Catalan, Spanish and Swedish societies, Umea (Sweden).

June 2017 : CEDYA 2017, Cartagena (Spain)

July 2017 : Summer School “Various aspects of mathematical physics”, Saint Petersburg (Russia).

September 2017 : X Workshop on Nonlinear Differential Equations, Brasilia (Brazil).

January 2018 : International Conference in Mathematics “Celebrating Centenary Year of Professor S.S. Shrikhande”, Mumbai (India).

Seminar talks :

1981 : E.N.S. (Paris).

1984 : IMPA (Rio de Janeiro), LCC (Rio de Janeiro), University of Brasilia (Brasilia), MRC (Madison), University of Michigan (Ann Arbor).

1985 : University of Rome I, MRC (Madison), ENS (Paris), University Autonoma of Madrid, Collège de France.

1986 : CMAF (Lisbon), University of Naples.

1987 : University of the Basque Country (Bilbao), University Autonoma of Barcelona, University of Iles Balears (Palma de Majorque), University Paris VI.

1988 : ICTP (Trieste), University of Orléans, University of Rome I, CMAF (Lisbon).

1989 : University of California at Santa Barbara, University du Wisconsin (Madison), Brown University (Providence), Courant Institute (New York).

1990 : Tata Institute (Bangalore), Ecole Polytechnique (Palaiseau), Collège de France, University of Nancy, Heriot-Watt University (Edinburgh), University of Paris-Sud, CMAF (Lisbon). Faculté de Sciences de Tunis, Ecole Polytechnique de Lausanne.

1991 : E. N. S. (Paris), University of Paris-Sud, University of the Basque Country (Bilbao), University Complutense of Madrid, University of Grenade, University of Bonn, Carnegie-Mellon University (Pittsburgh), Brown University (Providence), Courant Institute (New York).

1992 : University of the Basque Country, Bilbao. Academia Sinica, Taipei, Taiwan. University Chiao Tung, Hsinchu, Taiwan. University Cheng Kung, Tainan, Taiwan. University Tsing Hua, Hsinchu, Taiwan. Heriot-Watt University, Edinburgh. IMAG, University of Grenoble 2, Grenoble. CMAF, Lisbon. University of Palma, Spain.

1993 : University Paul Sabatier, Toulouse. Ecole Normale Supérieure de Lyon. University Paris 6. University of the Basque Country, Bilbao. University of Santa Barbara, USA. University of Minneapolis, USA. University of Madison, USA. Faculté de Sciences de Rabat, Maroc. Ecole Normale Supérieure de Cachan. Ecole Normale Supérieure, Paris.

1994 : University Blaise Pascal, Clermont-Ferrand. ETH Zentrum, Zürich. University of Cergy-Pontoise, France. Ecole Polytechnique, Paris. University of Bordeaux 1, University du Pays Basque (Bilbao), Princeton University, University of Naples, University Paris-Dauphine, University d’Orléans.

1995 : Collège de France. University of Vancouver. University of Madison-Wisconsin. Ecole Polytechnique de Lausanne.

1996 : Scuola Normale Superiore di Pise (conference series), University of Toulouse III, University of Lisbon, University of Paris-Sud, Annual congress of the ‘Maths en jeans’ association. University of Campinas (Brazil).

1997 : University Paris-Nord. University of Madison-Wisconsin. Courant Institute, New York.

1998 : University Paris VI. University Claude Bernard (Lyon I). Universidad del Pais Vasco. The Chinese University of Hong Kong. Ecole Normale Supérieure.

1999 : Institut Henri Poincaré, University of Sussex, University d’Oxford, University of Besançon, TU Berlin. University of Wroclaw (Pologne). University of the Beque Country (Bilbao).

2000 : University of Rennes, Technion (Haifa), University Hébraïque de Jérusalem, Polytechnic University of Barcelona. University of Pondicherry. T.I.F.R. Bangalore. University P. et M. Curie. University du Texas at Austin. Ecole Polytechnique de Lausanne, University of the Basque Country (in Physics and Mathematics).

2001 : University of Versailles, University of Grenoble (IMAG), University of Nantes, University of Mainz (Germany), University of Paris VI, Ecole Polytechnique (CMAX), University of the Basque Country, University Paris VII.

2002 : Ecole Polytechnique (Séminaire EDP, Centre de Mathématiques). University of Santa Barbara (USA), Tata Institute (Bangalore, India), University of Pondicherry (India), Académie des Sciences de China (Beijing).

2003 : Séminaire CRESPO (ENSTA et INRIA), University Paris VI, CERMICS (ENPC), UNAM (Mexico), Georgia Tech (Atlanta, US), University du Texas at Austin, Courant Institute (NYU), Ecole Normale de Lyon, CMAF (Lisbon), University of Toulouse III.

2004 : University of Strasbourg, University of Lille.

2005 : University Paris VI, Mathematical Institute (Chennai, India).

2006 : Collège de France; University of Nantes, University of Paris-Dauphine; KTH, Stockholm; University of Bogota, Colombia; University of Copenhagen.

2007 : University of Cergy-Pontoise; Ecole Normale Supérieure de Paris; University of Medellin (Colombia); CPT, Luminy.

2008 : University de Leipzig. University of Minneapolis (2).

2009 : University of Paris-Dauphine. University of Chambéry, University Paris VI, University of Franche-Comté.

2010 : University of Rennes.

2011 : Georgia Tech (Atlanta, USA), BCAM (Bilbao, Pays Basque), Uppsala (Sweden), University Paris-Dauphine, Colloquium Lorrain of Mathematics (Metz), Clermont-Ferrand.

2012 : Nice, IHES-Ecole Polytechnique, Paris-London seminar (Paris), I. Newton Institute (Cambridge, UK), Institute Mittag-Leffler (Sweden), Uppsala University (Sweden), TIFR Center Bangalore (India).

2013 : University Paris-Sud. Presentation FEM 2013 on math jobs outside France. University P. et M. Curie, Laboratoire J.-L. Lions. Institut Fourier, Grenoble. University of Rabat (Morocco).

2014 : University of Munich (Mathematical Physics seminar + Colloquium).

2015 : LMS-Mary Cartwright-Lecture-2015 (LMS, London). University of Nantes. BICMR, Peking University, China. TIFR Centre, Bangalore (India). Université de Krasnoyarsk (Russia).

2016 : UNICAMP, Campinas (Brazil). IMBM, Istanbul (Turkey). University of Vienna (Austria) (colloquium). University P. M. Curie (Paris).

2017 : NCTS Lakeside distinguished lecture, Taipei (Taiwan), University of Valencia (Spain), Chinese Academy of Sciences, Beijing.

2018 : T.I.F.R. Centre (Bombay).

Visits to other universities as invited lecturer and teacher :

1984 : I.M.P.A., Rio de Janeiro (6 months). M.R.C. et University of Wisconsin, Madison (3 months). University du Michigan, Ann Arbor (1 week).

1985 : University of Rome I (1 week). M.R.C. et University du Wisconsin, Madison (2 weeks), University Autonoma of Madrid (1 week).

1986 : C.M.A.F. , Lisbon (1 week). University of Naples (1 week).

1987 : University of the Basque Country, Bilbao (1 week). Centre de recerca, University Autonoma of Barcelona (1 month). University des Iles Baléares, Palma de Majorque (1 week). University of Rome I (1 week).

1988 : C.M.A.F., Lisbon (1 week).

1989 : University of California at Santa Barbara (3 months). Brown University, Providence (1 month). Courant Institute, New York University. (3 weeks).

1990 : Tata Institute, Bangalore (6 weeks). Heriot-Watt University, Edinburgh (1 week). CMAF, Lisbon (1 week). Faculté de Sciences de Tunis (1 week). Ecole Polytechnique de Lausanne (1 week).

1991 : University of the Basque Country (Bilbao) (1 week). University Complutense of Madrid (1 week). University of Grenade (1 week). University of Bonn (1 week). Carnegie-Mellon University, Pittsburgh (2 weeks). Brown University, Providence (2 weeks). Courant Institute, New York (1 week).

1992 : University of the Basque Country (Bilbao) (1 week). University Tsing Hua, Hsinchu, Taiwan (2 weeks). Heriot-Watt University, Edinburgh (1 week). CMAF, Lisbon (1 week). University of Palma, Spain (2 weeks)

1993 : University of Santa Barbara (1 week). University of Minneapolis (1 week). University of Madison (1 week). Faculté de Sciences de Rabat, Maroc (1 week). Universidad Autonoma of Madrid (1 week).

1994 : ETH Zentrum, Zürich (1 week). University of the Basque Country (1 week). Princeton University (1 week). Ecole polytechnique de Lausanne (1 week).

1995 : University of the Basque Country (1 week). Toronto university (2 weeks). University of Madison (1 week). University of Vancouver (1 week).

1996 : Scuola Normale Superiore di Pisa (1 week), University of Lisbon (1 week). UFRJ (Rio de Janeiro) (2 weeks).

1998 : The Chinese University of Hong Kong (1 week).

1999 : Universidad of Chili (1 week), TU Berlin (1 week). University of Wroclaw, Pologne (1 week). University of the Basque Country (1 month).

2000 : Universidad of Chili (1 week). University du Pays Basque (2 months), Polytechnic University of Barcelona (1 week), Hebraic University of Jérusalem et Technion (Haifa) (10 days). T.I.F.R. Bangalore (3 weeks).

2001 : Pacific Institute of Mathematical Sciences, Vancouver, Canada (5 weeks), University of the Basque Country (10 days).

2002 : Federal University of Rio de Janeiro (15 days), Tata Institute, India (1 month), Chinese Academy of Sciences (Beijing) (7 days), University of Wuhan, China (7 days), University of Pays Basque (8 days). University of Milan 2 (1 week).

2003 : UNAM (Mexico) (1 week). Georgia Inst. of Technology (3 weeks). University of Texas (Austin) (1 week). Courant Institute (NYU) (1 week).

2003 : Tata Institute (Bangalore) (10 days).

2005 : Tata Institute (Bangalore) and Mathematical Institute (Chennai) (10 days).

2006 : University Libanaise, Beyrouth (15 days). University du Chili (Santiago) (15 days).

2007 : Georgia Tech, Atlanta (15 days).

2008 : IMA, University of Minneapolis (2 months); Georgia Tech, Atlanta (15 days).

2009 : E. Schrödinger Institute, Vienna (12 days).

2012 : I. Newton Institute, Cambridge, UK (1 month); Institute Mittag-Leffler, Sweden (1 month); TIFR Center, Bangalore, India (15 days). I. Newton Institute, Cambridge, UK (1 month); Institute Mittag-Leffler, Sweden (1 month); TIFR Center, Bangalore,

2014 : Georgia Tech, Atlanta (15 days). Institut Mittag-Leffler, Sweden (15 days). University of Stuttgart, doctoral course (5 days).

2015 : BICMR, Peking University, China (1 week). Siberian Federal University (Krasnoyarsk, Russia) (1 week).

2016 : Institut Mittag-Leffler (Suède) (3 months).

2017 : National Taiwan University (Taipei) (1 week).

List of mathematical publications

- [1] M. J. Esteban. "Espazio topologikoak" (en collaboration, en Basque). Udako Euskal Unibertsitatea, Iruinea, 1978.
- [2] M. J. Esteban. "Neurria eta integrazioa" (en collaboration, en Basque). Udako Euskal Unibertsitatea, Iruinea, 1981.
- [3] M. J. Esteban. "Matematika Hiztegia" (en collaboration, en Basque). U.Z.E.I., 1982.
- [4] M. J. Esteban. Existence d'une infinité d'ondes solitaires pour des équations de champs non linéaires dans le plan. Ann. Fac. Toulouse, II (1980), p. 181-191.
- [5] M. J. Esteban et P.-L. Lions. Non-existence de solutions non-nulles pour des problèmes semi-linéaires dans des ouverts non bornés. CRAS, Série A, **290** (1980), p. 1083-1085.
- [6] M. J. Esteban et P.-L. Lions. Existence and non-existence results for semilinear elliptic problems in unbounded domains. Proc. R.S. Edinburgh, **93 A** (1982), p. 1-12.
- [7] M. J. Esteban. Compactness results and existence of many solutions of nonlinear problems in strip-like domains. Dans "Contributions to Nonlinear partial differential equations", ed. C. Bardos et al. (1983), Ed. Pitman.
- [8] M. J. Esteban et P.-L. Lions. A compactness lemma. Nonlinear Analysis TMA, **7(4)** (1983), p. 381-385.
- [9] M. J. Esteban. Nonlinear elliptic problems in strip-like domains. Symmetry of positive vortex rings. Nonlinear Analysis TMA **7(4)** (1983), p. 365-379.
- [10] M. J. Esteban. Problèmes semilinéaires dans des ouverts non bornés. Thèse 3è cycle (1981), Université Pierre et Marie Curie (Paris 6).
- [11] M. J. Esteban. Multiple solutions of semilinear elliptic problems in a ball. J. Diff. Equations **57(1)** (1985), p. 112-137.
- [12] M. J. Esteban. On periodic solutions of nonlinear parabolic equations. Trans. A.M.S. **293(1)** (1986), p. 171-189.
- [13] M. J. Esteban. A direct variational approach to Skyrme's model for meson fields. Comm. Math. Phys. **105** (1986), p. 571-591.
- [14] M. J. Esteban. An isoperimetric inequality in \mathbf{R}^3 . Anal. non lin. Ann. Inst. H. Poincaré **4(4)** (1987), p. 297-305.
- [15] M. J. Esteban. Existence of symmetric solutions for the Skyrme's problem. Ann. Mat. Pura Appl., IV **147** (1987), p. 187-195.
- [16] M. J. Esteban. A remark on the existence of positive periodic solutions of superlinear parabolic problems. Proc. A. M. S. **102(1)** (1988), p. 131-136.
- [17] M. J. Esteban. Variational approach to the existence of skyrmions. Dans "Contributions to Nonlinear Partial Differential Equations II". ed. J.I. Diaz, P.L. Lions, Pitman, 1987.
- [18] M. J. Esteban et P.-L. Lions. Γ -convergence and the concentration-compactness method for some variational problems with lack of compactness. Ricerche di Matematica **36(1)** (1987), p. 73-101.
- [19] M. J. Esteban et P.-L. Lions. Skyrmions and symmetry. Asymptotic Analysis **1** (1988), p. 187-192.
- [20] M. J. Esteban et P.-L. Lions. Stationary solutions of nonlinear Schrödinger equations with an external magnetic field. Dans "Partial Differential Equations and the Calculus of Variations", vol. 1, ed. Colombini et al., Birkhäuser 1989.
- [21] Th. Cazenave et M. J. Esteban. On the stability of stationary states for nonlinear Schrödinger equations with an external magnetic field. Mat. Aplic. Comput. **7(3)** (1988), p. 155-168.
- [22] M. J. Esteban. Rupture de symétrie pour des problèmes de Neumann sur-linéaires dans des ouverts extérieurs. C.R.A.S. **308**, série I (1989), p. 281-286.

- [23] M. J. Esteban. A new setting for Skyrme's Problem. Dans "Progress in Nonlinear Differential Equations and Their Applications", vol. 4. Ed. Berestycki et al., Birkhäuser 1990.
- [24] V. Coti Zelati et M. J. Esteban. Symmetry breaking and multiple solutions for a Neumann problem in an exterior domain. Proc. Roy. Soc. Edinburgh **116A** (1990), p. 327-339. Ê
- [25] M. J. Esteban et B. Perthame. Solutions globales de l'équation d'Enskog modifiée avec collisions élastiques ou inélastiques. C.R.A.S **309**, série I (1989), p. 897-902. Ê
- [26] M. J. Esteban. Nonsymmetric ground states of symmetric variational problems. Comm. Pure Appl. Math. **44** (1991), p. 259-274.
- [27] M. J. Esteban et B. Perthame. On the modified Enskog equation with elastic and inelastic collisions. Spin models. Anal. nonlinéaire, Ann. Inst. H. Poincaré **8(3-4)** (1991), p. 289-308.
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- [29] M. J. Esteban et S. Müller. Sobolev maps with integer degree and applications to Skyrme's problem. Proc. Roy. Soc. London **A436** (1992), p. 197-201.
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- [35] M. J. Esteban et E. Séré. Stationary states of the nonlinear Dirac equation : a variational approach. Comm. Math. Phys. **171** (1995), p. 323-350.
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