

CURRICULUM VITAE

Xavier Cabré

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Born 18/07/1966
Citizenship Spain

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Research interests

Partial Differential Equations, Nonlinear Analysis, Calculus of Variations

Education

- 09/1984–06/1989 Bachelor in Mathematics, June 1989
Universitat de Barcelona, Spain
- 09/1990–08/1994 **Doctorate Thesis** in Mathematics, May 1994
Courant Institute of Mathematical Sciences,
New York University, USA
Adviser: Professor Louis Nirenberg

Positions

- 09/1994–06/1995 **Postdoctoral Member of the Institute for Advanced Study**,
Princeton, USA
- 01/1996–08/1998 **Postdoctoral Fellow at the Laboratoire d'Analyse Numérique**
(currently Laboratoire Jacques-Louis Lions)
Université Pierre et Marie Curie (Paris VI), France
- 09/1998–09/2003 **Profesor Titular de Universidad**. Area: “Matemática Aplicada”
Associate Professor of Mathematics at the
Universitat Politècnica de Catalunya, Barcelona, Spain
- 09/2001–06/2002 **Harrington Faculty Fellow at**
The University of Texas at Austin, USA
- 09/2002–09/2003 **Tenure Associate Professor** of Mathematics at
The University of Texas at Austin, USA
- From 10/2003 Institució Catalana de Recerca i Estudis Avançats
ICREA Research Professor at the
Universitat Politècnica de Catalunya, Barcelona, Spain
- From 06/2008 **Catedrático de Universidad a Tiempo Parcial** (3 hours)
Universitat Politècnica de Catalunya, Barcelona, Spain

Other Academic Degrees

- 06/1998 “**Habilitation à diriger des recherches**”, Université Paris VI.
Degree authorizing to be Director of Doctorate Thesis in France. Jury: Professors H. Brezis (President), H. Berestycki, F. Bethuel (Referee), M. Esteban (Referee), C. Kenig (Referee), S. Klainerman, Yanyan Li
- 03/2000–03/2004 “**Qualification aux fonctions de Professeur des universités en sections 25 et 26**”. Degree authorizing to apply for Full Professorships in France, in Mathematics and Applied Mathematics
- 06/2007 “Habilitado para acceder a Catedrático de Universidad”. National competition allowing to become Full Professor in Applied Math. in Spain

Prizes and Honors

- 04/1993 Harold Grad Memorial Prize for outstanding performance and promise as a graduate student at Courant Institute, New York University
- 05/1995 **Kurt O. Friedrichs Prize** for excellence of Doctorate Thesis in 1994 at Courant Institute, New York University
- 11/2012 **Fellow of the American Mathematical Society (inaugural class of 2013)** for “outstanding contributions to the creation, exposition, advancement, communication, and utilization of mathematics”

Editorial Boards

- From 06/2014 **Journal of the European Mathematical Society**
- From 11/2002 Publicacions Matemàtiques
- 02/2006–09/2015 Annales de la Faculté des Sciences de Toulouse
- 09/2002–12/2014 Communications on Pure and Applied Analysis
- 05/2006–05/2010 Potential Analysis

Fellowships

- 01/1990–12/1993 Doctorate Fellowship of the Government of Spain
- 12/1993–07/1994 Alfred P. Sloan Doctoral Dissertation Fellowship
- 09/1995–07/1996 Postdoctoral holder of a European Union TMR Network Fellowship at the Scuola Normale di Pisa (Italy) and at the Laboratoire d’Analyse Numérique (Université Paris VI, France)
- 09/1996–08/1998 Postdoctoral holder of a European Union Individual Fellowship at the Laboratoire d’Analyse Numérique (currently Laboratoire Jacques-Louis Lions, Université Paris VI, France), directed by H. Berestycki
- 09/2001–06/2002 Harrington Faculty Fellow, The University of Texas at Austin, USA

Visiting Professorships

05/2000	“Professeur invité” for one month at Ceremade, Université Paris-Dauphine, France
06/2000	“Professeur invité” for one month at Université Cergy-Pontoise, France
02/2004	“Professeur invité” for one month at the Laboratoire Jacques-Louis Lions , Université Paris VI, France
09/2006	“Professeur invité” for one month at Laboratoire MIP, Toulouse , Université Paul Sabatier, France
10/2006	Visiting Professorship for one month at the University of Chicago , Department of Mathematics, USA
06-07/2011	“Professeur invité” for one month at the Laboratoire de Math. R. Salem, Rouen, France
09-10/2013	Visiting Professorship for two months at the Centre d’analyse et de mathématique sociales. EHESS - École des Hautes Études en Sciences Sociales, Paris, France
10/2014	J.T. Oden Faculty Fellow for one month at UT , The University of Texas at Austin, Texas, USA

Research Contracts and Grants

1998–2002: “Nonlinear parabolic partial differential equations: methods and applications”. European Union TMR Contract ERBFMRX-CT98-0201. Coordinator: Alberto Tesi (Roma 1). Amount to the UPC (X. Cabré): 33.315 EUR

12/1999–12/2002: “Ecuaciones en derivadas parciales: problemas de evolución, problemas geométricos y aplicaciones”. Spain MEC project DGESIC PB98-0932-C02. Main researcher: J. Solà-Morales. Number of participating researchers: 8. Amount: 27.108 EUR

12/2000–12/2003: “EDPs geométricas: análisis de imágenes y propiedades de simetría”. Spain DGI MCYT project BFM2000-0962-C02-02. **Main researcher: X. Cabré.** Number of participating researchers: 2. Amount: 10.120 EUR

10/2002–10/2005: “Ecuaciones en derivadas parciales: problemas de evolución, problemas geométricos, modelización y aplicaciones”. Spain MCYT project DGI MCYT BFM2002-04613-C03-01. Main researcher: J. Solà-Morales. Number of participating researchers: 12. Amount: 46.920 EUR

2002–2006: “Nonlinear partial differential equations describing front propagation and other singular phenomena”. European Union Contract HPRN-CT-2002-00274. Coordinator: Michiel Bertsch (Roma). Amount for the Spanish group: 156.000 EUR

2003–2005: “Red Temática: Análisis y resolución de problemas con origen físico, biológico y geométrico modelados por ecuaciones en derivadas parciales”. Catalan project DURSI, Generalitat de Catalunya, 2003/XT/00002. Main researcher: J. Solà-Morales. Number of participating researchers: 30. Amount: 6.200 EUR

06/2004–06/2009: “Global and geometrical aspects of nonlinear partial differential equations”. **European Science Foundation PESC Programme “Global”.** **Coordinator: H. Shahgholian (Stockholm).** **Spanish member of the Steering Committee: J.L. Vázquez (up to 07/2006) and X. Cabré (from 07/2006).** **10 participating countries. Amount: 480.437 EUR**

10/2005–10/2008: “Ecuaciones en derivadas parciales y aplicaciones: problemas de evolución y de reacción-difusión”. **Spain MEC project MTM2005-07660-C02-01.**

Main researcher: X. Cabré. Number of participating researchers: 13. Amount: 104.482 EUR

From 10/2005: “Equacions en derivades parcials”. Catalan project 2005SGR 00138. “Grup Consolidat de la Generalitat de Catalunya”. 13 participating researchers. Amount: 0

2006–07: “Red de ecuaciones elípticas y parabólicas no lineales”. Spain MEC “Red temática” MTM2005-24578-E. Main researcher: I. Peral (UAM, Madrid). Number of participating institutions: 8. Amount: 18.000 EUR

01/2009–12/2011: “Ecuaciones en derivadas parciales: análisis y aplicaciones”. **Spain MICINN project MTM2008-06349-C03-01. Main researcher: X. Cabré. Number of participating researchers: 15. Amount: 250.228 EUR**

10/2009–12/2013: “Equacions Diferencials en Derivades Parcial i Apliacions”. “Generalitat de Catalunya”. **2009SGR 345, Grups de Recerca Consolidats. Main researcher: J.A. Carrillo (coordinator); X. Cabré (UPC manager). Number of participating researchers: 28. Amount: 83.200 EUR**

01/2012–12/2015: “Ecuaciones en derivadas parciales: problemas de reacción-difusión y problemas geométricos”. **Spain MICINN project MTM2011-27739-C04-01. Main researcher: X. Cabré. Number of participating researchers: 14. Amount: 192.995 EUR**

01/2015–12/2017: “Ecuaciones en derivadas parciales: problemas de reacción-difusión, integro-diferenciales y geométricos”. **Spain MINECO project MTM2014-52402-C3-1-P. Main researcher: X. Cabré. Number of participating researchers: 15. Amount: 95.711 EUR**

07/2015–06/2019: “Investigador garante” (among other five researchers from universities in Barcelona) for the **Unidad de Excelencia María de Maeztu 2014** (MDM-2014-0445) given to the “Barcelona Graduate School of Mathematics” (**BGSMath**), 2.000.000 EUR

Publications: Books

[1] L.A. Caffarelli, X. Cabré. *Fully Nonlinear Elliptic Equations*, Colloquium Publications 43, American Mathematical Society, Providence, RI, 1995.

Publications: Articles

[2] X. Cabré. *On the Alexandroff-Bakelman-Pucci estimate and the reversed Hölder inequality for solutions of elliptic and parabolic equations*, Comm. Pure Applied Mathematics 48 (1995), 539-570.

[3] X. Cabré, L.A. Caffarelli. *Regularity for viscosity solutions of fully nonlinear equations $F(D^2u) = 0$* , Topol. Methods Nonlinear Anal. 6 (1995), 31-48.

[4] X. Cabré, P. Majer. *Truncation of nonlinearities in some supercritical elliptic problems*, C. R. Acad. Sci. Paris Sér. I Math. 322 (1996), 1157-1162.

[5] X. Cabré. *Nondivergent elliptic equations on manifolds with nonnegative curvature*, Comm. Pure Applied Mathematics 50 (1997), 623-665.

- [6] X. Cabré, Y. Martel. *Weak eigenfunctions for the linearization of extremal elliptic problems*, J. Funct. Anal. 156 (1998), 30-56.
- [7] H. Brezis, X. Cabré. *Some simple nonlinear PDE's without solutions*, Boll. Unione Mat. Ital. 1-B (1998), 223-262.
- [8] X. Cabré, S. Chanillo. *Stable solutions of semilinear elliptic problems in convex domains*, Selecta Math. (New Ser.) 4 (1998), 1-10.
- [9] X. Cabré, Y. Martel. *Existence versus instantaneous blow-up for linear heat equations with singular potentials*, C. R. Acad. Sci. Paris Sér. I Math. 329 (1999), 973-978.
- [10] L. Ambrosio, X. Cabré. *Entire solutions of semilinear elliptic equations in R^3 and a conjecture of De Giorgi*, J. American Mathematical Society 13 (2000), 725-739.
- [11] X. Cabré. *Partial differential equations, geometry and stochastic control* (Catalan), Butl. Soc. Catalana Mat. 15 (2000), 7-27.
- [12] G. Alberti, L. Ambrosio, X. Cabré. *On a long-standing conjecture of E. De Giorgi: symmetry in 3D for general nonlinearities and a local minimality property*, Acta Appl. Math. 65 (2001), 9-33.
- [13] X. Cabré. *A conjecture of De Giorgi on symmetry for elliptic equations in R^n* , European Congress of Mathematics, Vol. I (Barcelona, 2000), 259-265, Progr. Math., 201, Birkhäuser, 2001.
- [14] X. Cabré. *Topics in regularity and qualitative properties of solutions of nonlinear elliptic equations*, Discrete Contin. Dyn. Syst. 8 (2002), 331-359.
- [15] X. Cabré, E. Fontich, R. de la Llave. *The parameterization method for invariant manifolds I: manifolds associated to non-resonant subspaces*, Indiana Univ. Math. J. 52 (2003), 283-328.
- [16] X. Cabré, E. Fontich, R. de la Llave. *The parameterization method for invariant manifolds II: regularity with respect to parameters*, Indiana Univ. Math. J. 52 (2003), 329-360.
- [17] X. Cabré, L.A. Caffarelli. *Interior $C^{2,\alpha}$ regularity theory for a class of nonconvex fully nonlinear elliptic equations*, J. Math. Pures Appl. 82 (2003), 573-612.
- [18] X. Cabré, A. Capella. *On the stability of radial solutions of semilinear elliptic equations in all of R^n* , C. R. Acad. Sci. Paris, Ser. I 338 (2004), 769-774.
- [19] X. Cabré, M. Lucia, M. Sanchón. *A mean field equation on a torus: one-dimensional symmetry of solutions*, Comm. Partial Differential Equations 30 (2005), 1315-1330.
- [20] X. Cabré, J. Solà-Morales. *Layer solutions in a half-space for boundary reactions*, Comm. Pure Applied Mathematics 58 (2005), 1678-1732.
- [21] X. Cabré, E. Fontich, R. de la Llave. *The parameterization method for invariant manifolds III: overview and applications*, J. Differential Equations 218 (2005), 444-515.
- [22] X. Cabré, A. Capella. *Regularity of radial minimizers and extremal solutions of semilinear elliptic equations*, J. Functional Analysis 238 (2006), 709-733.
- [23] X. Cabré, M. Sanchón. *Semi-stable and extremal solutions of reaction equations involving the p -Laplacian*, Comm. Pure Applied Analysis 6 (2007), 43-67.

- [24] X. Cabré, A. Capella. *Regularity of minimizers for three elliptic problems: minimal cones, harmonic maps, and semilinear equations*, Pure and Applied Mathematics Quarterly 3 (2007), 801-825.
- [25] X. Cabré. *Extremal solutions and instantaneous complete blow-up for elliptic and parabolic problems*, Contemporary Mathematics Series (2007) 159-174, American Math. Society, in: "Perspectives in Nonlinear Partial Differential Equations: In honor of Haim Brezis".
- [26] X. Cabré. *Elliptic PDE's in Probability and Geometry: symmetry and regularity of solutions*, Discrete Contin. Dyn. Syst. Series A 20 (2008), 425-457.
- [27] X. Cabré, A. Capella, M. Sanchón. *Regularity of radial minimizers of reaction equations involving the p -Laplacian*, Calc. Var. Partial Differential Equations 34 (2009), 475-494.
- [28] X. Cabré, J. Terra. *Saddle-shaped solutions of bistable diffusion equations in all of \mathbb{R}^{2m}* , Journal of the European Mathematical Society 11 (2009), 819-843.
- [29] X. Cabré, J.-M. Roquejoffre. *Front propagation in Fisher-KPP equations with fractional diffusion*, Comptes Rendus Acad. Sci. Paris, Mathématique 347 (2009), 1361-1366.
- [30] X. Cabré, E. Cinti. *Energy estimates and 1-D symmetry for nonlinear equations involving the half-Laplacian*, Discrete and Continuous Dynamical Systems 28 (2010), 1179-1206.
- [31] X. Cabré, J. Tan. *Positive solutions of nonlinear problems involving the square root of the Laplacian*, Advances in Mathematics 224 (2010), 2052-2093.
- [32] X. Cabré. *Regularity of minimizers of semilinear elliptic problems up to dimension 4*, Communications on Pure and Applied Mathematics 63 (2010), 1362-1380.
- [33] X. Cabré, J. Terra. *Qualitative properties of saddle-shaped solutions to bistable diffusion equations*, Communications in Partial Differential Equations 35 (2010), 1923-1957.
- [34] X. Cabré. *Uniqueness and stability of saddle-shaped solutions to the Allen-Cahn equation*, Journal de Mathématiques Pures et Appliquées 98 (2012), 239-256.
- [35] X. Cabré, A.-C. Coulon, J.-M. Roquejoffre. *Propagation in Fisher-KPP type equations with fractional diffusion in periodic media*, C. R. Math. Acad. Sci. Paris 350 (2012), 885-890.
- [36] X. Cabré, X. Ros-Oton, J. Serra. *Euclidean balls solve some isoperimetric problems with nonradial weights*, C. R. Math. Acad. Sci. Paris, Ser. I 350 (2012), 945-947.
- [37] X. Cabré, M. Sanchón. *Geometric-type Sobolev inequalities and applications to the regularity of minimizers*, J. Funct. Analysis 264 (2013), 303-325.
- [38] X. Cabré, X. Ros-Oton. *Regularity of stable solutions up to dimension 7 in domains of double revolution*, Comm. Partial Differential Equations 38 (2013), 135-154.
- [39] X. Cabré, J.-M. Roquejoffre. *The influence of fractional diffusion in Fisher-KPP equations*. Communications in Mathematical Physics 320 (2013), 679-722.
- [40] X. Cabré, X. Ros-Oton. *Sobolev and isoperimetric inequalities with monomial weights*, J. Differential Equations 255 (2013), 4312-4336.
- [41] X. Cabré, Y. Sire. *Nonlinear equations for fractional Laplacians I: Regularity, maximum principles, and Hamiltonian estimates*, Annales Institut Henri Poincaré, Analyse non linéaire 31 (2014), 23-53.

- [42] X. Cabré, E. Cinti. *Sharp energy estimates for nonlinear fractional diffusion equations*, Calc. Var. and PDEs 49 (2014), 233-269.
- [43] X. Cabré, Y. Sire. *Nonlinear equations for fractional Laplacians II: existence, uniqueness, and qualitative properties of solutions*, Transactions of the American Mathematical Society 367 (2015), 911-941.
- [44] X. Cabré, N. Consul, J.V. Mandé. *Traveling wave solutions in a half-space for boundary reactions*, Analysis & PDE 8 (2015), 333-364.
- [45] X. Cabré, M. Sanchón, J. Spruck. *A priori estimates for semistable solutions of semilinear elliptic equations*, Discrete and Continuous Dynamical Systems 36 (2016), 601-609.
- [46] X. Cabré, J. Serra. *An extension problem for sums of fractional Laplacians and 1-D symmetry of phase transitions*, Nonlinear Analysis-Theory Methods & Applications 137 (2016), 246-265.
- [47] X. Cabré, X. Ros-Oton, J. Serra. *Sharp isoperimetric inequalities via the ABP method*, Journal of the European Mathematical Society 18 (2016), 2971-2998.
- [48] X. Cabré, M.M. Fall, J. Solà-Morales, T. Weth. *Curves and surfaces with constant nonlocal mean curvature: meeting Alexandrov and Delaunay*, Journal für die reine und angewandte Mathematik (Crelles Journal). DOI: <https://doi.org/10.1515/crelle-2015-0117>, April 2016.

Publications: Proceedings

- [49] X. Cabré. *Regularity for viscosity solutions of fully nonlinear equations $F(D^2u) = 0$* , Actas XIV CEDYA, Congreso de Ecuaciones Diferenciales y Aplicaciones, Vic 1995, 15-16.
- [50] X. Cabré, L.A. Caffarelli. *Regularity theory for a class of nonconvex fully nonlinear elliptic equations*, Actas del XVII CEDYA, Congress on Differential Equations and Applications, Salamanca 2001, 57-62.
- [51] X. Cabré. *Regularity of radial extremal solutions of semilinear elliptic equations*, Bol. Soc. Esp. Mat. Apl. 34 (2006), 92-98. Proceedings of the “XIX CEDYA”, Universidad Carlos III, Madrid, 2005.
- [52] X. Cabré. *Interior $C^{2,\alpha}$ regularity for fully nonlinear elliptic equations*, RIMS Kôkyûroku 1481 (2006), 79-87, Japan. Proceedings of “Viscosity Solution Theory of Differential Equations and its Developments”, Kyoto University, 2005.

Publications: Reviews

- [53] C. Sormani, X. Cabré. *Recent applications of Nirenberg’s classical ideas*, Notices of the American Mathematical Society 63, no. 2 (2016), 126-128.

Publications: Editor

- [54] *Recent Trends in Partial Differential Equations*. Papers from the UIMP-RSME Lluís A. Santaló Summer School held in Santander, July 12-16, 2004. Contemporary Math. 409, American Mathematical Society and Real Sociedad Matemática Española, 2006. Editors: J.L. Vázquez, X. Cabré, and J.A. Carrillo. Articles authors: L. Ambrosio, L. Desvillettes, H. Koch and E. Zuazua, A. Aftalion, M. Escobedo, S. Mischler.

[55] *Nonlinear Partial Differential Equations*. Papers from the CRM-FISYMAT School “Topics in PDE’s” held in Granada (April 7-11) and Barcelona (May 5-9), 2008. Advanced Courses in Mathematics - CRM Barcelona, Springer 2012.
Editors: Xavier Cabré, Carles Casacuberta, and Juan Soler. Articles authors: L.A. Caffarelli, F. Golse, Y. Guo, C.E. Kenig, A. Vasseur.

Invited Addresses

- 04/1994:** American Mathematical Society 892nd meeting, Brooklyn, New York (USA).
- 09/1995:** XIV CEDYA - IV Congreso de Matemática Aplicada, Vic, Barcelona (Spain).
- 07/1996:** Recent Trends in Elliptic Equations, Universidad Internacional Menéndez Pelayo, Santander (Spain).
- 05/1997:** European Union Workshop on Nonlinear Partial Differential Equations and Related Topics, Institut Henri Poincaré, Paris (France).
- 05/1997:** Workshop on Positive Solutions of Elliptic and Parabolic Differential Equations, Technion, Haifa (Israel).
- 01/1998:** Workshop on Geometric Questions in Partial Differential Equations, Oberwolfach (Germany).
- 02/1998:** European Union Workshop on Variational Methods and PDE’s of Mathematical Physics, Scuola Normale Superiore di Pisa (Italy).
- 07/1998:** Euroconferences in Mathematics, Front Propagation: Theory and Applications, Anogia, Crete (Greece).
- 12/1998:** Differential problems having solutions of infinite energy; week on fully nonlinear PDE’s, Istituto Nazionale di Alta Matematica, Rome (Italy).
- 01/1999:** International School in Partial Differential Equations, Temuco (Chile).
- 05/1999:** **Canum’99: 31ème Congrès d’Analyse Numérique**, Ax-Bonascres, Ariège (France). **Plenary talk.**
- 06/1999:** Nonlinear PDE: an International Conference in memory of S.N. Kruzhkov, Besançon (France). **Plenary talk.**
- 10/1999:** American Mathematical Society 947 th meeting, Providence, R.I. (USA).
- 06/2000:** European TMR Workshop on nonlinear parabolic PDE: methods and applications, Tel Aviv (Israel).
- 07/2000:** II Simposio internacional en ecuaciones no lineales y problemas de frontera libre, Buenos Aires (Argentina).
- 07/2000:** **3rd European Congress of Mathematics**, Barcelona (Spain). **Invited talk.**
- 09/2000:** Singularities in nonlinear parabolic problems, Cortona (Italy).
- 12/2000:** First Joint International Meeting between the American Mathematical Society and the Hong Kong Mathematical Society, Hong-Kong (China).
- 03/2001:** TMR Workshop on Viscosity Solutions and Applications, Palma de Mallorca (Spain).
- 03/2001:** Workshop on Geometric Evolutions and Nonlinear Elliptic Equations, Isaac Newton Institute, Cambridge (England).

05/2001: INDAM-EU TMR Workshop on Singularity in Nonlinear Elliptic Problems, Rome (Italy).

06/2001: Fourth European Conference on Elliptic and Parabolic Problems, Rolduc (Netherlands). Plenary talk.

07/2001: Fabes Lectures 2001, Bologna (Italy).

07/2001: PIMS Thematic Program in Nonlinear PDEs, Vancouver (Canada).

09/2001: **XVII CEDYA, Congreso de Ecuaciones Diferenciales y Aplicaciones**, Salamanca (Spain). **Plenary talk.**

05/2002: Conference on Heat Kernels and Analysis on Manifolds, Institut H. Poincaré, Paris (France).

06/2002: First joint meeting of the AMS and the Unione Matematica Italiana, Pisa (Italy).

07/2002: Conference on Harmonic maps, minimal surfaces and geometric flows, Brest (France).

06/2003: A Workshop in Geometric and Global Properties in PDE with Applications, Stockholm (Sweden).

06/2003: **First joint meeting of the AMS and the Real Sociedad Matemática Española**, Sevilla (Spain). **Plenary talk.**

09/2003: XVIII CEDYA (Congreso de Ecuaciones Diferenciales y Aplicaciones), Tarragona (Spain).

06/2004: **Conference in honor of Haim Brezis, “Nonlinear Analysis”. On the occasion of his 60th birthday. Le Carré des Sciences, Paris.**

09/2004: Fabes Lectures 2004, Bilbao (Spain).

10/2004: Jornada en honor de Soshana Kamin, UAM, Madrid (Spain).

10/2004: Workshop “Global and Geometric Aspects in Nonlinear PDE”, Yerevan (Armenia).

11/2004: Nonlinear PDEs describing Front Propagation and other Singular Phenomena, Lorentz Center, Leiden (Netherlands).

12/2004: Une journée a Marseille, Université de Provence, Marseille (France).

04/2005: International Workshop on Variational Methods in Nonlinear Analysis. Dedicated to Professors Louis Nirenberg and Giovanni Prodi on the occasion of their 80th birthday. Erice, Sicily (Italy).

06/2005: Nonlinear Partial Differential Equations and Applications. Conference in honor of Jim Serrin on the occasion of the awarding of the title of Doctor Honoris Causa of Université François Rabelais de Tours (France).

06/2005: **International Conference on Calculus of Variations and Partial Differential Equations. The Center of Mathematical Sciences at the Zhejiang University.** HangZhou (China). **Plenary talk.**

06/2005: Viscosity Solution Theory of Differential Equations and its Developments. Research Institute of Mathematical Sciences, Kyoto University. Kyoto (Japan).

07/2005: Symposium of Nonlinear Elliptic Equations and Variational Methods. Beijing Normal University. Beijing (China).

07/2005: III International Symposium on Nonlinear PDEs and Free Boundary Problems. Buenos Aires (Argentina).

09/2005: Workshop on “Partial Differential Equations, Optimal Design and Numerics”. Benasque (Spain).

09/2005: XIX CEDYA (Congreso de Ecuaciones Diferenciales y Aplicaciones) and IX Congreso de la Sociedad Española de Matemática Aplicada. Universidad Carlos III de Madrid (Spain). Invited talk.

10/2005: **Workshop on “Recent Results in Nonlinear Elliptic Equations and their Interactions with Geometry”**, Math. Sciences Research Institute MSRI, Berkeley (USA).

03/2006: **Reaction-diffusion and Free Boundary Problems.** Banff International Research Station, **Banff (Canada).** **2 invited conferences.**

06/2006: UAM Spring Concentration Period on PDE, Nonlinear Elliptic Equations and Related Topics. UAM, Madrid (Spain).

06/2006: Euroconferences in Crete: Discontinuous change in behavior issues in partial differential equations. Anogia (Greece).

06/2006: Optimal transport and geometric PDE’s. Nice (France).

06/2006: ESPALIA 2006, “Encuentro España-Italia de EDPs”. Universita di Roma 1, Rome (Italy).

09/2006: Barcelona Analysis Conference. Universitat de Barcelona (Spain).

11/2006: Jornada de Ecuaciones en derivadas parciales. Universitat de Valencia (Spain).

02/2007: Recent Trends in Nonlinear Partial Differential Equations. A celebration of the 60th birthday of Prof. Ireneo Peral. Salamanca (Spain).

03/2007: “Evolución de estructuras geométricas mediante flujos parabólicos e hiperbólicos”. 2 hours of an intensive course FisYmat, Granada (Spain).

04/2007: Workshop on Patterns: Models and Applications, IMUB (Institut de Matemàtica, UB), Barcelona (Spain).

06/2007: Workshop/Summer School in Saariselkä. Qualitative Properties of Solutions to Elliptic and Parabolic Equations, Saariselkä (Finland).

07/2007: **First French-Spanish Mathematical Congress**, Zaragoza (Spain). **Ple-nary talk.**

09/2007: Primer Encuentro de la Red de Ecuaciones Parabólicas y Elípticas No Lineales, San José - Níjar, Almería (Spain).

01/2008: ICMC Summer Meeting on Differential Equations, Universidade de Sao Paulo, Sao Carlos (Brazil).

02/2008: 8th International Conference on Operations Research, Capitolio, Habana (Cuba).

03/2008: Workshop on Variational Methods for Nonlinear PDE and their Applications, Technion, Haifa (Israel).

06/2008: Nolineal 2008. Barcelona (Spain). Plenary talk.

12/2008: “Jornadas de EDPs y Aplicaciones”, Granada (Spain).

02/2009: Congreso de la Real Sociedad Matemática Española, Oviedo (Spain).

03/2009: Aspects géométriques des équations aux dérivées partielles, Marseille (France).

03/2009: IV International Symposium on Nonlinear PDEs & Free Boundary Problems, in honor of Professor Luis Caffarelli. Mar del Plata (Argentina). Plenary talk.

04/2009: Jornada Interconsolider I-math + Nanoselect. Bellaterra, Barcelona (Spain).

05/2009: Indam School on symmetry for elliptic PDEs. Roma (Italy).

05/2009: Nonlinear Partial Differential Equations. An international conference in memoriam Fuentesanta Andreu. Burjassot, Valencia (Spain).

06/2009: The Poetry of Analysis. Conference in honour of Antonio Córdoba on the occasion of his 60th birthday. Madrid (Spain). Plenary talk.

06/2009: Workshop on Non-local Equations. Univ. Carlos III (Leganés), Madrid (Spain). Plenary talk.

12/2009: SIAM Conference on Analysis of Partial Differential Equations. Miami (United States).

12/2009: Journées 40 ans du LJLL. Laboratoire J.L. Lions, Univ. Paris 6. Paris (France).

01/2010: Nonlinear PDE Days. Liouville theorems and applications. Frankfurt-Giessen-Karlsruhe (Germany).

05/2010: Joint SIAM/RSME-SCM-SEMA Meeting and DSPDEs’10, Barcelona (Spain). Plenary talk.

06/2010: Nonlinear Evolution Equations, Palermo (Italy).

04/2011: International Conference on Surface Theory. Sevilla (Spain).

06/2011: Fronts et EDP non linéaires. Colloque en l’honneur de Henri Berestycki. Paris (France). Plenary talk.

07/2011: Geometric properties of solutions of nonlinear PDEs and their applications. Banff (Canada).

08/2011: IV EBED - Brazilian School of Differential Equations. 3 hours mini-course. Joao Pessoa (Brazil).

09/2011: Nonlinear PDEs and Functional Inequalities, Workshop UAM. Madrid (Spain).

09/2011: Recent Trends in Nonlinear PDE. The Graduate Center, CUNY. New York (USA).

01/2012: A week on Fractional Diffusion. Milano (Italy).

03/2012: Trends in Mathematical Analysis. Milano (Italy).

05/2012: Concentration month on nonlinear elliptic PDEs. Chicago (USA).

06/2012: Progress in Nonlinear Partial Differential Equations. Hangzhou (China).

06/2012: New Trends in Nonlinear PDEs. Pisa (Italy).

08/2012: Frontiers of Mathematics and Applications - 2012. Summer Course UIMP. Santander (Spain). Plenary course.

09/2012: ERC Workshop on Geometric Partial Differential Equations. Pisa (Italy).

09/2012: Mostly Maximum Principle. Rome (Italy).

09/2012: Nonlinear PDE's from Geometry and Physics. Rome (Italy).

11/2012: Nonlocal Models and Peridynamics. Berlin (Germany).

01/2013: Congreso de la Real Sociedad Matemática Española 2013. Santiago de Compostela (Spain).

05/2013: Mini-courses and Conference on Nonlinear Elliptic Equations. New Brunswick and New York (USA).

07/2013: Nonlinear Partial Differential Equations. On the occasion of J. Mazón's 60th birthday. Burjassot, Valencia (Spain).

07/2013: Analysis and Partial Differential Equations. Vancouver (Canada).

07/2013: 29 Coloquio Brasileiro de Matematica. IMPA, Rio de Janeiro (Brazil).

09/2013: Journées ERC ReaDi. EHESS Paris (France).

11/2013: Recent developments of nonlinear PDEs. Canberra (Australia).

01/2014: School on Nonlinear Elliptic Problems. Milano (Italy).

05/2014: Geometric Aspects of Semilinear Elliptic and Parabolic Equations (14w5017). Banff (Canada).

07/2014: First Joint International Meeting RSME-SCM-SEMA-SIMAI-UMI. Bilbao (Spain). Plenary talk.

11/2014: Singularities arising in nonlinear problems (SNP2014). Kyoto (Japan).

12/2014: Nonlocal days in Basel. Basel (Switzerland).

05/2015: Louis Nirenberg, 2015 Abel Prize for his contributions to the theory of PDEs. FME-UPC, Barcelona (Spain).

06/2015: Geometric measure theory, optimal mass transportation and PDEs. 4 1/4 hours minicourse. Sant Feliu de Guixols, Barcelona (Spain).

06/2015: An afternoon of Mathematics at Tor Vergata with Louis Nirenberg. Rome (Italy).

07/2015: Math Summer Camp. FME-UPC, Barcelona (Spain).

07/2015: Summer School on Nonlinear PDE's and applications to image analysis. 6h mini-course. CRM Bellaterra (Spain).

08/2015: BIRS Workshop 15w5004 New Trends in Nonlinear Elliptic Equations. Banff (Canada).

09/2015: Workshop on Nonlocal Nonlinear Partial Differential Equations and Applications. Anacapri (Italy).

10/2015: Workshop Analysis in Lyon (France).

11/2015: Acte conjunt Soc Catalana d'Economia i Soc Catalana de Matemàtiques. Institut d'Estudis Catalans, Barcelona (Spain).

- 11/2015:** PDE 2015, Theory and Applications of Partial Differential Equations. Weierstrass Institute, Berlin (Germany).
- 12/2015:** BDSM15, Barcelona Dynamical Systems meeting 2015. UB, Barcelona (Spain).
- 01/2016:** Giornata sulle Equazioni Ellittiche Nonlineari. Perugia (Italy).
- 03/2016:** Kawai Hall inauguration 25 Anniversary, Matsuturu mathematics Kokyu. 6 1/2 hours mini-course. Tohoku University (Japan).
- 05/2016:** Calculus of Variations and Nonlinear Partial Differential Equations week one: minicourses. 5 hours minicourse. Columbia University (USA).
- 05/2016: Calculus of Variations and Nonlinear Partial Differential Equations, week two: conference. Columbia University (USA). Plenary talk.**
- 07/2016:** Novos Talentos Em Matematica. 5 hours mini-course. Gulbenkian Foundation, Lisboa (Portugal).
- 07/2016:** XVII ENEM (Encuentro Nacional de Estudiantes de Matemáticas). UPC, Barcelona (Spain).
- 09/2016: A Mathematical Tribute to Ennio De Giorgi. Centro De Giorgi, Pisa (Italy). Plenary talk.**

More Relevant Invited Talks at Seminars

- 1992 and 1993:** Università di Firenze, Rutgers University, Universitat de Barcelona.
- 1994:** Brown University, University of Pennsylvania, Universidad Complutense de Madrid, Rutgers University, Cornell University, Institute for Advanced Study (Princeton).
- 1995:** University of Chicago, University of California at Berkeley, Università di Bologna, Scuola Normale Superiore di Pisa.
- 1996:** École Normale Supérieure d'Ulm (Paris), Universidad de Granada, ETH Zürich, Rutgers University.
- 1997: Collège de France (Paris),** Laboratoire d'Analyse Numérique (Université Paris VI), Universidad Autónoma de Madrid, École Normale Supérieure d'Ulm (Paris), Université de Cergy-Pontoise, Université de Versailles, Université de Picardie Jules Verne - Amiens, Laboratoire d'Analyse Numérique (Université Paris VI).
- 1998:** Università di Bologna, University of Bath, Universitat Autònoma de Barcelona, Universitat Politècnica de Catalunya (Barcelona).
- 1999:** University of Texas at Austin, Laboratoire d'Analyse Numérique (Université Paris VI), CMLA École Normale Sup. de Cachan (Paris), Societat Catalana de Matemàtiques, Universitat Autònoma de Barcelona, Max-Planck Institute for Mathematics in the Sciences (Leipzig), Rutgers University, Universidad del País Vasco (Bilbao).
- 2000:** Università di Firenze, University of Texas at Austin, Università di Bologna, Laboratoire d'Analyse Numérique (Université Paris VI), Université de Cergy-Pontoise, Université d'Orléans, Université de Picardie Jules Verne - Amiens, Université de Tours.
- 2001:** The University of Texas at Austin, Courant Institute (New York University), Rutgers University, Universitat de Barcelona, Laboratoire d'Analyse Numérique (Université Paris VI), Math. Colloquium at Courant Institute (New York University).

2002: Laboratoire d'Analyse Numérique (Université Paris VI), CEREMADE Université Paris IX-Dauphine, University of Chicago, Houston University, Rice University.

2003: Centro Ricerca Matematica Ennio De Giorgi (Pisa).

2004: Analyse non linéaire (Laboratoire Jacques-Louis Lions, Université Paris VI), Université Paris Sud-Orsay, **Le Séminaire du Laboratoire Jacques-Louis Lions (Université Paris VI)**, Laboratoire d'Analyse et de Mathématiques Appliquées (Université Paris 12), Fis y Mat (Doctorate program at the Universidad de Granada), Universidad Complutense de Madrid, The University of Texas at Austin, Seminario de Probabilidades (Universitat de Barcelona), Séminaire Nord-Sud (Université de Provence, Marseille), Séminaire d'Analyse Appliquée (Centre de Mathématiques et Informatique, Université de Provence, Marseille).

2005: Col.loqui de la Facultat de Matemàtiques (Universitat de Barcelona), Universitat Autònoma de Barcelona, Institute of Applied Mathematics (Academia Sinica Beijing, China).

2006: Analyse non linéaire (Laboratoire J.L. Lions, Université Paris VI), Laboratoire MIP (Université Paul Sabatier, Toulouse), PDE seminar of the Department of Mathematics (**University of Chicago**), Math. Dep. Analysis seminar at The University of Texas at Austin, Col.loqui del Dep. Matemàtica Aplicada 1 (Universitat Politècnica de Catalunya), Colloquium de l'Institut de Mathématiques de Toulouse.

2007: Séminaire MIP (Univ. Paul-Sabatier, Toulouse), Analysis Seminar (Univ. Texas, Austin, United States), Courant Institut (New York University, United States), **Mathematics Dep. Colloquium at Rutgers University (New Brunswick, United States)**.

2008: Università Politecnica delle Marche (Ancona, Italy), Università Tor Vergata Roma 2 (Roma, Italy).

2009: Analyse Non Lineaire (Laboratoire Jacques-Louis Lions, Univ. Paris VI, France), Coloquio del Instituto de Matemáticas de la Universidad Nacional Autónoma de México.

2010: Courant Institute (New York University, United States), **Princeton University (United States)**, Analysis Seminar (Warwick Mathematics Institute, UK).

2011: Colloquia Universidad Carlos III de Madrid, Colloquium du Laboratoire de Math. R. Salem (Rouen, France), Columbia University (New York), Courant Institute (New York University).

2013: Institut Henri Poincaré (Paris).

2014: The University of Tokyo (Japan).

2015: Politecnico di Bari, Complutense Madrid, Weierstrass Institute (Berlin).

2016: Instituto Superior Técnico (Lisboa), ETH Zurich, Università degli Studi di Napoli Federico II.

Direction of Doctoral Thesis

16/09/2005: Antonio Capella, *Stable solutions of nonlinear elliptic equations: qualitative and regularity properties*. Universitat Politècnica de Catalunya (Barcelona, Spain).

18/06/2008: Joana Terra, *Nonlinear elliptic PDEs: stability properties of saddle-shaped and minimal solutions*. Universitat Politècnica de Catalunya (Barcelona, Spain).

03/07/2008: Jिंगgang Tan, *Nonlinear analysis for an elastic lattice and a fractional Laplacian*. Universitat Politècnica de Catalunya and Universidad de Chile (codirected with Prof. Patricio Felmer).

05/07/2010: Eleonora Cinti, *Bistable elliptic equations with fractional diffusion*. Universitat Politècnica de Catalunya and Università di Bologna (codirected with Prof. Bruno Franchi).

17/06/2014: Joaquim Serra, *Symmetry and regularity for local and nonlocal elliptic problems*. Universitat Politècnica de Catalunya (Barcelona, Spain).

19/06/2014 Xavier Ros-Oton, *Regularity for local and nonlocal elliptic problems*. Universitat Politècnica de Catalunya (Barcelona, Spain).

07/07/2014 Anne-Charline Coulon, *Front propagation under fractional diffusions*. Universitat Politècnica de Catalunya and Université Paul Sabatier (Toulouse) (codirected with Prof. Jean-Michel Roquejoffre).

Activities as Organizer

21-23/05/1997: Organizing Committee (jointly with A. Ambrosetti, H. Brezis, I. Ekeland and M. Esteban). European Union Workshop on Nonlinear Partial Differential Equations and Related Topics, Institut Henri Poincaré, Paris (France).

1997-98: Weekly seminar “Analyse non linéaire”. Lab. d’Analyse Numérique, Université Paris VI. Organized jointly with H. Brezis, T. Ca-zenave and S. Klainerman.

From 1998: Weekly seminar “EDP y aplicaciones”. Universitat Politècnica de Catalunya (Barcelona). Organized jointly with J. Solà-Morales, A. Calsina, J.A. Carrillo, A. Avinyó, and N. Consul.

17-20/04/2002: Organizer (jointly with Luis Caffarelli) of the Workshop on Variational and Viscosity Methods in Partial Differential Equations. The University of Texas at Austin.

12-16/07/2004: Organizing Committee (jointly with Juan Luis Vázquez and José Antonio Carrillo). **UIMP - RSME Santaló Summer School** “Recent Trends in Partial Differential Equations”, Universidad Internacional Menéndez Pelayo, Santander, Spain.

31/01–04/02/2005: Organizing Committee (jointly with Juan Luis Vázquez). Special session “Interacción entre ecuaciones elípticas no lineales, parabólicas y cinéticas” in the “Primer Congreso Conjunto de Matemáticas RSME-SCM-SEIO-SEMA”, MAT.ES 2005, Universidad de Valencia (Spain).

15/07–16/12/2005: Organizing Committee (jointly with L. Caffarelli, L.C. Evans, C. Gutiérrez, L. Wang, and P. Yang). “Nonlinear Elliptic Equations and Its Applications” **One semester Program at the Mathematical Sciences Research Institute at Berkeley, USA.**

15/09/2005: Organizer (jointly with A. Avinyó, J. Solà-Morales, V. Caselles, and J.A. Carrillo). Segona trobada d'equacions en derivades parcials i aplicacions. Facultat de Nàutica, Universitat Politècnica de Catalunya, Barcelona (Spain).

16-18/09/2005: Organizing Committee (jointly with M. Sanz, J. Amorós, J.A. Carrillo, C. Casacuberta, D. Herbera, T.M. Seara, R.M. Miró-Roig, and M. Noy). **EMS-SCM** (European Math. Soc. and Soc. Catalana Matemàtiques) **Joint Mathematical Weekend**. Universitat de Barcelona (Spain).

5-7/04/2006: Organizing Committee (jointly with F. Quirós, H. Shahgholian, and J.L. Vázquez). **SPRING WORKSHOP** Nonlinear Diffusion Equations and related PDEs. Universidad Autónoma de Madrid (Spain).

8/05–15/06/2006: Organizing Committee (jointly with J. García Azorero, I. Peral, and J.D. Rossi). Spring concentration period on PDE's 2006. Universidad Autónoma de Madrid (Spain).

19-21/06/2006: Organizing Committee (jointly with L. Boccardo). **ESPALIA 2006** (“Encuentro España-Italia de EDPs”). Università di Roma 1 (Italy).

10-14/07/2006: Organizing Committee (jointly with A. Delshams and T.M. Seara) of the **Summer Doctorate School “Fifth Jornades d’Introducció als Sistemes Dinàmics i a les EDP’s” (JISD2006)**. Universitat Politècnica de Catalunya, Barcelona (Spain).

11-22/07/2007: Organizing Committee of the European Science Foundation **ESF “GLOBAL School on PDEs: layers and dislocations”**, within the **Summer Doctorate School “Sixth Jornades d’Introducció als Sistemes Dinàmics i a les EDP’s” (JISD2007)**. , organized jointly with A. Delshams and T.M. Seara. Universitat Politècnica de Catalunya, Barcelona (Spain).

18-22/02/2008: Organizing Committee of the Summer Doctorate School “Fifth Jornades d’Introducció als Sistemes Dinàmics i a les EDP’s” (**JISD2008**). Universitat Politècnica de Catalunya, Barcelona (Spain).

7-11/04/2008: Coordinator and Organizing Committee of the **Advanced Courses “Topics in PDE’s and applications 2008, 1st edition”**. Fisymat, Granada (Spain).

5-9/05/2008: Coordinator and Organizing Committee of the **Advanced Courses “Topics in PDE’s and applications 2008, 2nd edition”**. CRM (Bellaterra), Barcelona (Spain).

21-26/03/2010: Coorganizer of the workshop “Deterministic and stochastic front propagation”. Banff International Research Station, Banff (Canada).

14-23/06/2010: Coordinator and organizer of the Master School “Jornades d’Introducció als Sistemes Dinàmics i a les EDPs” (**JISD2010**). Universitat Politècnica de Catalunya, Barcelona (Spain).

05/11/2010: Organizing Committee of “Jornada de recerca de Joves Investigadors”. Societat Catalana de Matemàtiques. Barcelona, Spain.

2-3/06/2011: Conference Coordinator of “Trobada d’edps i aplicacions”. Universitat de Girona, Spain.

27/06-1/07/2011: Coordinator and organizer of the Master School “Jornades d’Interacció entre Sistemes Dinàmics i Equacions en Derivades Parcial” (**JISD2011**). Universitat Politècnica de Catalunya, Barcelona (Spain).

28/05-1/06/2012: Coordinator and organizer of the Summer School “Tenth Workshop on Interactions between Dynamical systems and Partial Differential Equations” (**JISD2012**). Universitat Politècnica de Catalunya, Barcelona (Spain).

15/07-19/07/2013: Coordinator and organizer of the Summer School “Eleventh Workshop on Interactions between Dynamical systems and Partial Differential Equations” (**JISD2013**). Universitat Politècnica de Catalunya, Barcelona (Spain).

02/09-06/09/2014: Organizer of the “Conference on qualitative and geometric aspects of elliptic PDE’S”. CRM Bellaterra, Barcelona (Spain).

16/06-20/06/2014: Coordinator and organizer of the **EMS Summer School “Twelfth Workshop on Interactions between Dynamical systems and Partial Differential Equations” (JISD2014)**. Universitat Politècnica de Catalunya, Barcelona (Spain).

01/06-05/06/2015: Coordinator and organizer of the Summer School “Thirteen Workshop on Interactions between Dynamical systems and Partial Differential Equations” (**JISD2015**). Universitat Politècnica de Catalunya, Barcelona (Spain).

07/09-11/09/2015: Scientific committee member for the “Workshop in Nonlinear PDEs”. Université Libre de Bruxelles (Belgium).

27/06-01/07/2016: Scientific Committee member. “The 3rd Conference on Nonlocal Operators and Partial Differential Equations”. Bedlewo (Poland).

11/07-15/07/2016: Coordinator and organizer of the Summer School “Fourteen Workshop on Interactions between Dynamical systems and Partial Differential Equations” (**JISD2016**). Universitat Politècnica de Catalunya, Barcelona (Spain).

Teaching

1989-90: 45 hours course in “Probability and Statistics” for first year students in Chemistry. Universitat de Barcelona (Spain).

1998-99, 1999-00, 2000-01, 2003-04, 2005-06, 2006-07, 2007-08: 30 hours doctorate course in “Functional Analysis and Applications”. Universitat Politècnica de Catalunya (Barcelona, Spain).

1998-99, 1999-00, 2000-01: Several “problem session” courses in Calculus I, Calculus II, Algebra and Geometry, for first and second year students in Industrial Engineering. Universitat Politècnica de Catalunya (Barcelona, Spain).

1999-00 and 2000-01: 45 hours course in “Complex Analysis” for fourth year students in Mathematics. Universitat Politècnica de Catalunya (Barcelona, Spain).

2000-01: Two 45 hours courses in “Calculus I” for first year students in Industrial Engineering. Universitat Politècnica de Catalunya (Barcelona, Spain).

2000-01: 10 hours of a doctorate course (30 hours total) “Equacions en derivades parcials i aplicacions al processament d’imatges”. Universitat Pompeu Fabra, Programa de Doctorat en Informàtica i Comunicació Digital (Barcelona, Spain).

Fall 2002: 30 hours Graduate course in “Partial Differential Equations”. The University of Texas at Austin, USA.

Spring 2003: 45 hours course “M427K Advanced Calculus for Applications I: Introduction to Differential Equations”. The University of Texas at Austin, USA.

2002-03: 15 hours of a doctorate course (30 hours total) “Equacions en derivades parcials, processos estocàstics i models matemàtics en finances”. Universitat Pompeu Fabra, Programa de Doctorat en Informàtica i Comunicació Digital (Barcelona, Spain).

2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11: 30 hours course in “Ampliació d’Anàlisi” for fourth year students in Mathematics. Universitat Politècnica de Catalunya (Barcelona, Spain).

2013-14: 60 hours (6 ECTS) Graduate course in “Partial Differential Equations”, **BGSM**, Barcelona Graduate School of Mathematics (Barcelona, Spain).

2009-10, 2010-11, 2011-12, 2012-13, 2015-16, 2016-17: 30 hours in the 60 hours course (7,5 ECTS) “**Advanced Course in Partial Differential Equations**” for **Master students in Applied Mathematics**. MAMME-FME-UPC, Universitat Politècnica de Catalunya (Barcelona, Spain).

2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17: 45 hours in the 75 hours course (7,5 ECTS) “**Partial Differential Equations**” for **third year undergraduate students in Mathematics**. FME-UPC, Universitat Politècnica de Catalunya (Barcelona, Spain).

2016-17: 7 hours in the 60 hours course (7,5 ECTS) “Mathematical Modelling with Partial Differential Equations” for Master students in Applied Mathematics. MAMME-FME-UPC, Universitat Politècnica de Catalunya (Barcelona, Spain).