

MARTA SANZ-SOLÉ
Abridged Curriculum Vitae (2000 - ...)
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Professional Data

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Education

1978 Ph.D. in Mathematics, University of Barcelona
Advisor: D. Nualart
1974 Graduated in Mathematics, University of Barcelona

Positions

1986-... Professor, University of Barcelona
1983-1986 Associate Professor, University of Barcelona
1979-1983 Associate Professor, University *Autònoma* of Barcelona
1974-1979 Assistant, University *Politécnica* of Catalonia

Visiting Positions (longer than one month)

2010 Isaac Newton Institute for Mathematical Sciences, Cambridge, UK
2007 Institut Mittag-Leffler, Djursholm, Sweden
2007 Université Henri Poincaré, Nancy, France
2006 Centro di Ricerca Matematica Ennio de Giorgi, Pisa, Italy
2004 Université Paris I, France
2003 Ecole Polytechnique Fédérale, Lausanne, Switzerland
2001 Università degli Studi di Padova, Padova, Italy

Research Interests

Random fields, analysis on the Wiener space, stochastic differential and partial differential equations. In particular: Malliavin calculus and its applications to SPDEs, large deviations, sample path properties, rough path analysis approach, numerical approximations, potential theory.

Selected Publications

(Complete list at

<http://www.ams.org/mathscinet/search/author.html?mrauthid=154450>)

Dalang, Robert C.; Sanz-Solé, Marta: Hölder Regularity of the Solution to the Stochastic Wave Equation in Dimension Three. *Memoirs of the AMS*, Vol. 199, 2009.

Sanz-Solé, Marta: Properties of the density for a three dimensional stochastic wave equation. *J. Funct. Anal.* 255 (2008) 255-281.

Malliavin, Paul; Sanz-Solé, Marta: Smoothness of the functional law generated by a non linear SPDE. *The Chinese Annals of Mathematics, Series B*, Vol. 29, No. 2 (2008) 113-120.

Millet, Annie; Sanz-Solé, Marta: Large deviations for rough paths of the fractional Brownian motion. *Ann. Inst. H. Poincaré Probab. Statist.* 42 (2006), no. 2, 245–271.

Dalang, Robert C.; Sanz-Solé, Marta: Regularity of the sample paths of a class of second-order spde's. *J. Funct. Anal.* 227 (2005), no. 2, 304–337.

Sanz-Solé, Marta: Malliavin calculus. With applications to stochastic partial differential equations. *Fundamental Sciences*. EPFL Press, Lausanne; distributed by CRC Press, Boca Raton, FL, 2005.

Quer-Sardanyons, Lluís; Sanz-Solé, Marta: Absolute continuity of the law of the solution to the 3-dimensional stochastic wave equation. *J. Funct. Anal.* 206 (2004), no. 1, 1–32.

Sanz-Solé, Marta; Vuillermot, Pierre-A.: Equivalence and Hölder-Sobolev regularity of solutions for a class of non-autonomous stochastic partial differential equations. *Ann. Inst. H. Poincaré Probab. Statist.* 39 (2003), no. 4, 703–742.

Kohatsu-Higa, A.; Márquez-Carreras, D.; Sanz-Solé, M.: Logarithmic estimates for the density of hypoelliptic two-parameter diffusions. *J. Funct. Anal.* 190 (2002), no. 2, 481–506.

Kohatsu-Higa, A.; Márquez-Carreras, D.; Sanz-Solé, M.: Asymptotic behavior of the density in a parabolic SPDE. *J. Theoret. Probab.* 14 (2001), no. 2, 427–462.

Millet, Annie; Sanz-Solé, Marta: Approximation and support theorem for a wave equation in two space dimensions. *Bernoulli* 6 (2000), no. 5, 887–915.

Ferrante, Marco; Rovira, Carles; Sanz-Solé, Marta: Stochastic delay equations with hereditary drift: estimates of the density. *J. Funct. Anal.* 177 (2000), no. 1, 138–177.

Rovira, Carles; Sanz-Solé, Marta: Large deviations for stochastic Volterra equations in the plane. *Potential Anal.* 12 (2000), no. 4, 359–383.

Selected Conferences as Plenary Speaker

- Joint Mathematical Conference CSASC 2010, Prague 22-27, 2010.
- XI CLAPEM, Naiguatá, Venezuela, November 1-6, 2009.
- 14th General Meeting European Women in Mathematics, University of Novi Sad, Serbia, August 25-28, 2009.
- Stochastic Analysis and Random Dynamics. Lviv, Ukraine, June 14-20, 2009.
- Stochastic Analysis, Random Fields and Applications. Ascona, May 19-23, 2008.
- Stochastic Partial Differential Equations and Applications-VIII, Levico Terme, Italy, January 6-12, 2008.
- Mathematical Issues in Stochastic Approaches for Multiscale Modeling. MSRI, Berkeley, May 21-25, 2007.
- Stochastic and Potential Analysis URASCM 2007, Hammamet (Tunisia) March 26-29, 2007.
- 31st Conference on Stochastic Processes and their Applications. Paris, July 17-21, 2006.
- International Congress on the Applications of Mathematics, ICAM 2006. Santiago de Chile, March 13-17, 2006.
- Abel Symposium 2005: Stochastic Analysis and Applications: A Symposium in honor of Kiyosi Itô. Oslo, Norway, 2005.
- Stochastic Analysis, Random Fields and Applications. Ascona, May 30-June 3, 2005.
- Stochastic Partial Differential Equations and Random Media. From Theory to Application I. Bielefeld, Germany, April 4 - 9, 2005.
- 7th International Meeting on SPDEs and Applications. Levico Terme, Italy, 2004.
- The Arctic Workshop on Stochastic Analysis. Tromsø, Norway, 2003.
- 4th Seminar on Stochastic Analysis, Random Fields and Applications. Ascona, Switzerland, May 2002.
- First Congress of the Royal Spanish Mathematical Society. Madrid, Spain, 2000.

Advanced Schools

- *Applications of Malliavin Calculus to Stochastic Partial Differential Equations*. LMS-EPSRC Short Course. Imperial College London, 7-11 July 2008.
- *XII Brazilian School of Probability*, Ouro Preto, Minas Gerais, August 3-9, 2008.

Scientific Committees

- Member of the Scientific Committee of the *Conference of the Centennial of the Royal Mathematical Spanish Society, RSME 2011* (Avila, February 2011).
- Member of the Scientific Committee of the conference *Stochastic Processes and their Applications 2011* (Oaxaca, Mexico, June 19-25, 2011).
- Member of the Scientific Committee of the conference *Probability and Stochastic Processes* (Bangalore, India, August 13-17, 2010).
- Member of the Scientific Committee of the *5th European Congress of Mathematics* (Amsterdam, The Netherlands, July 2008).
- Member of the Scientific Program Committee of the *7th World Congress of the Bernoulli Society for Mathematical Statistics and Probability and 71th Annual Meeting of the Institute of Mathematical Statistics* (Singapore, July 2008).
- Member of the Scientific Committee of the *First French-Spanish Congress of Mathematics* (Zaragoza, Spain, July 2007).
- One of the members of the committee appointed by the Federation of Spanish Scientific Societies (COSCE). Panelist of *Spain in Europe* chaired by Federico Mayor Zaragoza (2004).

Journals

- Associate Editor of *Collectanea Mathematica* (2007-...).
- Associate Editor of *Stochastic Processes and their Applications* (2002-...).
- Associate Editor of *Journal of Applied Mathematics and Stochastic Analysis* (2009).

- Associate Editor of *Communication on Stochastic Analysis* (2010-···).
- One of the members of the editorial board of the Bulletin of the Catalan Mathematical Society (2004-···).

Committees of Scientific Societies

- Elected Chair of the *Committee for Conferences on Stochastic Processes*, Bernoulli Society (2008-2009).
- Member of the *IMS Committee of Special Lectures* (September 2008-August 2010). Chair of the Committee in 2010.
- Member of the Scientific Council of *Société des Mathématiques Appliquées et Industrielles* (SMAI) France (2008-···).
- Elected member of the *Commission on Development and Exchanges* of the International Mathematical Union (IMU) for 2007-2010.
- Member of the Scientific Committee of the Spanish Royal Mathematical Society (2007-···).
- Member of the *Committee for Conferences on Stochastic Processes* Bernoulli Society (2005-2009).
- Member of the Council of the European Mathematical Society (2004-···).
- Member of the Scientific Committee of the Catalan Mathematical Society (2002-···).
- Member of the European Mathematical Society Committee *Raising Public Awareness of Mathematics* (2001-2006).
- Elected member of the Executive Committee of the European Mathematical Society 1997-2004.

Research Centres and Projects

- Member of the Team of Directors of the *Centre de Recerca Matemàtica*, Bellaterra, Spain (April 2007-···).
- One of the members of the Board of Directors of the Spanish research mathematical programme *i-math-Consolider* (2006-2008).
- Member of the Scientific Council of the Banach Center (1998-2005).

Organization of Large Scientific Events

- Research Programme on *Stochastic Partial Differential Equations*, Institut Mittag-Leffler, Fall 2007. Co-organiser.
- *International Congress of Mathematicians, ICM 2006, Madrid 22-30 August, 2006*. Member of the Executive Committee. Chair of the Local Program Committee.
- *6th World Congress of the Bernoulli Society for Mathematical Statistics and Probability and 67th Annual Meeting of the Institute of Mathematical Statistics* Barcelona, July 26-31, 2004. Member of the Organizing Committee.
- *3th European Congress of Mathematics*, Barcelona, July 10-14, 2000. Secretary General of the Executive Committee.

Academic Appointments at the University of Barcelona

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| February 2005-April 2009 | Member of the Scientific Policy Board |
| March 2000-March 2003 | Vice-President of the Division of Sciences |
| March 2000-March 2003 | Member of the Committee for Doctorate Studies |
| March 2000-March 2003 | Member of the Scientific Policy Board |
| July 2000-March 2003 | Committee for EU Projects |
| September 2000-July 2004 | Scientific Committee of Technical and Scientific Services |

Miscellaneous

Has supervised seven Ph. D. students. Currently supervising three Ph. D. students.

Narcis Monturiol Medal (1998). Highest distinction of the Catalonia Autonomous Government for scientific and technological merits.

Membership of Scientific Societies: American Mathematical Society, Bernoulli Society, Catalan Mathematical Society, European Mathematical Society, Institute of Mathematical Statistics, International Association for Mathematical Physics, Royal Spanish Mathematical Society.