

# MARTA SANZ-SOLÉ

Curriculum Vitae (abridged version)

# Personal Data

Birthdate	January 19, 1952, Sabadell (Barcelona), Spain
Citizenship	Spanish
Address	Travessera de les Corts, 165, A-2
	E-08028 Barcelona

## **Professional Data**

Address	Facultat de Matemàtiques i Informàtica. Universitat de Barcelona	
	Gran Via de les Corts Catalanes, 585	
	E-08007 Barcelona	
E-mail	marta.sanz@ub.edu	
Homepage	https://www.ub.edu/probabilitats-seminaribcn/Sanz-Sole/	
Telephone	$+34\ 934021655,\ +34646440759$	

## Education

April 1978	Ph.D. in Mathematics, Universitat de Barcelona
	Advisor: D. Nualart
1969 - 1974	Degree in Mathematics (equivalent to B.Sc. and M.Sc.),
	Universitat de Barcelona

### Positions

- 2022 · · · Professor Emeritus, Universitat de Barcelona (UB)
- 1986 2022 Professor, Universitat de Barcelona (UB)
- 1983 1986 Associate Professor, Universitat de Barcelona (UB)
- 1979 1983 Associate Professor, Universitat Autònoma de Barcelona (UAB)
- 1974 1979 Assistant, Universitat Politècnica de Catalunya (UPC)

#### Visiting Positions (longer than one month)

- 2016 Institut de mathématiques d'analyse et applications, EPFL, Lausanne, CH
- 2012 Centre Interfacultaire Bernoulli, EPFL, Lausanne, CH
- 2010 Isaac Newton Institute for Mathematical Sciences, Cambridge, UK
- 2007 Institut Mittag-Leffler, Djursholm, Sweden
- 2007 Université Henri Poincaré, Nancy, France
- 2006 Centro di Recerca Matematica Ennio de Giorgi, Scuola Normale Superiore Pisa, Italy
- 2004 Université Paris I, France
- 2003 École Polytechnique Fédérale, Lausanne, Switzerland
- 2001 Università degli Studi di Padova
- 1997 Mathematics Science Research Institute (MSRI), Berkeley, CA, USA
- 1991 Laboratoire de Probabilités, Université Paris VI, France
- 1990 Université Angers, France
- 1989 Università di Messina, Italy
- 1988 Université de Clermont-Ferrand II, France
- 1987 Center for Stochastic Processess,

University of North Carolina at Chapel Hill, USA

1984 Laboratoire de Probabilités, Université Paris VI, France

#### **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, support theorems, numerical approximations, potential theory.

#### Scientific Publications

As of April 2025, the database MathSciNet records **103** articles authored by Marta Sanz-Solé and **8** total related publications. This includes papers in the Annals of Probability, Probability Theory and Related Fields, Journal of Functional Analysis, Annals of the Institut Henri Poincaré, among others, two Memoirs of the AMS and a monograph on Malliavin calculus.

## Selected Conferences and Lectures $(2000 - \cdots)$

- SPDEs, optimal control and mean field games, ZIF, Bielefeld University, July 10-14, 2023. Plenary speaker.
- 2. Modern Topics in Probability, Brin Mathematics Research Center, University of Maryland, October 17-21, 2022. Plenary speaker.
- London Mathematical Society Lecture at the ICM 2018, Rio de Janeiro, August 7, 2018.
- The 39th Conference on Stochastic Processes and their Applications (SPA 2017), Moscow, July 24-28, 2017. IMS Medallion Lecture.
- 5. 2016-2017 Warwick EPSRC Symposium. Stochastic PDEs: Analysis and Computation, Warwick, UK, April 27-31, 2017. Plenary speaker
- Stochastic Analysis, Rough Paths and Geometry. Imperial College London, UK, January 7-9, 2016. Plenary speaker.
- Mathematical Analysis of Viscous Incompressible Fluid. RIMS, Kyoto, Japan, November 16-18, 2015. Plenary speaker.
- Stochastics of environmental and financial mathematics. Center for Advanced Studies. Norwegian Academy of Sciences and Letters. Oslo, September 15-19, 2014. Plenary speaker.
- 9. Stochastic Analysis and Applications. A Congress in honour to Terry Lyons 60th Birthday. Oxford-Man Institute and Mathematical Institute University of Oxford, September 23-27, 2013. Plenary speaker.
- Seminar on Stochastic Processes 2013. Duke University, March 14-16, 2013. Plenary speaker.
- 11. De Rahm Lecture 2012. EPFL, Lausanne, February 29, 2012.
- 12. Ladyzhenskaya Lecture 2012. IWR, Heidelberg, May 7, 2012.
- 13. Stochastic Analysis and Stochastic PDEs. Institute of Mathematics. University of Warwick, April 16-20 April, 2012. Invited Speaker.
- 14. ISAAC 2011. Moscow, August 22-26, 2011. Plenary Speaker.

- 15. 7th Congress of Romanian Mathematicians, Brasov, July 2, 2011. Plenary speaker.
- 5th World Conference on 21st Century Mathematics 2011, Abdus Salam School of Mathematical Sciences, GC Lahore, February 9-13, 2011. Plenary speaker.
- 17. Stochastic Partial Differential Equations: Approximation, Asymptoics and Computation. Workshop at the Isaac Newton Institute for Mathematical Sciences, Cambridge, June 28-July 2, 2010. Invited speaker.
- Joint Mathematical Conference CSASC 2010, Prague 22-27, 2010. Plenary speaker.
- Stochastic Partial Differential Equations. Workshop at the Isaac Newton Institute for Mathematical Sciences, Cambridge, January 4-8, 2010. Invited speaker.
- XI CLAPEM, Naiguatá, Venezuela, November 1-6, 2009. Plenary speaker.
- 21. 14th General Meeting European Women in Mathematics, University of Novi Sad, Serbia, August 25-28, 2009. Plenary speaker.
- 22. 7th International ISAAC Congress, Imperial College London, July 13-18, 2009. Invited speaker at the session *Stochastic Analysis*.
- Stochastic Analysis and Random Dynamics. Lviv, Ukraine, June 14-20, 2009. Invited speaker.
- 24. Stochastic Analysis, Random Fields and Applications. Ascona, May 19-23, 2008. Invited speaker.
- 25. Stochastic Partial Differential Equations and Applications-VIII, Levico Terme, Italy, January 6-12, 2008. Invited speaker.
- 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. Series of lectures.
- 28. Stochastic Dynamics, Université Paris 1, Paris, June 11-12, 2007. Invited speaker.

- 29. Mathematical Issues in Stochastic Approaches for Multiscale Modeling. MSRI, Berkeley, May 21-25, 2007. Invited speaker.
- Stochastic and Potential Analysis URASCM 2007, Hammamet (Tunisia) March 26-29 (2007). Invited speaker.
- Computational Aspects of Stochastic Partial Differential Equations, an European Science Foundation Exploratory Workshop. Salzburg, September 18 - 21, 2006. Invited speaker.
- 32. 31st Conference on Stochastic Processes and their Applications. Paris, July 17-21, 2006. Plenary speaker.
- International Congress on the Applications of Mathematics, ICAM 2006. Santiago de Chile, March 13-17, 2006. Plenary speaker.
- 34. Abel Symposium 2005: Stochastic Analysis and Applications: A Symposium in honor of Kiyosi Itô. Oslo, Norway, 2005. Plenary speaker.
- 35. Stochastic Partial Differential Equations and Random Media. From Theory to Application II. Bielefeld September 12-15, 2005. Invited speaker.
- Stochastic Analysis, Random Fields and Applications. Ascona, May 30-June 3, 2005. Invited speaker.
- 37. Stochastic Partial Differential Equations and Random Media. From Theory to Application I. Bielefeld April 4 - 9, 2005. Invited speaker.
- 38. 7th International Meeting on SPDEs and Applications. Levico Terme, Italy, 2004. Invited speaker.
- 39. The Arctic Workshop on Stochastic Analysis. Tromsø, Norway, 2003. Invited speaker.
- 40. 4th Seminar on Stochastic Analysis, Random Fields and Applications. Ascona, Switzerland, 2002. Invited speaker.
- 41. Stochastic Evolution Equations and Applications. Oberwolfach, Germany, 2001. Invited speaker.
- 42. Swiss Probability Seminar. Annual session. Bern, Switzerland, 2000. Plenary speaker.

- 43. Workshop on Stochastic Differential Equations and Applications. Levico Terme, Italy, 2000. Invited speaker.
- 44. First Congress of the Royal Spanish Mathematical Society. Madrid, Spain, 2000. Plenary speaker.

## **PhD Students**

Maria Jolis	Universitat Autònoma de Barcelona
	year of defence: 1989
Rosario Delgado	Universitat de Barcelona
	year of defence: 1994
Carles Rovira	Universitat de Barcelona
	year of defence: 1995
David Márquez-Carreras	Universitat de Barcelona
	year of defence: 1998
Mónica Sarrà	Universitat de Barcelona
	year of defence: 2000
Lluis Quer-Sardanyons	Universitat de Barcelona
	year of defence: 2005
Iván Torrecilla	Universitat de Barcelona
	year of defence: 2009
Mireia Besalú	Ph.D. student 2006-2009
Victor Ortiz	Universitat de Barcelona
	year of defence: 2012
Maite Naranjo del Val	Ph.D. student 2009–2012
Francisco Delgado	Universitat de Barcelona
	year of defence: 2013
André Süss	Universitat de Barcelona
	year of defence: 2014
Adrián Hinojosa Calleja	Universitat de Barcelona
	year of defence: 2022

#### Teaching

Undergraduate courses in statistics, probability, measure theory, stochastic processes, time series and calculus (UPC, UAB, UB).

Master and doctoral courses on stochastic calculus, stochastic differential equations, stochastic evolution equations, numerical approximations of stochastic differential equations, among others, in master programmes in mathematics at the Barcelona University (UB), EPFL, Switzerland (academic years 2003-3004 and 2015-2016) and University of Messina (1989). Course on stochastic processes in the *Graduate Programme in Economics*, *Finance and Management* organized by the Department of Economics and Business at the University Pompeu Fabra, Barcelona (2004-2005 and 2005-

2006).

## Professional Assignments (2005 - $\cdots$ )

## 1. Prize Committees

## (a) International

- Abel Committee for the *Abel Prize* 2016, 2017. Norwegian Academy of Science and Letters.
- Smale Prize Committee. Foundations of Computational Mathematics, 2016.
- Princess of Asturies Awards for technical and scientific research. Princess of Asturies Foundation (2013 - 2016).
- Panel for Natural Sciences 1. European Young Investigator Awards. European Science Foundation (2006 2008).

## (b) National

- Ferran Sunyer i Balaguer Prize. Institute of Catalan Studies. Ferran Sunyer i Balaguer Foundation, 2023 - ···
- *Rubio de Francia Prize*. Royal Mathematical Spanish Society 2021 2023. Chair.
- Catalonia National Research Awards 2020. Fundació Catalana per a la Recerca i la Innovació.
- Premis Jaume I, Fundamental Research, 2021 2023. Foundation Premis Jaume I.
- Premio Euskadi de Investigación. Modalidad de ciencia y tecnología, 2018, 2020, 2022. Basque Government.
- Prizes for Mathematical Research Royal Mathematical Spanish Society-BBVA Foundation, 2016.
- The City of Barcelona Awards (Science and Technology) 2015, 2016.
- *Rubio de Francia Prize*. Royal Mathematical Spanish Society 2012 2013.

• Julio Rey Pastor National Prize in Mathematics. Spanish Government, 2011.

## 2. Scientific Committees of Conferences

- Fondations of Computational Mathematics, FOCOM 2023 (Whistler, BC, Canada, June 12 to 21, 2023).
- 2022 IMS Annual Meeting (London, UK, June 27-30, 2022).
- ICM Panel "Probability". ICM 2022.
- Stochastic Processes and their Applications 2017 (Moscow, Russia, July 24-27, 2017).
- Stochastic Processes and their Applications 2011 (Oaxaca, Mexico, June 19-25, 2011).
- Conference of the Royal Mathematical Spanish Society, RSME 2011 (Salamanca, 2011).
- Probability and Stochastic Processes (Bangalore, India, August 13-17, 2010).
- Stochastic Analysis and Random Dynamical Systems (Lviv, Ucraine, July 14-20, 2008).
- 5th European Congress of Mathematics, ECM 2008 (Amsterdam, The Netherlands, July 14-18, 2008).
- 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).
- CIMPA-UNESCO School: Modèles aléatoires en finance mathématique (Marrakech, Marrocco, 2017).
- First French-Spanish Congress of Mathematics (Zaragoza, Spain, July 2007).

## 3. Editorial Boards. Associate Editor

- The Annals of Probability (2015 2020).
- SIAM-ASA Journal of Uncertainty Quantification (2018 2020).
- Journal of Mathematical Analysis and Applications (2021 2022).
- Stochastics and Partial Differential Equations. Analysis and Computations (2012 · · · )

- EMS Surveys in Mathematical Sciences (2013 · · · ).
- Bernoulli (2013 2015).
- Collectanea Mathematica (2007 2019).
- Stochastic Processes and their Applications (2002 2012).
- Journal of Applied Mathematics and Stochastic Analysis (2009 2012).
- Communications on Stochastic Analysis (2010 2014).
- Bulletin of the Catalan Mathematical Society (2004 ...).

### 4. Committees and Positions in Scientific Societies

- Board of Directors. Foundations of Computational Mathematics (FOCOM) (2017 2023).
- IMS Fellows Committee (2013 2016).
- President of the European Mathematical Society (2011 2014).
- Honorary Committee of the Centenary of the Royal Spanish Mathematical Society (2011).
- Scientific Council of SMAI (Société des Mathématiques Appliquées et Industrielles) France (2008 2013).
- Chair of the Conferences Committee of Stochastic Processes, Bernoulli Society (2008 - 2009).
- IMS Committee of Special Lectures (September 2007 August 2010). Chair of the Committee in 2010.
- Commission on Development and Exchanges of the International Mathematical Union (IMU) for 2007 2010.
- Conferences Committee of Stochastic Processes, Bernoulli Society (2005 2011).
- European Mathematical Society Committee Raising Public Awareness of Mathematics (2001 2006).
- Scientific Committee of the Catalan Mathematical Society (2002 2019).
- Scientific Committee of the Royal Spanish Mathematical Society (2007 ...).
- Council of the European Mathematical Society (2004 2011).

- Member of the Executive Committee of the European Mathematical Society (1997 - 2004).
- One of the members of the committees appointed by the Federation of Spanish Scientific Societies (COSCE). Panelist of Spain in Europe chaired by Federico Mayor Zaragoza (2004).

## 5. Research Centres and Organisations

- CERCA (Research Centres of Catalonia). Vice president of the Board of Trustees 2023-···
- Council Fondation Sciences Mathématiques de Paris, (2013-···).
- Steering Committee for the East African Centre for Mathematical Research (EACMaR) (2020 -···).
- Scientific Advisory Board of the Korteweg-de Vries Institute for Mathematics, University of Amsterdam, The Netherlands (2015-...).
- Director of the Barcelona Graduate School of Mathematics (BGS-Math) (September 2018-2019).
- Chair of the Scientific Committee of the Barcelona Graduate School of Mathematics (BGSMath) (2015-2016).
- Scientific Committee of CIRM, Luminy, France (2015-2020).
- Board of Directors of the Institut Henri Poincaré (2013-2019).
- Committee for Research and Education, *École Polytechnique*, Palaiseau, France (2013 2017).
- Scientific Advisory Board of the Barcelona Graduate School of Mathematics (BGSMath) (2013 2014).
- Scientific Council of the Banach Center (1998-2005, 2010-2014).
- Board of Directors of the Centre de Recerca Matemàtica, Bellaterra, Spain (April 2007- July 2010).

## 6. Steering Committees of Research Projects

- Advisory board of DATASIG, Alan Turing Institute, Imperial College London, University College London, University of Oxford, EPSRC (2019-2022).
- Board of Directors of the Spanish research mathematical project Consolider Mathematica (2006-2008).

## 7. Evaluation of Institutions

- KTH Research Assessment Exercise 2021. Chair of the expert panel Mathematics and Engineering Mechanics. Royal Institute of Technology, Stockholm.
- Aalto University Research Art and Impact Assessment, RAI 2018. Member of the panel *ICT* and mathematics. Aalto University, Helsinki.
- KTH Research Assessment Exercise 2012. Chair of the expert panel Mathematics. Royal Institute of Technology, Stockholm.
- Evaluation Committee of the Centre International de Rencontres Scientifiques (CIRM, Luminy, France). CNRS. Years 2009, 2015.

## 8. Evaluation Agencies

Austrian Science Fund (FWF, Austria), Czech Science Foundation, DGICYT (Spain), European Research Council, European Science Foundation, FECYT (Spain), MUST (Italia), National Science Foundation (USA), Swiss Science Foundation for Scientific Research. Swedish Research Council. Academy of Finland.

Member of the ERC 2015 and 2017 Consolidator Grants Panel PE1.

Chair of the ERC 2019 and 2021 Consolidator Grants Panel PE1.

## **Organization of Large Scientific Events**

- International Congress of Mathematicians, ICM 2006, Madrid 22-30 August, 2006. Member of the Executive Committee and 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. Member of the Executive Committee. Secretary of Organisation.

### Organization of Scientific Events and Special Sessions

- Special session Some aspects of evolution Stochastic partial differential equations, 40th Conference on Stochastic Processes and Their Applications (SPA 2018), Gothenburg, June 11-15, 2018.
- Special session *Stochastics*, Edinburgh Mathematical Society-Catalan Mathematical Society Joint Meeting. Edinburgh, September 27-29, 2017. Edinburgh, September 27-29, 2017. Co-organizer.
- Scientific and organizing committee of the conference Barcelona Mathematical Days 2017 (BMD 2017), IEC, Barcelona, April 27-28, 2017.
- Scientific co-organizer of the workshop Probability and Statistics in High Dimensions. A scientific tribute to Evarist Giné. CRM, Bellaterra, June 20-22, 2016.
- Special session *Stochastics*, Edinburgh Mathematical Society-Catalan Mathematical Society Joint Meeting. Barcelona, May 27-30, 2015. Co-organizer.
- Special session New developments in Malliavin calculus, 37th Conference on Stochastic Processes and Their Applications (SPA 2014), Buenos Aires, July 28-August 1, 2014.
- Scientific and organizing committee of the Barcelona Summer School on Stochastic Analysis, CRM, Bellaterra, July 2012, 2014, 2016 and 2018.
- Special session *Stochastic partial differential equations*, European Meeting of Statistics, Budapest, July 20-25, 2013.
- Scientific co-organizer of the workshop Uncertainty Quantification, ICERN, University of Brown, October 9-13, 2012.
- Scientific co-organizer of the special session on *Stochastic Partial Differential Equations and Applications*. Centenary Congress of the Royal Spanish Mathematical Society. Ávila 1-5, 2011.
- Scientific co-organizer of the programme at the Mittag-Leffler Institute. Stochastic Differential Equations and Applications. Fall 2007.
- One of the organizers of the EMS round table Should mathematicians care about communicating to broad audiences? Theory and practice at the ICM 2006.

- Co-ordinator of the closing round table at the ICM 2006 Are pure and applied mathematics drifting apart?
- *EMS-SCM Joint Mathematical Weekend*. Barcelona, May 16-18, 2005. Chair of the Organizing Committee.
- Advanced Courses on Stochastic Analysis. Centre de Recerca Matemàtica. Bellaterra, Barcelona, September 1997. Co-organizer.
- Infinite Dimensional Analysis: Malliavin Calculus. Topic of the Year Program on Stochastic Analysis held at MSRI, Berkeley, USA in 1997/1998. Co-organizer.
- Barcelona Meeting on Stochastic Analysis and its Applications. Barcelona June 30-July 4, 1997.
- Semester on Stochastic Analysis. Centre de Recerca Matemàtica. Bellaterra, Barcelona, September 1991- February 1992. Co-organizer.
- Barcelona Seminar on Stochastic Analysis. Sant Feliu de Guixols, 23-27 September 1991. Co-organizer.
- Séminaire de Probabilités XXIII. Barcelona, 26-30 September 1988. Co-organizer.

## Academic assignments at the University of Barcelona

March 2018 - 2022	Member of the Consultive Council
February 2005 - April 2009	Member of the Scientific Policy Board
March 2000 - March 2003	Vice President of the Sciences Division
March 2000 - March 2003	Member of the Doctorate Studies
	Committee
March 2000 - March 2003	Member of the Scientific Policy Board
July 2000 - March 2003	Committee for EU European Projects
September 2000 - July 2004	Scientific Committee of technical
	services
February 1993 - February 1996	Dean of the Faculty of Mathematics
Other academic assigments	

September 2022 - · · · Director of the *Mathematics and Astronomy* section of the Royal Academy of Sciences and Arts of Barcelona

## Membership of Scientific Societies

American Mathematical Society, Bernoulli Society for Mathematical Statistics and Probability, Catalan Mathematical Society, European Mathematical Society, Institute of Mathematical Statistics, Royal Spanish Mathematical Society.

## Honors

- Narcis Monturiol Medal (1998). Highest distinction of the Catalonia Government for scientific and technological merits.
- Fellow of the Institute of Mathematical Statistics (appointed in 2011).
- Member of the IMU Circle.
- Elected member of the *Institute of Catalan Studies*. Section Science and Technology (17.11.2016 ...).
- Elected academician of the Royal Academy of Sciences and Arts of Barcelona. Section Mathematics and Astronomy (15.12.2016 ...).
- Medal of the Royal Spanish Mathematical Society 2017.
- Honorary member of the *Catalonia College of Economics* (appointed in 2017).
- Elected member of the Academia Europaea  $(2024 \cdots)$ .
- Creu de Sant Jordi (2024). Distinction of the Catalonia Government for outstanding services to Catalonia in defence of its identity or in the civic and cultural sphere.