

Curriculum Vitae

Lluís Quer-Sardanyons

March 18, 2024

Personal information

Full name: Lluís Antoni Quer i Sardanyons

Place and date of birth: Juneda (Catalonia), June 11, 1977.

Current professional status

Professional category: Associate Professor

Starting date: 09/04/2018

Address:

Department of Mathematics
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Previous scientific activities

- Interim Associate Professor at the Department of Mathematics of the Universitat Autònoma de Barcelona. 01/01/2013 - 08/04/2018.
- Postdoc Lecturer at the Department of Mathematics of the Universitat Autònoma de Barcelona. 15/09/2012 - 31/12/2012.
- Tenure-track Lecturer at the Department of Mathematics of the Universitat Autònoma de Barcelona. 15/09/2007 - 14/09/2012.
- Postdoc Researcher *Juan de la Cierva* of the Spanish Ministry of Education and Science at the Department of Mathematics of the Universitat Autònoma de Barcelona. 01/09/2006 - 14/09/2007.
- Postdoc Researcher of INRIA Lorraine at the Institut de Mathématiques Elie Cartan de Nancy (Université Henri Poincaré Nancy). 01/09/2005 - 31/08/2006.
- Doctoral fellowship FPI of the Spanish Ministry of Education and Science at the Department of Statistics of the Universitat de Barcelona. 01/08/2001 - 31/07/2005.
- Doctoral fellowship BRD of the Universitat de Barcelona at the Department of Statistics. 01/05/2000 - 31/07/2001.

Education

- PhD in Mathematics at the Universitat de Barcelona (Cum Laude Mention), with European Mention. February 2005. Title: *The stochastic wave equation: study of the law and approximations*. Advisor: Marta Sanz-Solé.
- Degree in Mathematics at the Universitat de Barcelona. February 2000.

Languages

Catalan: mother tongue

English, French and Spanish: fluent

German and Italian: upper intermediate

Scientific interests

Stochastic analysis, stochastic partial differential equations, Malliavin calculus, approximation methods for stochastic processes.

Participation in competitive research projects

1. Stochastic and Deterministic Models. Applications in Biosciences (PID2021-123733NB-I00), funded by the Ministry of Sciences, Innovation and Universities. 01/09/2022-31/08/2025. Responsible researcher: Xavier Bardina.
2. *Modelos estocásticos y aplicaciones* (PGC2018-097848-B-I00), funded by the Ministry of Economy. 01/01/2019 - 31/12/2021. Responsible researcher: Xavier Bardina.
3. *EDPs estocásticas, teoremas límite y modelización* (MTM2015-67802-P), funded by the Ministry of Economy. 01/01/2016 - 31/12/2018. Responsible researcher: Xavier Bardina.
4. *Processos estocàstics* (2014SGR422), funded by the Catalan Government. 01/01/2014 - 31/12/2016. Responsible researcher: Marta Sanz-Solé.
5. *Análisis y aplicaciones de procesos Gaussianos y de procesos de Lévy* (MTM2012-33937), funded by the Ministry of Economy. 01/10/2013 - 31/12/2015. Responsible researcher: Xavier Bardina.
6. *Processos estocàstics* (2009SGR1360), funded by the Catalan Government. 01/10/2009 - 31/12/2013. Responsible researcher: Marta Sanz-Solé.
7. *Procesos de Lévy, procesos gaussianos y aplicaciones* (MTM200908869), funded by the Ministry of Science and Innovation. 01/01/2010 - 31/12/2012. Responsible researcher: Frederic Utzet.
8. *Cálculo estocástico para procesos de Lévy y para procesos gaussianos* (MTM2006-06427), funded by the Ministry of Education and Science. 01/01/2007 - 31/12/2009. Responsible researcher: Frederic Utzet.
9. *Estudio de medios aleatorios* (HF2005-0038), funded by the Ministry of Science and Technology. 01/01/2006 - 31/12/2007. Responsible researcher: Carles Rovira.
10. *Processos estocàstics* (2005SGR00203), funded by the Catalan Government. 01/01/2006 - 31/12/2008. Responsible researcher: Marta Sanz-Solé.
11. *Análisis con caminos irregulares: Aplicaciones a las ecuaciones en derivadas estocásticas* (HF2003006), funded by the Ministry of Science and Technology. 01/01/2004 - 31/12/2006. Responsible researcher: Marta Sanz-Solé.

12. *Projet OMEGA - Méthodes numériques probabilistes*, funded by INRIA. 2000 - 2007 (participation during the one-year postdoc position at the Institut Elie Cartan de Nancy). Responsible researcher: Denis Talay.
13. *Análisis de modelos estocásticos de evolución y medios aleatorios* (BFM2003-01345), funded by the Ministry of Science and Technology. 01/01/2004 - 31/12/2006. Responsible researcher: Marta Sanz-Solé.
14. *Processos estocàstics* (2001SGR00068), funded by the Catalan Government. 01/01/2001 - 31/12/2004. Responsible researcher: David Nualart.
15. *Modelos de evolución aleatoria espacialmente homogéneos* (BMF2000-0607), funded by the Ministry of Science and Technology. 19/12/2000 - 19/12/2003. Responsible researcher: Marta Sanz-Solé.

Publications

1. R.M. Balan, D. Nualart, L. Quer-Sardanyons and G. Zheng. The hyperbolic Anderson model: moment estimates of the Malliavin derivatives and applications. *Stochastics and Partial Differential Equations: Analysis and Computations* 10 (2022), 757-827.
2. C. Marinelli and L. Quer-Sardanyons. Absolute continuity of solutions to reaction-diffusion equations with multiplicative noise. *Potential Analysis* 57 (2022), 243-261.
3. L.M. Giordano, M. Jolis and L. Quer-Sardanyons. SPDEs with linear multiplicative fractional noise: continuity in law with respect to the Hurst index. *Stochastic Processes and their Applications* 130 (2020), no. 12, 7396-7430.
4. X. Bardina, J.P. Márquez and L. Quer-Sardanyons. Weak approximation of the complex Brownian sheet from a Lévy sheet and applications to SPDEs. *Stochastic Processes and their Applications* 130 (2020), no. 9, 5735-5767.
5. L.M. Giordano, M. Jolis and L. Quer-Sardanyons. SPDEs with fractional noise in space: continuity in law with respect to the Hurst index. *Bernoulli*, 26 (2020), no. 1, 352-386.
6. R. Anton, D. Cohen and L. Quer-Sardanyons. A fully discrete approximation of the one-dimensional stochastic heat equation. *IMA Journal of Numerical Analysis* 40 (2020), no. 1, 247-284.
7. R. Balan, L. Quer-Sardanyons and J. Song. Existence of density for the stochastic wave equation with space-time homogeneous Gaussian noise. *Electronic Journal of Probability* 24 (2019), paper no. 106, 1-43.
8. R. Balan, L. Quer-Sardanyons and J. Song. Hölder continuity for the Parabolic Anderson Model with space-time homogeneous Gaussian noise. *Acta Mathematica Scientia* 39B (2019), no. 3, 717-730.
9. R. Balan, M. Jolis, and L. Quer-Sardanyons. Intermittency for the Hyperbolic Anderson Model with rough noise in space. *Stochastic Processes and their Applications* 127 (2017), no. 7, 2316-2338.
10. R. Balan, M. Jolis, and L. Quer-Sardanyons. SPDEs with rough noise in space: Hölder continuity of the solution. *Statistics and Probability Letters* 119 (2016), 310-316.
11. D. Cohen and L. Quer-Sardanyons. A fully discrete approximation of the one-dimensional stochastic wave equation. *IMA J. Numer. Anal.* 36 (2016), no. 1, 400-420.
12. R. Balan, M. Jolis and L. Quer-Sardanyons. SPDEs with affine multiplicative fractional noise in space with index $\frac{1}{4} < H < \frac{1}{2}$. *Electron. J. Probab.* 20 (2015), no. 54, 1-36.

13. C. Marinelli, E. Nualart and L. Quer-Sardanyons. Existence and regularity of the density for the solution to semilinear dissipative parabolic SPDEs. *Potential Analysis* 39 (2013), no. 3, 287-311.
14. A. Deya, M. Jolis and L. Quer-Sardanyons. The Stratonovich heat equation: a continuity result and weak approximations. *Electronic Journal of Probability* 18 (2013), no. 3, 1-34.
15. L. Quer-Sardanyons. Gaussian upper density estimates for spatially homogeneous SPDEs. *Malliavin Calculus and Stochastic Analysis: A Festschrift in Honor of David Nualart*, Springer Proceedings in Mathematics & Statistics 34, 2013.
16. C. Marinelli and L. Quer-Sardanyons. Existence of weak solutions for a class of semilinear stochastic wave equations. *SIAM Journal on Mathematical Analysis*, 44 (2012), 906-925.
17. L. Quer-Sardanyons and S. Tindel. Pathwise definition of second order SDEs. *Stochastic Processes and their Applications* 122 (2012), no. 2, 466-497.
18. E. Nualart and L. Quer-Sardanyons. Gaussian estimates for the density of the non-linear stochastic heat equation in any space dimension. *Stochastic Processes and their Applications* 122 (2012), no. 1, 418-447.
19. R.C. Dalang and L. Quer-Sardanyons. Stochastic integrals for spde's: a comparison. *Expositiones Mathematicae* 29 (2011), 67-109.
20. D. Nualart and L. Quer-Sardanyons. Optimal Gaussian density estimates for a class of stochastic equations with additive noise. *Infinite Dimensional Analysis, Quantum Probability and Related Topics* 14 (2011), no. 1, 25-34.
21. X. Bardina, M. Jolis and L. Quer-Sardanyons. Weak convergence for the stochastic heat equation driven by Gaussian white noise. *Electronic Journal of Probability* 15 (2010), 1267-1295.
22. D. Nualart and L. Quer-Sardanyons. Gaussian density estimates for solutions to quasi-linear stochastic partial differential equations. *Stochastic Processes and their Applications* 119 (2009), 3914-3938.
23. D. Nualart and L. Quer-Sardanyons. Existence and smoothness of the density for spatially homogeneous SPDEs. *Potential Analysis* 27 (2007), 281-299.
24. L. Quer-Sardanyons and S. Tindel. The 1-d stochastic wave equation driven by a fractional Brownian sheet. *Stochastic Processes and their Applications* 117 (2007), 1448-1472.
25. L. Quer-Sardanyons and M. Sanz-Solé. Space semi-discretisations for a stochastic wave equation. *Potential Analysis* 24 (2006), no. 4, 303-332.
26. L. Quer-Sardanyons and M. Sanz-Solé. A stochastic wave equation in dimension 3: smoothness of the law. *Bernoulli* 10 (2004), no. 1, 165-186.
27. L. Quer-Sardanyons and M. Sanz-Solé. Absolute continuity of the law of the solution to the 3-dimensional stochastic wave equation. *Journal of Functional Analysis* 206 (2004), no. 1, 1-32.
28. L. Quer-Sardanyons and M. Sanz-Solé. Existence of density for the solution to the three-dimensional stochastic wave equation. *RACSAM Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat.* 97 (2003), no. 1, 63-68.

Research stays

Longer than 4 weeks:

1. Centre Interfacultaire Bernoulli at the Ecole Polytechnique Fédérale de Lausanne. 01/02/2012 - 16/02/2012 and 03/06/2012 - 21/06/2012. Financing: invitation of CIB in the framework of the thematic semester *Stochastic Analysis and Applications*.
2. Institut Galilée, Université Paris 13. 02/01/2011 - 02/02/2011. Financing: invited professor program of the Université Paris 13.
3. Hausdorff Research Institute for Mathematics in Bonn. 06/09/2010 - 31/12/2010. Financing: HIM grant for small groups of young researchers in the framework of the HIM Junior Trimester Program on Stochastics.
4. Dipartimento di Matematica, Università degli Studi di Trento. 15/10/2009 - 15/11/2009. Financing: postdoc grant of the Centro Internazionale per la Ricerca Matematica - Fondazione Bruno Kessler.
5. Department of Mathematics, University of Kansas. 23/08/2008 - 24/09/2008. Financing: Grant BE of the Catalan Government.
6. Institut Mittag-Leffler, Sweden. 15/11/2007 - 15/12/2007. Financing: postdoc grant of the Institut Mittag-Leffler in the framework of the semester program *Stochastic Partial Differential Equations*.
7. Institut de Mathématiques Elie Cartan de Nancy. 01/09/2005 - 31/08/2006. Financing: postdoc position of INRIA.
8. Institut de Mathématiques Elie Cartan de Nancy. Two months in the period 01/03/2005 - 31/05/2005. Financing: grant from the doctoral fellowship FPI.
9. Institut für Mathematik, Humboldt Universität Berlin. 03/05/2004 - 03/07/2004. Financing: grant from the doctoral fellowship FPI.
10. Institut für Mathematik, Humboldt Universität Berlin. 26/04/2003 - 26/07/2003. Financing: grant from the doctoral fellowship FPI.
11. Institut Galilée, Université Paris 13. 09/09/2001 - 06/10/2001. Financing: grant from the doctoral fellowship BRD of the Universitat de Barcelona.

Short stays (less than 4 weeks): Institut Elie Cartan Nancy (2004, 2006, 2009, 2010), Fachbereich Mathematik at the Universität Salzburg (2005, 2006), Ecole Polytechnique Fédérale de Lausanne (2007, 2009, 2015), Department of Mathematics at the University of Ottawa (2011), Mathematics Research Unit at the University of Luxembourg (2015), Department of Mathematics at Purdue University (2016), Department of Mathematics at the University of Oslo (2017), Institut National des Sciences Appliquées de Toulouse (2018), Centre Interfacultaire Bernoulli of the EPF de Lausanne (2019), Department of Mathematical Sciences at the Chalmers University of Technology (2023).

Contributions to conferences

1. *SPDEs with linear multiplicative fractional noise: continuity in law with respect to the Hurst index*. Invited talk. STORM Workshop 2022. University of Oslo, Norway, September 5-8, 2022.
2. *SPDEs with fractional noise in space: continuity in law with respect to the Hurst index*. Contributed talk. The 41st Conference on Stochastic Processes and their Applications 2019. Northwestern University, USA, July 8-12, 2019.

3. *Stochastic PDEs with fractional noise*. Invited talk at the session Recent trends on Random Dynamical Systems and Applications. II Joint Meeting Spain - Brazil in Mathematics. Universidad de Cádiz, December 11-14, 2018.
4. *Existence of Density for the Stochastic Wave Equation with Space-time Homogeneous Noise*. Invited talk. Workshop on Stochastic Analysis and Related Topics. University of Honk Kong, July 3-5, 2018.
5. *A fully discrete approximation of the 1d stochastic heat equation*. Invited talk at the session Numerical methods for S(P)DEs. 40th Conference on Stochastic Processes and their Applications. Gothenburg, Sweden, June 11-15, 2018.
6. *Intermittency for the Hyperbolic Anderson Model with rough noise in space*. Invited talk. Stochastic Partial Differential Equations - X. Levico Terme, Italy, May 30 - June 3, 2016.
7. *Intermittency for the Hyperbolic Anderson Model with rough noise in space*. Contributed talk. Barcelona-Toulouse Probability Days. Institut National des Sciences Appliquées de Toulouse. May 27-28, 2016.
8. *SPDEs with fractional noise in space with index $H < \frac{1}{2}$* . Contributed talk. 38th Conference on Stochastic Processes and their Applications. Oxford, July 13-17, 2015.
9. *A fully discrete approximation of the 1d stochastic wave equation*. Invited talk. Edinburgh Mathematical Society - Societat Catalana de Matemàtiques joint meeting. Institut d'Estudis Catalans, Barcelona. May 28-30, 2015.
10. *Stochastic pde's with fractional noise in space*. Invited talk. Swiss Probability Seminar. Universität Bern. May 6, 2015.
11. *SPDEs with fractional noise in space with index $H < \frac{1}{2}$* . Invited talk. Workshop on new advances in Malliavin Calculus, SPDEs and BSDEs and applications to Finance. Institut National des Sciences Appliquées de Toulouse. March 5-6, 2015.
12. *The Stratonovich heat equation: a continuity result and weak approximations*. Invited talk. Workshop on Stochastic Processes and Differential Equations in Infinite Dimensional Spaces, King's College London. March 31 - April 3, 2014.
13. *Malliavin calculus applied to semilinear dissipative parabolic SPDEs*. Contributed talk. International Conference on Probability and Statistics, Ecole Nationale des Sciences Appliquées de Marrakech. December 17-20, 2013.
14. *Malliavin calculus applied to semilinear dissipative parabolic SPDEs*. Contributed talk. Workshop on Finance and Stochastics, Institut de Matemàtica de la Universitat de Barcelona. November 26-27, 2013.
15. *Study of the Density for Semilinear Dissipative Parabolic SPDEs*. Invited talk. Tercera Jornada SCM de Joves Investigadors en Matemàtiques, Institut d'Estudis Catalans. October 19, 2012.
16. *Study of the Density for Semilinear Dissipative Parabolic SPDEs*. Invited talk. 4th Iberian Mathematical Meeting, Universidad de Valladolid. October 5-7, 2012.
17. *Study of the Density for Semilinear Dissipative Parabolic SPDEs*. Invited talk. Stochastic Analysis and Applications, Centre Interfacultaire Bernoulli, Lausanne. June 4-8, 2012.
18. *The Stratonovich heat equation: a continuity result and weak approximations*. Invited talk. Stochastic Analysis and Stochastic Partial Differential Equations, Banff International Research Station for Mathematical Innovation and Discovery, Canada. April 1-6, 2012.
19. *Gaussian density estimates for SPDEs*. Invited talk. Recent Developments in Stochastic Analysis, Centre Interfacultaire Bernoulli, Lausanne. January 30 - February 3, 2012.

20. *Convergencia en ley para la ecuación del calor estocástica*. Invited talk. II Encuentro Conjunto RSME (Real Sociedad Matemática Española) - SMM (Sociedad Matemática Mexicana), Torremolinos, España. January 17-20, 2012.
21. *Weak convergence for the stochastic heat equation driven by Gaussian white noise*. Invited talk. The ACMAC Workshop on Stochastic Partial Differential Equations, Heraklion, Greece. June 13-17, 2011.
22. *Pathwise definition of second order SDEs*. Invited talk. Seventh Seminar on Stochastic Analysis, Random Fields and Applications, Ascona, Switzerland. May 23-27, 2011.
23. *Gaussian density estimates for a class of stochastic equations with additive noise*. Contributed talk. International Conference on Malliavin Calculus and Stochastic Analysis. An event in honor of Professor David Nualart Lawrence (Kansas), USA. March 19-21, 2011.
24. *Weak convergence for the stochastic heat equation driven by Gaussian white noise*. Contributed talk. ICM Satellite Conference on Probability and Stochastic Processes, Bangalore, India. August 13-17, 2010.
25. *Weak convergence for the stochastic heat equation driven by Gaussian white noise*. Poster. Stochastic Partial Differential Equations, Isaac Newton Institute for Mathematical Sciences, Cambridge. January 4-8, 2010.
26. *Gaussian density estimates for the stochastic heat equation in high dimensions*. Contributed talk. 33rd Conference on Stochastic Processes and Their Applications, Berlin. July 27-31, 2009.
27. *Gaussian density estimates for the stochastic heat equation in high dimensions*. Contributed talk. International Conference on Stochastic Analysis and Random Dynamical Systems, Lviv, Ukraine. June 14-20, 2009.
28. *Existence and smoothness of the density for spatially homogeneous SPDEs*. Invited talk. Applications of Partial Differential Equations, Mittag-Leffler Institut, Sweden. November 19-23, 2007.
29. *The 1-d stochastic wave equation driven by a fractional Brownian sheet*. Contributed talk. International Multidisciplinary Workshop on Stochastic Modeling, Sevilla, España. June 25-29, 2007.
30. *Existence and smoothness of the density for spatially homogeneous SPDEs*. Invited talk. Swiss Probability Seminar, Bern. June 6, 2007.
31. *The 1-d stochastic wave equation driven by a fractional Brownian sheet*. Invited talk. International Colloquium on Stochastic and Potential Analysis URASCM, Hammamet, Tunisia. March 26-29, 2007.
32. *Space semi-discretisations for a stochastic wave equation*. Invited talk. ESF-Exploratory Workshop: Computational Aspects of Stochastic Partial Differential Equations. Salzburg, Austria. September 17-21, 2006.
33. *The 1d stochastic wave equation driven by a fractional Brownian motion*. Poster. International Congress of Mathematicians, Madrid. August 22-30, 2006.
34. *The 1d stochastic wave equation driven by a fractional Brownian motion*. Poster. 31st Conference on Stochastic Processes and their Applications, Paris. July 17-21, 2006.
35. *Malliavin calculus applied to the three-dimensional stochastic wave equation*. Contributed talk. Third Conference on Stochastic Analysis and Probability, Marrakech, Morocco. December 13-17, 2005.

36. *Malliavin calculus applied to the three-dimensional stochastic wave equation*. Contributed talk. Journées de Probabilités, Nancy, France. September 5-9, 2005.
37. *The stochastic wave equation in dimension three: smoothness of the law*. Poster. Stochastic Partial Differential Equations and Applications, Levico Terme, Italy. January 5-10, 2004.
38. *Existence of density for the three-dimensional stochastic wave equation*. Contributed talk. XXXIIème Ecole d'Eté de Calcul de Probabilités, Saint-Flour, France. July 7-24, 2002.

Seminar talks

1. *Stochastic PDEs with fractional noise*. Computational and Applied Mathematics seminar at Chalmers University of Technology. June 7, 2023.
2. *Stochastic PDEs with fractional noise*. Probability Seminar at King's College London. December 5, 2022.
3. *Existence of density for the stochastic wave equation with space-time homogeneous Gaussian noise*. Probability Seminar of the Ecole Polytechnique Fédérale de Lausanne. December 17, 2019.
4. *Existence of density for the stochastic wave equation with space time homogeneous Gaussian noise*. Barcelona Probability Seminar. January 21, 2019.
5. *The hyperbolic Anderson model with rough noise in space*. Stochastic Analysis Seminar at the University of Oslo. April 27, 2017.
6. *The hyperbolic Anderson model with rough noise in space*. Purdue Probability Seminar at Purdue University. December 6, 2016.
7. *SPDEs with fractional noise in space with index $H < 1/2$* . Stochastic Analysis Seminar at Imperial College London. December 8, 2015.
8. *SPDEs with fractional noise in space*. Probability Seminar, University of Luxembourg. September 21, 2015.
9. *SPDEs with fractional noise in space with index $H < 1/2$* . Barcelona Probability Seminar. October 22, 2014.
10. *The Stratonovich heat equation: a continuity result and weak approximations*. Barcelona Probability Seminar. March 5, 2014.
11. *Approximations in law for the stochastic heat equation*. Seminar of the Basque Center for Applied Mathematics. May 17, 2012.
12. *Weak convergence for the stochastic heat equation driven by Gaussian white noise*. Séminaire de Probabilités of the Institut Galilée Université Paris 13. January 19, 2011.
13. *Stochastic integrals and SPDEs I & II*. Stochastics seminar of the Junior Trimester Program on Stochastics at the Hausdorff Research Institute for Mathematics (Bonn, Germany), 2-hours session. December 13, 2010.
14. *Weak convergence for the stochastic heat equation driven by Gaussian white noise*. Oberseminar Stochastics at the Universität Bonn, Germany. October 28, 2010.
15. *Optimal Gaussian density estimates for a class of stochastic equations with additive noise*. Barcelona Probability Seminar. April 7, 2010.
16. *The stochastic heat equation in high dimensions: existence of the density and Gaussian estimates*. Seminario Dipartimento di Matematica at the Università degli Studi di Trento. November 10, 2009.

17. *The stochastic heat equation in high dimensions: existence and Gaussian estimates for the density.* Probability Seminar of the School of Mathematics at the University of Manchester. September 30, 2009.
18. *Gaussian Density Estimates for Solutions to Quasi-Linear SPDEs.* Barcelona Probability Seminar. April 1, 2009.
19. *Gaussian Density Estimates for Solutions to Quasi-Linear SPDEs.* Séminaire de Probabilités de l'Ecole Polytechnique Fédérale de Lausanne. March 10, 2009.
20. *Probability densities and SPDEs.* Séminaire de Probabilités of the Institut Elie Cartan Nancy, France. January 22, 2009.
21. *Stochastic PDEs driven by a fractional noise.* Probability Seminar at the University of Kansas, USA. September 3, 2008.
22. *On stochastic integration with respect to Gaussian noises.* Postgraduate seminar of the SPDE semester at the Mittag-Leffler Institut, Sweden. December 5, 2007.
23. *SPDEs in high dimensions: from the stochastic integral to the smoothness of the density.* Barcelona Probability Seminar. October 31, 2007.
24. *The 1-d stochastic wave equation driven by a fractional Brownian motion.* Séminaire de Probabilités of the Institut Elie Cartan Nancy, France. June 15, 2006.
25. *The 1-d stochastic wave equation driven by a fractional Brownian motion.* Seminar of the Mathematics Department, Universität Salzburg, Àustria. June 1, 2006.
26. *The 1-d stochastic wave equation driven by a fractional Brownian motion.* Barcelona Probability Seminar. March 22, 2006.
27. *Space semi-discretisations for a stochastic wave equation.* Séminaire de théorie et applications numériques des processus stochastiques, INRIA Sophia Antipolis, France. February 17, 2006.
28. *Approximation of the solution to a stochastic wave equation.* Seminar of the Mathematics Department, Universität Salzburg, Àustria. January 25, 2005.
29. *On the approximation of the solution to a one-dimensional stochastic wave equation.* Séminaire de Probabilités of the Institut Elie Cartan Nancy, France. November 18, 2004.
30. *Approximations for the solution to a stochastic wave equation.* Barcelona Probability Seminar. November 10, 2004.
31. *On the approximation of solutions of SPDE's driven by space-time white noise.* Seminar on Stochastic Analysis and Finance, Humboldt Universität Berlin. July 1, 2004.
32. *Parabolic SPDEs with non-Lipschitz drift: regularity of the law of the solution.* Barcelona Probability Seminar. October 15, 2003.
33. *Smoothness of the law for the three dimensional stochastic wave equation.* Berliner Probability Theory Colloquium, Humboldt Universität Berlin. June 4, 2003.
34. *On the three space dimensional stochastic wave equation perturbed by a white noise.* Séminaire de Probabilités, Institut Galilée de la Université Paris 13. September 26, 2001.

Courses delivered (postgraduate level)

1. *Stochastic Analysis*, in the Master on Mathematics for Finance at the Universitat Autònoma de Barcelona. Since 2016, 24 hours each Spring semester.
2. *Introduction to Stochastic Partial Differential Equations*. Institut Galilée de la Université Paris 13. January 2011. 4 hours.
3. Tutorials on *Malliavin Calculus applied to Stochastic Partial Differential Equations*. LMS-EP SRC Short Course Stochastic Partial Differential Equations, Imperial College London. July 2008. 3 hours.
4. *Introduction to Stochastic Partial Differential Equations*. Department of Mathematics at the Universitat Autònoma de Barcelona. June 2008. 5 hours.

Editorial activities

- Editor of the volume *Khoshnevisan, Davar; Schilling, René. From Lévy-type processes to parabolic SPDEs. Advanced Courses in Mathematics. CRM Barcelona. Birkhäuser/Springer, Cham, 2016.*
- Associate Editor of the volume *Malliavin Calculus and Stochastic Analysis: A Festschrift in Honor of David Nualart*, Springer Proceedings in Mathematics & Statistics 34, 2013.
- Referee for the following journals: Acta Applicandae Mathematicae, Annals of Probability, Central European Journal of Mathematics, Electronic Communications in Probability, Electronic Journal of Probability, International Journal of Computer Mathematics, Journal of Mathematical Analysis and Applications, Journal of Nonlinear Analysis Series A: Theory, Methods & Applications, Numerical Mathematics: Theory, Methods and Applications, SIAM Journal on Mathematical Analysis, Statistics and Probability Letters, Stochastics, Stochastic Analysis and Applications, Stochastic Processes and their Applications, Stochastics and Dynamics, Taiwanese Journal of Mathematics and many conference proceedings.

Supervision of PhD students

1. Juan Pablo Roberto Márquez. Thesis: Weak Approximation of the Complex Brownian Sheet from a Lévy Process and Applications to SPDEs. PhD advisors: Xavier Bardina and Lluís A. Quer. Defended in January 23, 2020 at the Universitat Autònoma de Barcelona.
2. Luca Maria Giordano. Thesis: Stochastic Equations with Fractional Noise: Continuity in Law and Applications. Advisors: Lluís A. Quer and Stefania Ugolini. Defended in February 21, 2020 at the Università degli Studi di Milano.

Participation in Master and PhD committees

1. Member of the PhD-thesis committee of Adrián Hinojosa (advisor: Marta Sanz-Solé). Universitat de Barcelona, April 2022.
2. *Rapporteur* of the PhD-thesis of Rola Zintout (advisor: Ivan Nourdin). Université de Lorraine, September 2015.
3. Member of the Master-thesis committee of Ioannis Nomikos (advisor: Aureli Alabert). Universitat Autònoma de Barcelona, May 2014.
4. Member of the PhD-thesis committee of Francisco Delgado (advisor: Marta Sanz-Solé). Universitat de Barcelona, May 2013.

5. Member of the PhD-thesis committee of Víctor Ortiz (advisor: Marta Sanz-Solé). Universitat de Barcelona, March 2012.

Organization of scientific events

1. Conference on Stochastic Analysis and Stochastic Partial Differential Equations. A celebration of Marta Sanz-Solé's Mathematical Legacy. Centre de Recerca Matemàtica, May 30 - June 3, 2022. Member of the Organizing Committee.
2. Workshop on the Theory and Applications of Stochastic Partial Differential Equations. The Fields Institute for Research in Mathematical Sciences (Toronto), June 10-14, 2019. Member of the Organizing Committee.
3. Workshop Barcelona-Toulouse Probability Days. Centre de Recerca Matemàtica, October 4-5, 2018. Member of the Organizing Committee.
4. 4th Barcelona Summer School on Stochastic Analysis. Centre de Recerca Matemàtica, July 9-13, 2018. Member of the Organizing Committee.
5. Meeting of the Catalan, Spanish, Swedish Math Societies. University of Umea, June 12-15, 2017. Co-organizer of the special session SPDEs: from Theory to Simulations.
6. Thematic Day on Stochastic Analysis, in the framework of the Barcelona Probability Seminar. Facultat de Matemàtiques de la Universitat de Barcelona. January 25, 2017. Co-organizer.
7. 3rd Barcelona Summer School on Stochastic Analysis. Centre de Recerca Matemàtica, June 27 - July 1, 2016. Member of the Organizing Committee.
8. Barcelona-Toulouse Probability Days. INSA Toulouse, May 27-28, 2016. Member of the Organizing Committee.
9. Barcelona Probability Seminar. Co-organizer since September 2014.
10. 2nd Barcelona Summer School on Stochastic Analysis. Centre de Recerca Matemàtica, July 7-11, 2014. Member of the Organizing Committee.
11. Congreso de Jóvenes Investigadores de la Real Sociedad Matemática Española. Universidad de Sevilla, September 16-20, 2013. Co-organizer of the special session *Probabilidad y Modelos Aleatorios*.
12. International Conference on Malliavin Calculus and Stochastic Analysis. An event in honor of Professor David Nualart. University of Kansas, March 19-21, 2011. Member of the Organizing Committee.
13. 6th World Congress of the Bernoulli Society and 67th Annual Meeting of the Institute of Mathematical Statistics. Barcelona, July 26-31 2004. Responsible of the coordination of volunteers.