December 2020

CARMONA, RENE ANDRE

Paul M. Wythes '55 Professor of Engineering and Finance
Bendheim Center for Finance
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- Executive Member of the Program in Applied and Computational Mathematics
- Associated Member of the Department of Mathematics

Personal Data:

Born: August 6, 1947 Marseille (France)
Citizenship: US
Married (Debra) , 3 daughters (Stéphanie, Chelsea, Chanel)

Research Areas:

Stochastic Analysis, Stochastic Control and Stochastic Games, Financial Data Analysis, Computational & Environmental Finance.

Education:

- "Licence" and "Maitrise" of Mathematics, Univ. of Marseille, June 1968
- "C.A.P.E.S." and "Agregation" of Mathematics (federal degrees) Paris, June 1969
- "These d'Etat" in Probability, Univ. of Marseille, June 1977

Positions:

- Assistant de Mathématiques, Univ. Aix-Marseille II, 1969 - 1972
- Maitre Assistant de Mathématiques, Univ. Aix-Marseille II, 1972 - 1978
- Maitre de Conférences de Mathématiques, Univ. Saint Etienne, 1978 - 1979
- Professeur de Mathématiques, Univ. Saint Etienne, 1979 - 1981
- Visiting Assistant Professor, Univ. California, Irvine, 1981 - 1982
- Assistant Professor, Univ. California, Irvine, 1982 - 1983
- Associate Professor, Univ. California, Irvine, 1983 - 1984
- Professor, Univ. California, Irvine, 1984 - 1995
- Professor, Princeton Univ. 1995 -

Simultaneously:

- ▷ Chairman of the I.R.E.M. (Res. Inst. in Math. Education), 1976-1978
- ▷ Chairman of the Department of Mathematics, Univ. Saint Etienne, 1978-1981.
- ▷ Scientific Consultant for the A.D.I. (Computer Science Agency) in the Ministery of Industry of the French Government, 1980-1981.
- ▷ Member of the Department of Information and Computer Science. U.C. Irvine 1993-95
- ▷ Chair of the Princeton University Committee on Statistical Studies (1995-2005)
- ▷ Director of the Statistics & Operations Research Program, C.E.O.R., Princeton University. 1997 - 1998
- ▷ PACM Executive Committee, Princeton University. 1997 -
- ▷ Director of Graduate Studies, ORFE Princeton University. 1999 - 2000
- ▷ Director of Graduate Studies, Bendheim Center for Finance, Princeton University. 2000 - 2015, 2018 -
- ▷ Acting Chair, ORFE, Princeton University. 2001 - 2002
- ▷ Chair, ORFE, Princeton University. 2015 - 2018

Extended Research Visits

- ▷ Cornell Univ. Prof. L. Gross, 1/3/76-6/30/76. (French Foreign Office support)
- ▷ Princeton Univ. Prof. E.H. Lieb, 3/15/78 - 5/15/78 (supported by N.S.F.)
- ▷ Princeton Univ. Prof. B. Simon, 2/1/80 - 6/30/81 (supported by N.S.F.)
- ▷ I.H.E.S., Prof. J. Frolich, 5/1/81 - 6/30/81 (supported by I.H.E.S.)
- ▷ Aarhus Univ. Prof. P. T. Jorgensen, 6/15/82 - 7/15/82 (supported by Aarhus Univ.)
- ▷ CPT, C.N.R.S., Marseille, 7/15/82 - 9/15/82 (supported by C.N.R.S.)
- ▷ University Paris I Sorbonne, 1/13/2001 - 1/31/2001 (supported by C.N.R.S.)
- ▷ University Paris X Dauphine, 6/13/2002 - 6/30/2002 (supported by C.N.R.S.)
- ▷ VIV Institute of Mathematics and Applications, Minneapolis 4/1/2004 - 6/30/2004
- ▷ University Paris X Dauphine, Jan. & June 2008 (supported by Chaire EDF)
- ▷ University Nice & INRIA Sophia-Antipolis, March-April 2010 (supported by CNRS)
- ▷ Fields Institute Focus Program on Energy and Commodities, August 2013
- ▷ University Nice & INRIA Sophia-Antipolis, January 2014
- ▷ University Nice, January 2016
- ▷ Simons Institute (UC Berkeley Campus), Fall 2020

Awards, Honors:

- ▷ Fellow of the Institute of Mathematical Statistics (IMS) 1985
- ▷ International Conference on Stochastic Analysis & Applications: from Mathematical Physics to Mathematical Finance, Princeton NJ, June 2008. (in honor of 60-th Birthday)
- ▷ Fellow of the Society of Industrial and Applied Mathematics (SIAM) 2009
- ▷ J.L. Doob Prize of the American Mathematical Society (Nov. 2019) awarded every 3 years, https://www.ams.org/tools/news?news_id=5596
- ▷ Fellow of the American Mathematical Society, class of 2021

`http://www.ams.org/cgi-bin/fellows/fellows_by_year.cgi`

Membership

AMS, IMS, SIAM, Bachelier Society

Consulting / Advising :

- ▹ Northrop, Hughes, Tokos Inc, Medical Diagnostics, Axcom, Lattice Ltd, Willowbridge, Chase, Gordian, Enron, BNP/Paribas, LDE, DirectEnergy, Insightful, Calpine, Morgan Stanley, J.P. Morgan, NRG
- ▹ Academic Outreach Program JPMorgan Chase, 2005–2008
- ▹ Advisory Board of Dow Jones Steel Index
- ▹ Executive Courses: Splus (Jan 2000, July 2001, April 2005), Munich Re (Feb 2001), ENRON (July 2001), Splus (July 2001), Renaissance Re (Feb 2002), Nationwide (Oct. 2004)
- ▹ SSP Scientific Committee, 2006 -
- ▹ Advisory Board of Oxford Man Institute of Mathematical Finance, 2007-2016
- ▹ Advisory Board of Institute of Mathematics & Applications (IMA), Minneapolis, 2011-2016
- ▹ Schonfeld Quantitative Conference, Sept. 26, 2017
- ▹ Oxford (Math Department) Electorial Board, October 4-6, 2017
- ▹ Scientific Board of the Risk Foundation (Paris), 2015 -
- ▹ Council of the Bachelier Finance Society 2016 -
- ▹ AMS Short Course Committee 2016 - 2017, 2018 (chair)
- ▹ Duality Quantitative Conference, Jan. 22, 2020
- ▹ Advisory Board of IMSI (NSF Institute for Mathematical and Statistical Innovation, University of Chicago) 2020 -

`https://www.imsi.institute/scientific-advisory-committee/`

Invited Short Courses / Public Lectures (last 10 years):

- ▹ IPAM New Directions in Financial Mathematics, Jan. 5-9, 2010, Los Angeles (3 lectures)
- ▹ IMA New Directions Course: Mathematical Models for Climate Change, and Energy and the Emissions Markets, IMA, Minneapolis, June 5-18, 2010 (10 lectures)
- ▹ 6th Bachelier Congress, Toronto, Ontario Canada, June 22-26, 2010
- ▹ EDF-FIME Conference, HEC Chateau Paris, June 28-29, 2010
- ▹ SOCCER Conference on Commodities, Heidelberg, July12-14, 2010
- ▹ Vienna Stochastic Analysis Conference, Vienna, July 14-16 2010
- ▹ Short Course on Commodities and the Emissions Markets, Jan. 17-18 2011, Vienna (5 lectures)
- ▹ Short Course on Commodities, Jun. 13, 2011, Oxford (3 lectures)
- ▹ Bernoulli Public Lecture, EPF Lausanne March 15, 2012
- ▹ Short Course on High Frequency Trading, 8th International Purdue Symposium on Statistics, June 21, 2012 (4 lectures)
- ▹ Short Course on High Frequency Trading, Jun. 13, 2013, Princeton Summer School in Financial Mathematics (5 lectures)

- ▷ Short Course on Mean Field Games and Financialization of Commodities, Fields Institute Focus Program, August 2013 (5 lectures)
- ▷ Course (8 x 90mn lectures) on Stochastic Games in Financial Mathematics, 7th EMS Summer School in Financial Mathematics (Oxford, Sep. 2014)
- ▷ IPAM Short Course on High Frequency Markets, Mar. 10-13, 2015
- ▷ IPAM Short Course on Trading Commodity Indexes, May. 4-8, 2015
- ▷ CFM Imperial College Distinguished Lectures (3) London, June 2016
- ▷ Minerva Lectures (Columbia University) 4 lectures, Oct-Nov. 2016
- ▷ Boeing Lecture University of Washington, Seattle Jan. 2017
- ▷ Joint ETH-University Math Colloquium, Zúrich, November 14, 2017
- ▷ Briton Lectures (Mc Master University) 4 lectures, March 5 - 9, 2018
- ▷ Menger Lectures (Illinois Institute of Technology, Chicago) 3 lectures, March 25 - 27, 2018
- ▷ AMS Short Course Lectures (Denver, AMS Annual Meeting) 2 lectures, Jan. 2020
- ▷ Seminar on Stochastic Process SSP2020 (Michigan State University, East Lansing MI) 3 hr, March 4, 2020
- ▷ Purdue Fall 2020 Distinguished Seminar (Purdue University), Nov. 10, 2020
- ▷ Network Games (IMSI Chicago University), 6 lectures, June 2021

Invited Lectures (last 10 years)

- ▷ Fields Opening Conference on Financial Math, Fields Institute, Toronto, Jan. 11-16, 2010
- ▷ Essen - RWE Energy Day, Essen-Duissburg University, Essen, Feb. 5, 2010
- ▷ L.Gross Birthday Conference, Cornell University, Ithaca NY, Apr. 11-12, 2010
- ▷ NYSE Europlace Conference, April 26, 2010, New York NY
- ▷ 6th Bachelier Congress, Toronto, Ontario Canada, June 22-26, 2010
- ▷ EDF-FIME Conference, HEC Chateau Paris, June 28-29, 2010
- ▷ SOCCER Conference on Commodities, Heidelberg, July12-14, 2010
- ▷ Vienna Stochastic Analysis Conference, Vienna, July 14-16 2010
- ▷ 2nd South Pacific Conference on Mathematics, Nouméa New Caledonia, Aug. 30 - Sep. 4, 2010
- ▷ 2nd Essen Conference on Commodities, Essen-Duissburg University, Essen, Oct. 6-7, 2010
- ▷ Sixth Oxford-Princeton Conf. in Financial Mathematics, Oct. 8-9, 2010, OMI Oxford
- ▷ NSF Workshop on Sustainability, Nov. 15-17, 2010, DIMACS, Rutgers Univ. NJ
- ▷ Third SIAM Conf. in Financial Mathematics, Nov. 19-20, 2010, San Francisco CA
- ▷ AMS National Meeting, Jan. 7-8, 2011. New Orleans, LA
- ▷ Fifth Bachelier Conference dedicated to M. Musiela, Jan. 19-23, 2011. Metabief FRA
- ▷ Oberwolfach Conference in Stocahstic Analysis and Financial Mathematics, Jan. 24-29, 2011. Oberwolfach, Germany
- ▷ Villars de Lans International Conference in Statistics (in honor of A.. Antoniadis), March 24-25, 2011. Villars de Lans, France
- ▷ Stochastic Analysis, Random Fields and Applications. Seventh Ascona Conference, May 23-25, 2011. Ascona CH

- ▷ Stochastic Processes and Applications International Conference, June 19-24, 2011. Oaxaca, Mexico
- ▷ Risk Day, Sept. 9, 2011, Zürich, ETH
- ▷ International Conference on Stochastic PDEs, Sept. 12-15, 2011, ETH Zürich, CH
- ▷ Claremont Energy Conference, Oct.7, 2011, Claremont, CA
- ▷ International Conference of the Swiss Finance Institute, Oct. 19-21, 2011, Lausanne, CH
- ▷ International Conference on Stochastic PDEs, Sept. 12-15, 2011, ETH Zürich, ETH
- ▷ 3rd Humboldt-Princeton Conf. in Financial Econometrics, Oct. 28-29, 2011, Berlin, Germany
- ▷ Conference in Honor of Freddy Delbaen September 24-28, 2012, Zürich, CH
- ▷ International Conference on Mean Field Games, Nov. 12-13, 2012, IMA Minneapolis
- ▷ High Frequency International Conference, April 3-5, 2013, London, UK
- ▷ International Conference on BSDEs, May 22-24, 2013, Rennes, FR
- ▷ Financial Mathematics International Conference, June 4-7, 2013. Dublin, IR
- ▷ Stochastic Processes and Applications International Conference, July 29- Aug. 2, 2013. Boulder, CO
- ▷ Conference in Honor of Terry Lyons, October 23-27, 2013, Oxford, UK
- ▷ Essen - RWE Third Energy Conference, Oct. 9-12, 2013, Essen-Duissburg GE,
- ▷ Finance of Sustainable Systems Conference, Oct. 24-25, 2013, Paris Dauphine.
- ▷ MCFAM Distinguished Lectures, University of Minnesota, Dec. 6, 2013
- ▷ SIAG Conference on Financial Mathematics, Nov. 13-15, 2014, Chicago
- ▷ Mean Field Game workshop, Cambridge, May. 12-13, 2015
- ▷ International Conference in Honor of S. Shreve, Pittsburgh, Jun. 1-5, 2015
- ▷ 3rd International Conference on Mean Field Games, Paris, Jun. 10-12, 2015
- ▷ 5th ANNUAL IMS-FIPS WORKSHOP, Rutgers, Jun. 25-27, 2015
- ▷ AMaMeF SwissQuote Conference, EPFL Lausanne, Sep. 7-11, 2015 (talk + panel)
- ▷ Deterministic and Stochastic Partial Differential Equations, Brown University, Nov. 5-7, 2015
- ▷ Deutsche Bank Quant Conference, New York, Oct. 15, 2015
- ▷ Office of Financial Research (Treasury Department, Washington) January 2016
- ▷ Eastern States Financial Mathematics Conference, WPI, March 2016
- ▷ Ann Arbor Conference in Financial Mathematics, June 2016
- ▷ Berlin-Princeton-Singapore Conference on Financial Mathematics, July 2016
- ▷ Lake Arrowhead, IPAM Long Program Reunion, December 12, 2016
- ▷ Recent Advances in Financial Mathematics, Paris 10-13 January 2017
- ▷ Duncan Lectures, John Hopkins March 9 -10, 2017
- ▷ Stochastic Systems, INRIA, Sophia Antipolis FRA, March 30 - 31, 2017
- ▷ CFMAR 10th Anniversary Conference, Santa Barbara, May 18 - 20, 2017
- ▷ 10th Oxford- Princeton Workshop in Stochastic Analysis, Oxford, May 25 - 26, 2017
- ▷ 4th Workshop on Mean Field Games, Roma, June 13-16, 2017
- ▷ ICERM Conference on Robust Methods, Providence, RI, June 19 - 23, 2017
- ▷ CIRM Conf. on Stochastic Systems & Mean Field Games, Luminy, July 17 - 21, 2017
- ▷ CIRM Conf. on Stochastic Analysis and Financial Mathematics, Luminy, November 15-17, 2017

- ▷ ANR Workshop on Mean Field Games (Tours, France) March 15-17, 2018
- ▷ Mathematics and Economics: Trends and Explorations. ETH Zürich, June 4-8, 2018
- ▷ ANR Workshop on Mean Field Games (Paris, France) December 17-18, 2018
- ▷ International Conference in Honor of J.M. Lasry, Paris, Jun. 27, 2018
- ▷ International Conference on MFGs, Edinburgh, April 2-5, 2019
- ▷ SIAM International Conference on Financial Math, Toronto CA, June 4-7, 2019
- ▷ International Conference in Honor of S. Howisson, Oxford, Jun. 28, 2018
- ▷ International Conference on MFGs, Trento, Sept. 9-13, 2019
- ▷ SIAM International Conference on PDEs & Analysis, La Quinta CA, Dec. 11-14, 2019
- ▷ IMSI International Conference on MFGs, Chicago, Feb. 5-8, 2020
- ▷ SIAG FME, Sept. 17, 2020 (virtual)
- ▷ Informs Annual Meeting, Nov. 12, 2020 (virtual)

Panel Moderator / Discussant:

PU-China Workshop on Environment, April 2008, Princeton, NJ
Second SIAM Conference on Financial Mathematics, November 21-22, 2008, New Brunswick, NJ
Business Today Conference, Nov. 22, 2009, New York, NY
Fields Institute Workshop on Commodities and Emissions, April 9-10, 2010, Toronto Canada
ORFE@10, Economics of Energy and Climate Change, Princeton, NJ, April 23, 2010
EDF-FIME Conference, HEC Chateau Paris, June 28-29, 2010,
Fields Institute Electricity and Commodity Markets, Aug. 15, 2013, Toronto Canada
Fields Institute Games, Equilibriums and the Environment Markets Workshop, Aug. 28, 2013, Toronto Canada
Fields Institute Workshop on New Economic Thinking, Dec. 1, 2013, Toronto Canada
PIMS Workshop on Systemic Risk, July 28-30, 2014, Vancouver Canada
AMaMeF SwissQuote Conference, EPFL Lausanne, Sep. 7-11, 2015
QSV Risk.net Panel, July. 15, 2020 (virtual)
Ascona Stochastic Analysis Conference, COVID Panel, July 3, 2020 (virtual)
NYU Shangai, Panel on MFGs in Economics, Dec. 22, 2020 (virtual)

International Conference Organization:

- ▷ "Stochastic Processes and Applications to Differential Operators in Mathematical Physics," held in the C.I.R.M. (International Center for Mathematical Meetings), Marseille, August 24-28, 1981
- ▷ "First RUAC Symposium on Advanced Computing" Irvine, June 12, 1993
- ▷ (with B. Rozovskii) "First Winter School / Workshop on Stochastic Partial Differential Equations: Theory & Applications," Los Angeles, Jan. 1996.
- ▷ "First Workshop on Energy Risk in the Deregulated Electricity Markets" Princeton NJ, April 5, 2001.
- ▷ "Particle Systems and Filtering" Paris, June 18-20, 2001

- ▷ "Princeton Workshop on Price Risk and the Future of the US Electricity Markets" Princeton NJ, October 10, 2003.
- ▷ "Princeton International Conference on Credit Risk" Princeton NJ, September 16-18, 2004.
- ▷ Econometrics of High Frequency Data, June 23-26, 2005, Bonita Canyon FA (co-organizer with Y. Ait-Sahalia and P. Mykland)
- ▷ Third Oxford-Princeton Conference on Financial Mathematics November 10-12, 2005, Princeton NJ
- ▷ First Cambridge-Princeton Conference in Finance, September 16-17, 2005, Princeton NJ (co-organizer with Y. Ait-Sahalia)
- ▷ First SIAM Conference on Financial Mathematics, July 9-12, 2006, Boston MA (co-organizer with T. Zariphopoulou)
- ▷ Applications of Risk Measures and Robust Control in Finance, Sept. 6-7, 2006, Princeton NJ (co-organizer with Y. Ait-Sahalia)
- ▷ Second Princeton Credit Risk Conference, May 23-24, 2008, Princeton NJ (joint with R. Sircar)
- ▷ Volatility, October 10-11, 2008, Huntington Beach CA (co-organizer with Y. Ait-Sahalia)
- ▷ Second SIAM Conference on Financial Mathematics, November 21-22, 2008, New Brunswick, NJ (co-organizer with P. Feehan)
- ▷ First MSRI Conference on Sustainable Systems, May 4-8, 2009, Berkeley CA (co-organizer)
- ▷ New Directions in Financial Mathematics, January 5-9, 2010, IPAM, Los Angeles CA
- ▷ Energy and Emissions Markets Workshop, Fields Institute, April 9-10 2010, Toronto Canada
- ▷ IMA New Directions Course: New Mathematical Models in Economics & Finance, IMA, Minneapolis, June 5-18, 2010
- ▷ Oxford Man Institute Workshop on Commodities, Jun. 13-15, 2011, Oxford
- ▷ MiniSymposium on Stochastic Games, ICIAM, July 18-22, 2011, Vancouver, Canada
- ▷ Seventh Oxford-Princeton Conf. in Financial Mathematics, April, 2012, Princeton
- ▷ The Mathematics of the New Financial Systems, IMA Minneapolis, May 17-19, 2012
- ▷ MiniSymposium on Equilibrium Models for the Commodity Markets, 4th SIAG FME Conf. July 18-22, 2012, Minneapolis,
- ▷ Fields Institute Games, Equilibriums and the Environment Markets Workshop, Aug. 2013, Toronto Canada
- ▷ Eighth Oxford-Princeton Conf. in Financial Mathematics, March, 2014, Oxford
- ▷ Third Oberwolfach Conf. in Financial Mathematics, May 4 - 10, 2014, Germany
- ▷ PIMS Conference on Systemic Risk, July 28 - 31, 2014, UBC Vancouver, Canada
- ▷ SIAG Conference on Financial Mathematics, 4 sessions on Mean Field Games, Nov. 13-15, 2014, Chicago
- ▷ High Frequency Markets, LOBs, and Optimal Execution, IPAM, April 13-17, 2015, Los Angeles, CA
- ▷ Financialization of the Commodity Markets, IPAM, May 4 - 8, 2015, Los Angeles, CA
- ▷ Forensic Analysis of Financial Data, IPAM, May 18 - 22, 2015, Los Angeles, CA
- ▷ Princeton/Dauphine Commodity Markets Workshop April 8-10, 2016

- ▷ 9th World Congress of the Bachelier Finance Society, Crown Plaza Hotel New York, NY. July 15 20, 2016 (350 participants)

International Summer School / (long) Thematic Program Organization:
- ▷ First Princeton Summer School in Financial Mathematics, June 16 - 29, 2013
- ▷ PIMS Summer School on Systemic Risk, July 21 - 25, 2014, UBC Vancouver, Canada
- ▷ IPAM Thematic Program on Financial Mathematics. Feb - June 2015, UCLA, Los Angeles, CA (including 5 workshops)
- ▷ IPAM Conference on Mean Field Games. UCLA, August 28 - September 1, 2017

Review Panels:
- ▷ NSF Review Panels (1995, 1997, 2001, 2004, 2005, 2006, 2007, 2008),
- ▷ SEAS Dean Search Committee, Princeton Universtiy (2001-2002)
- ▷ External Reviewer, Dpt Math, Munich University, 2003 (C4 Recruiting)
- ▷ Board of Electors Dpt Math, Oxford University, Dec. 2004 (Faculty Recruiting)
- ▷ Board of Electors Dpt Math, Oxford Univ. Spring & Summer 2006 (Chair Recruiting)
- ▷ External Reviewer, Vienna Institute for Finance 2006
- ▷ External Reviewer, Dpt Math, Berlin Technical University, Summer 2008
- ▷ Oxford Man Institute, Advisory Board Meeting, May 10-11, 2012
- ▷ IMA Minneapolis, Advisory Board Meeting, October 7-8, 2012
- ▷ IMA Minneapolis, Advisory Board Meeting, October 13-14, 2013
- ▷ IMA Minneapolis, New Director Search Committee, Fall 2013 - 2015

Departments and Programs Evaluations:
- ▷ Review of UCI School of Biological Sciences (Chair) UC Irvine (Spring 1995),
- ▷ INRIA Program 5 Evaluation Committee (1996)
- ▷ CNRS-LAGA Paris XIII Evaluation Committee (2003)
- ▷ Evaluation Stat. Dpt UNC Chapter Hill, February 2008
- ▷ Evaluation Dpt Pure Mathematics, Ecole Polytechnique Paris, February 2008
- ▷ Evaluation Dpt Applied Mathematics, Ecole Polytechnique Paris, February 2008
- ▷ Evaluation Dpt Mathematics, ETH Zürich, May, 2008
- ▷ Review Oxford Man Institute in mathematical Finance, Dec. 2008
- ▷ Evaluation Dpt Applied Probab. & Statist., U.C. Santa Barbara, February 2009
- ▷ Chair INRIA Stochastic Programs (5) Evaluation Committee (March 28-30, 2010)

Current Funding:
- ▷ NSF: Large Populations Equilibria: Asymmetric Mean Field Games and McKean-Vlasov Control (PI) 7/1/17 - 6/30/20 ($ 312,000)
- ▷ ARO: Mean Field Games on Graphs, (PI) 9/1/17 - 9/1/20 ($ 420,000)
- ▷ (AFOSR MURI) Theory, Implementations, and Applications of Mean Field Games: The Second Generation (Sole PI) 06/15/19-06/14/22 ($ 940,000)

▷ (ARPA-E PERFORM) Stochastic Models, Indices & Optimization Algorithms for Pricing & Hedging Reliability Risks in Modern Power Grids, (PI) 10/01/20-09/30/23 ($ 3,400,000 + $ 500,000)

Associate Editor of:

Annals of Probability (1982 - 1985)
Random Operators and Stochastic Equations (1992 -)
Annales de l'Institut Henri Poincaré (1997 - 2001)
Applied Mathematics Research Notes (2003 - 2017)
Journal of Applied Mathematics and Stochastic Analysis (2004 -)
Probability and Mathematical Statistics (2006 -)
Quantitative Finance (2011 -)
Journal of Banking and Finance (2011 - 2017)
SIAM Journal on Financial Mathematics (2015 -)

Co-Editor in Chief of:

SIAM Journal on Financial Mathematics (2008 - 2015)

Founding Editor of:

Stochastic Analysis Digest (SAD)
Electronic Journal of Probability
Electronic Communications in Probability
SIAM Journal on Financial Mathematics

Editor of:

Princeton Series in Financial Engineering (Princeton University Press)
Paris-Princeton Seminar in Mathematical Finance (Springer Verlag)

Founding Chair of:

SIAM Activity Group on Financial Mathematics & Engineering

Ph.D. Students:

▷ Anestis Antoniadis - Univ. Saint Etienne French, "These d'Etat", June 1983
▷ Joan Mahoney - U.C. Irvine, June 1988
▷ Wen C. Masters - U.C. Irvine, June 1989 (supported by NSF)
▷ Lonnie Hudgins - U.C. Irvine, April 1992 (supported by Northrop)
▷ Ho Son Ahn - U.C. Irvine, June 1992
▷ John Noble - U.C. Irvine, September 1992
▷ Fred Viens - U.C. Irvine, June 1996 (supported by ARO)
▷ Stanislav Grishin - Princeton University, June 1997
▷ Julia Egorova Morrison - Princeton University, November 2001

- ▷ Manuel Sales - Princeton University, December 2001
- ▷ Mike Terhanchi - Princeton University, June 2002
- ▷ Anastasia Papavasiliou - Princeton University, June 2002
- ▷ Pavel Diko - Princeton University, Dec. 2003
- ▷ Lixin Wang - Princeton University, April 2004
- ▷ Valdo Durrleman - Princeton University, April 2004
- ▷ Michael Ludkovski - Princeton University, April 2005
- ▷ Albina Danilova - Princeton University, August 2005
- ▷ Arnaud Porchet - University Paris Dauphine, January 2008 (co-advisor N. Touzi)
- ▷ Nitin Saksena - Princeton University, September 2008
- ▷ Max Fehr - ETH Zürich, February 2009 (co-advisor H.J. Lüthi)
- ▷ Sergey Nadtochiy - Princeton University, May 2009
- ▷ Zhou (Joe) Yang - Princeton University, September 2010
- ▷ Youhong Sun - Princeton University, June 2011
- ▷ Michael Li - Princeton University, January 2013
- ▷ Yi Ma - Princeton University, June 2014
- ▷ Haifeng Luo - Princeton University, June 2014
- ▷ Kevin Webster - Princeton University, June 2014
- ▷ Daniel Lacker - Princeton University, June 2015
- ▷ Geoffrey Zhu - Princeton University, June 2018
- ▷ Peiqi Wang - Princeton University, February 2019
- ▷ Mark Cerenzia - Princeton University, June 2019
- ▷ Christy Graves - Princeton University, February 2020

Ph.D. / Habilitation Committees:

- ▷ Pierre Del Moral (INRIA) 2006
- ▷ Stéphane Crépey (Univ. Evry) 2009
- ▷ Mireille Bossy (INRIA) 2010
- ▷ René Aid (Paris-Dauphine) 2010
- ▷ Martin Bauer (Munich) June 24 2020 (virtual)
- ▷ Emma Hubert (Paris Dauphine) Dec. 10, 2020 (virtual)

Post Doc Mentoring:

- ▷ W.Hwang (NSF) Oct. 1, 1993 - June 30, 1994
- ▷ S. Zhong (NSF) Oct. 1, 1994 - June 30, 1995
- ▷ S. Zhong (ONR) Oct. 1, 1995 - June 1997
- ▷ L. Xu (ONR) Oct. 1, 1995 - Sept. 30 1998
- ▷ Ph. Briand (French Gov.) Oct. 1, 1997 - Sept. 30 1998
- ▷ R. van Handle (NSF RTG) Oct. 1, 2008 - .2009
- ▷ M. Coulon (NSF RTG) Oct. 1, 2009 - .
- ▷ S. Sturm (NSF RTG) Feb. 1, 2010 - 2012 .
- ▷ M. Bicuch (NSF RTG) Oct. 1, 201- 2013 .
- ▷ A. Papanicolaou (NSF RTG) Oct. 1, 2010 - 2013 .

▷ Matt Lorig (NSF RTG) Oct. 1, 2011 - 2014.
▷ Mathieu Lauriere (NSF & ARO) Feb. 1, 2018 -
▷ Alexander Aurrell (ARO & AFOSR MURI) Feb. 15, 2020 -
▷ Xinshuo Yang (ARPA-E) Oct. 1, 2020 -
▷ Majid Khoshghalb (ARPA-E) Oct. 1, 2020 -

PUBLICATIONS

Articles

[1] Laplaciens sur un espace de Wiener abstrait, *C.R. Acad. Sci. Paris* ser. **A 278** (1974) 933-936.

[2] Module de continuité uniforme des mouvements browniens à valeurs dans un espace de Banach, *C.R. Acad. Sci.* Paris ser. **A 281** (1975) 659-662.

[3] (with N. Kôno), Convergence en loi et lois du logarithme itéré pour les vecteurs gaussiens, *Z. Wahrscheinlichkeitstheorie verw. Gebiete* **36** (1976) 241-267.

[4] Lois du logarithme itere pour les suites de vecteurs gaussiens, *Ann. Sci. Univ. Clermont* **61** (1976) 5-9.

[5] Measurable Norms and some Banach Space Valued Gaussian Processes, *Duke Math Journal* **44** (1977) 109-127.

[6] Potentials on Abstract Wiener Spaces, *J. of Functional Analysis* **26** (1977) 215-231.

[7] Tensor Products of Gaussian Measures, Proceedings of Conference of Vector Space Measures and Applications, Dublin 1977, *Lect. Notes in Math*, #**644**, 96-124.

[8] Pointwise Bounds for Schrödinger Eigenstates, *Comm. Math. Phys.* **62** (1978) 97-106.

[9] (with S. Chevet) Tensor Gaussian Measures on $L^p(E)$, *J. of Functional Analysis* **33** (1979) 297-310.

[10] Regularity Properties of Schrödinger and Dirichlet Semigroups, *J. of Functional Analysis* **33** (1979) 251-296.

[11] Banach Space Valued Gaussian Processes, Proceedings of Conference on Probability on Banach Space II, Oberwolfach (June 1978), *Lect. Notes in Math.*, #**709**, 67-73.

[12] Opérateurs de Schrödinger à résolvante compacte, Sém. Proba. XIII, *Lect. Notes in Math.*, #**721**, 569-573.

[13] Processus de diffusion gouverné par la forme de Dirichlet de l'opérateur de Schrödinger, Sém. Proba. XIII, *Lect. Notes in Math.*, #**721**, 557-569.

[14] Etude Probabiliste de l'Opérateur de Schrödinger, Ann. Sci. Univ. Clermont. (1979)

[15] Infinite Dimensional Newtonian Potentials, Proceedings of Conference on Probability Theory on Vector Spaces II, Wroclaw (Poland), (September 1979), *Lect. Notes in Math.*, #**828**, 30-43.

[16] (with Barry Simon) Pointwise Bounds on Eigenfunctions and Wave Packets in N Body Quantum Systems V. Lower Bounds and Path Integrals, *Comm. in Math. Phys.* **80** (1981), 59-98.

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