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Married, two children
French citizen

Current positions

- Full professor at ISFA (*Institut de Science Financière et d'Assurances,* Institute of Actuarial Science and Finance), University Claude Bernard of Lyon 1, France (since Sept. 2011).
- Lecturer and scientific Enterprise Risk Management program director at *Institut du Risk Management, Institut des Actuaires* since 2009.
- Lecturer at ENSAE (Paris) since 2006, Paris 6 (since 2011), Paris 7 (since 2010).

Other responsibilities

- Member of the CERA review panel, and of the CERA review panel subgroup that reviewed the applications from the UK, Australia, the Netherlands, Germany and Japan.
- In charge of the French ERM syllabus for the *Institut des Actuaires* (CERA-type French designation).
- In charge of international relations at ISFA (in particular, development of four joint M.Sc. programs in Actuarial Science and Finance in Hanoi, Hochiminh City, Beirut and Rabat).
- Coordinator of the continuous-time training at ISFA.
- Co-responsible of the 3rd year (Master 2) at ISFA.
- Formerly : Associate researcher at CMAP, Ecole Polytechnique, Palaiseau, France (2009-2012).
  Research expert on longevity risk in the Chair "Derivatives of the future", sponsored by the French Federation of Banks and chaired by Nicole El Karoui.
- Full professorship offer, Université Paris 10 (2011, declined).
- Formerly : lecturer at HEC Paris (2007-2009), and HEC Lausanne (2005-2008) ; *Maître de Conférences* (Associate professor) at ISFA (2005-2011) ; in charge of the Continuous Professional Training of the French Institute of Actuaries with Arthur Charpentier and Frédéric Planchet (2007-2010).

Membership / Refereing and Editorship activities

- Co-editor of *European Actuarial Journal.*
- Associate Editor of *Insurance : Mathematics and Economics.*
- Associate Editor of *Methodology and Computing in Applied Probability.*
- Associate Editor of *American Journal of Algorithms and Computing.*
- Associate Editor of *Risks.*
- Associate Editor of the *Bulletin Français d'Actuariat (BFA).*
- Former member of the board of officers of the French Institute of Actuaries (2008-2012).
- Corresponding member of the Swiss Actuarial Association (2012).
- Referee for *Journal of Risk and Insurance, Journal of Applied Probability, Extremes, Stochastic and Probability Letters, Astin Bulletin, North American Actuarial Journal, Stochastic Processes and their Applications, Insurance : Mathematics and Economics, Journal of Computational and Applied Mathematics, Journal of Pension Economics and Finance, Methodology and Computing in Applied Probability, Math Reviews (AMS), Computational Statistics.*
- Expert for Fonds National de Recherche Scientifique (Belgium, research projects evaluation), the Czech National Research Foundation, Fonds de recherche du Québec - Nature et technologies, and for OSEO.
- Member of the *Institut des Actuaires (Fully Qualified* and *Agrégé).*
- Participant to MIRACCLE research project funded by ministry of ecology on risks related to climate change.

- Chairperson of the Research Chair *Actuariat durable et stabilité du secteur de l'assurance à long terme* sponsored by Milliman Paris (2010-2013).
- Participant to the Research Chair *Management de la modélisation* sponsored by BNP Paribas Cardif (2010-2015).
- Member of the board and of the underwriting committee of the insurance company *Axéria Prévoyance.*
- Member of the External Expert Committee of SCOR (3-person committee that reports to the Executive Committee on the internal model validation process).
- Formerly : Participant to the ANR Research Project AST&Risk (2008-2012).

Awards and honorary membership

- Best paper award, Conference of the Life Section of the International Actuarial Association, Mexico, Oct. 2012.
- Second best paper award, ASTIN Colloquium, Mexico, Oct. 2012.
- Corresponding member of the Swiss Actuarial Association (2012)
- 2011 Lloyd's Science of Risk : runner-up prize in the insurance and finance category.
- SCOR 2005 Award (best PhD in Actuarial Science).

Past consultancy activities

On correlations in Solvency II and simulation methods for Milliman Paris, On Solvency II for Actuaris-Watson-Wyatt, On stochastic mortality and transfer of longevity risk for SCOR Global Life, On prospective life tables in Argentina, for the International Labour Office (ILO, Bureau International du travail, Genève).

Education

2002–2004	PhD thesis in applied mathematics, Laboratoire de Science Actuarielle et Financière, Université Lyon 1
2001–2003	Actuary diploma, Institut de Science Financière et d'assurances (ISFA), Université Lyon 1
2001–2002	Master's degree (DEA) in Finance and Actuarial Science, Université Lyon 1
2001–2002	*Agrégation de mathématiques*
1998–2002	Ecole Normale Supérieure de Lyon, Bachelor 3 and Master in pure and applied mathematics
1996–1998	Preparatory class (CPGE) at the *Lycée Louis-le-Grand,* Paris

Research

- Habilitation thesis (HDR) defended on Nov. 9th, 2010.
- **PhD thesis** : *Contribution to the study of some univariate and multivariate risk processes*, under the supervision of Daniel Serant (Laboratoire de Science Actuarielle et Financière, Université Lyon 1) and Christian Mazza (Université de Genève, Switzerland), defended on December 14th, 2004.
- **Interests :** Risk management in insurance and finance. Risk theory, ruin probabilities, hitting times, multidimensional processes, stochastic dependence, Markovian environment, martingale methods. Solvency II, ORSA, Economic Capital and Entreprise Risk Management (ERM). Securitization of insurance risks. Stochastic mortality, pandemic risk, longevity risk.

Invited conferences

- Summer School of the Swiss Actuarial Association, Lausanne, June 2013 (24-hour course on Enterprise Risk Management for insurance and finance, with D. Ingram).
- Sixth Brazilian Conference on Statistical Modelling in Insurance and Finance, Maresias, March 2013 (5-hour short course on Enterprise Risk Management).
- Workshop "Perspectives on Actuarial Risks in Talks of Young Researchers", Ascona, Switzerland, January 2013.
- Workshop "Interplay between Probability and Actuarial Sciences", Brussels, October 2012.
- Workshop "Sequential Monte Carlo methods and Efficient simulation in Finance", Ecole Polytechnique, October 2012.
- Conference on Extremes and Risk Management, Cergy-Pontoise, September 2012.
- Swiss Actuarial Association General Assembly, Martigny, September 2012.
- Risk and Stochastics conference, London School of Economics, March 2012.
- Actuarial and Financial Mathematics Conference, Brussels, February 2012.
- Summer school of the Belgian Institute of Actuaries (7-hour course on ERM), Leuven, September 2011.
- Annual conference of the DAV, Berlin, April 2011.
- Journées d'Etudes en Statistique, Luminy, Marseilles, November 2010 (two 2-hour lectures).
- Journées de Statistique 2010 de la SFDS, Marseilles, May 2010 (1 among 18 invited speakers, 100+ talks, 400+ participants).
- ERMII Research Workshop on Systemic Risk, Atlanta, May 2010.
- Australasian Actuarial Education and Research Symposium, Sydney, December 2009.
- Journées d'Economie et d'Econométrie de l'Assurance, Rennes, October 2009.
- 2do Simposio en Actuaria, Bogota, September 2009.
- 2nd International Workshop on Gerber-Shiu Functions, Linz, August 2008.
- 4 talks in invited sessions in international conferences

Publications

- C. Lefèvre, S. Loisel, *On multiply monotone distributions, continuous or discrete, with applications*, to appear in Journal of Applied Probability (2013).
- J. Trufin, S. Loisel, Ultimate ruin probability in discrete time with Bühlmann credibility premium adjustments, to appear in Bulletin Français d'Actuariat (2013).
- H. Gerber, S. Loisel, *Why risk theory should be of interest for insurance practitioners and risk managers nowadays*, Proceedings of the AFMATH Conference, Brussels (2012), 17-21.
- P. Barrieu, H. Bensusan, N. El Karoui, C. Hillairet, S. Loisel, C. Ravanelli, Y. Salhi, *Understanding, modelling and managing longevity risk : key issues and main challenges*, Scandinavian Actuarial Journal (2012), Vol. 2012, No 3, 203-231.
- S. Loisel, *Company Management's Reaction Capacity and Management Actions : Need and Difficulty to Take These into Account in ORSA*, in Risk Metrics for Decision Making and ORSA, édité par la SOA, la CAS et la CIA, 52-54 (2012).
- M. Bargès, S. Loisel, X. Venel, *On finite-time ruin probabilities with dependence between reinsurance cycles and the claim arrival process*, to appear in Scandinavian Actuarial Journal (Applied Section), 2012.
- S. Loisel, X. Milhaud, *From deterministic to stochastic surrender risk models : impact of correlation crises on economic capital*, European Journal of Operational Research (2011), Vol. 214, No 2, 348-357.
- H. Albrecher, C. Constantinescu, S. Loisel, *Explicit ruin formulas for models with dependence among risks*, Insurance : Mathematics and Economics (2011), Vol. 48, No 2, 265-270.
- M. Chauvigny, L. Devineau, S. Loisel, V. Maume-Deschamps, *Fast remote but not extreme quantiles with multiple factors. Applications to Solvency II and Enterprise Risk Management*, European Actuarial Journal (2011), Vol. 1, No 1, 131-157.

- M. Bargès, H. Cossette, S. Loisel, E. Marceau, *Moments of a compound Poisson models with dependence based on the FGM copula and discounted claims*, to appear in ASTIN Bulletin (2011), Vol. 41, No 1, 215-238.
- X. Milhaud, S. Loisel, V. Maume-Deschamps, *Surrender triggers in life insurance : classification and risk predictions*, Bulletin Français d'Actuariat (2011) Vol. 11, No 22, 5-48.
- R. Biard, C. Lefèvre, S. Loisel, H. Nagaraja, *Asymptotic finite-time ruin probabilities for a class of path-dependent claim amounts using Poisson spacings* , Applied Stochastic Models in Business and Industry (2011), Vol. 27, No 5, 503-518.
- X. Milhaud, M.-P. Gonon, S. Loisel, *Les comportements de rachat en Assurance Vie en régime de croisière et en période de crise*, Risques (2010), Vol. 83, pp 76-81.
- C. Lefèvre, S. Loisel, *Stationary-excess operator and convex stochastic orders*, Insurance : Mathematics and Economics (2010), Vol. 47, pp. 64-75.
- R. Biard, S. Loisel, C. Macci, N. Veraverbeke, *Asymptotic behavior of the finite-time expected time-integrated negative part of some risk processes*, Journal of Mathematical Analysis and Applications (2010), Vol. 367, No2, pp. 535-549 .
- S. Loisel, C. Mazza, D. Rullière, *Convergence and asymptotic variance of bootstrapped finite-time ruin probabilities with partly shifted risk processes*, Insurance : Mathematics and Economics (2009), Vol. 45, No 3, 374-381.
- L. Devineau, S. Loisel, *Risk aggregation in Solvency II : How to converge the approaches of the internal models and those of the standard formula ?*, Bulletin Français d'Actuariat, No 18, Vol. 9, 107-145 (2009).
- S. Loisel, N. Privault, *Sensitivity analysis and density estimation for finite-time ruin probabilities*, Journal of Computational and Applied Mathematics, Vol. 230, No 1, 107-120 (2009).
- C. Lefèvre, S. Loisel, *Finite-Time Ruin Probabilities for Discrete, Possibly Dependent, Claim Severities*, Methodology and Computing in Applied Probability, Vol. 11, No 3 (2009), 425-441.
- L. Devineau, S. Loisel, *Construction d'un algorithme d'accélération de la méthode des "simulations dans les simulations" pour le calcul du capital économique Solvabilité II*, Bulletin Français d'Actuariat (BFA), No. 17, Vol. 10, 188-221 (2009).
- S. Loisel, *From Liquidity Crisis to Correlation Crisis, and the Need for "Quanls" in ERM, in Risk Management : The Current Financial Crisis, Lessons Learned and Future Implications*, édité par la SOA, la CAS et la CIA, 75-77 (2008).
- R. Biard, C. Lefèvre, S. Loisel, *Impact of correlation crises in risk theory : asymptotics of finite-time ruin probabilities for heavy-tailed claim amounts when some independence and stationarity assumptions are relaxed*, Insurance : Mathematics and Economics, Vol. 43-3, 412-421 (2008).
- W. Fisher, S. Loisel, S. Wang, *On some key research issues in Enterprise Risk Management related to economic capital and diversification effect at group level*, Bulletin Français d'Actuariat (BFA), No. 15, Vol. 9 (2008).
- C. Lefèvre, S. Loisel, *On finite-time ruin probabilities for classical risk models*, Scandinavian Actuarial Journal (2008), Vol. 1, 41-60.
- S. Loisel, C. Mazza, D. Rullière, *Robustness analysis and convergence of empirical finite-time ruin probabilities and estimation risk solvency margin*, Insurance : Mathematics and Economics, Vol. 42, Issue 2, April 2008, 746-762.
- S. Loisel, *Time to ruin, insolvency penalties and dividends in a Markov-modulated multirisk model with common shocks*, Bulletin Français d'Actuariat, No. 14, Vol. 8, 4-24 (2007).
- D. Rullière, S. Loisel, *The win-first probability under interest force*, Insurance Mathematics and Economics, Vol. 37, Issue 3, pp 421-442, 2005.
- S. Loisel, *Differentiation of some functionals of risk processes and optimal reserve allocation*, Journal of Applied Probability, 42-2 (2005).
- S. Loisel, *Ruin theory with K lines of business*, Proceedings of the 3rd Actuarial and Financial Day, Bruxelles, pp 4-24, 2004.
- D. Rullière, S. Loisel, *Another look at the Picard-Lefèvre formula for finite-time ruin probabilities*, Insurance : Mathematics and Economics, Vol. 35-2, 187-203, 2004.

Selected Talks

- Seminar on non-stationarity, CIRM, Luminy, January 2013.
- Actuarial science seminar, UNSW, Sydney, March 2013.
- ASTIN-AFIR/ERM-LIFE Colloquia, Mexico, October 2012.
- Journées MAS de la SMAI, Clermont-Ferrand, August 2012.
- Summer School of the Institut des Actuaires, Brest, July 2012.
- Rencontres de statistique Avignon-Marseille, Marseille, June 2012.
- Séminaire de statistique, CREST, Paris, June 2012.
- Seminaire de mathématiques, Toulouse School of Economics, June 2012.
- Séminaire de probabilité et statistiques, Besançon, June 2012.
- Lyon-Le Mans actuarial science and finance seminar, Le Mans, May 2012.
- ERM Symposium, Washington, April 2012.
- Operations Research Conference, Habana, March 2012.
- Bachelier Colloquium, Metabief, January 2012.
- Reliability and Actuarial Science, a conference organized by SFDS and SMAI, Toulouse, November 2011.
- Séminaire d'actuariat, UQAM, Montréal, November 2011.
- Séminaire d'actuariat, Université Laval, Québec, November 2011.
- Insurance Mathematics and Economics Conference, Trieste, July 2011.
- Summer school of the French Institute of Actuaries, Strasbourg, July 2011.
- Applied Stochastic Models and Data Analysis Conference, Rome, June 2011.
- Conference Longevity modeling : an inter-disciplinary approach (organizing committee), Paris, May 2011.
- Conference Queuing networks and related fields III, Bedlewo, Poland, May 2011.
- DFVGM Scientific Day, Berlin, April 2011.
- Seminar of Mathematics of the CMM, University of Chile, Santiago, April 2011.
- Séminaire de statistique de l'IRMA, Strasbourg, April 2011.
- UNSW Actuarial Science Seminar, Sydney, March 2011.
- International Financial Risks Forum, Paris, March 2011.
- Conférence Longevity and Pension Funds, Paris, February 2011 (organizing committee and discussant).
- Séminaire de Statistique et applications, Luminy, Marseille, January 2011.
- Cours Bachelier on longevity risk (4 2-hour lectures in January 2011 with N. El Karoui ; C. Hillairet, T.L. Nguyen and Y. Salhi).
- Seminar on Variable annuities, Fondation Natixis, Paris, December 2010.
- Journées d'Etudes en Statistique, Luminy, Marseilles, November 2010.
- Longevity 6 Conference, Sydney, September 2010.
- International Workshop on Applied Probability, Madrid, July 2010.
- 14th IME conference, Toronto, June 2010.
- Third international Gerber-Shiu Workshop, Waterloo, June 2010.
- Journées de Statistique 2010 de la SFDS, Marseilles, May 2010.
- ERMII Research Workshop on Systemic Risk, Atlanta, May 2010.
- Seminar *Probabilités Numériques et Finance,* Univ. Paris 6 and Paris 7, April 2010.
- Australasian Actuarial Education and Research Symposium, Sydney, December 2009.
- Seminar of statistics of IRMA, Strasbourg, November 2009.
- Journées d'Economie et d'Econométrie de l'Assurance, Rennes, October 2009.
- 2do Simposio en Actuaria, Bogota, September 2009.
- Argus conference : Risk Management en assurance, au delà des outils, quelle gouvernance ?, Paris, June 2009.
- Workshop in honour of Hans Gerber, Lausanne, June 2009.

– IME Conference, Istanbul, May 2009.
– ERM Symposium, Chicago, April 2009.
– 2nd International Workshop on Gerber-Shiu Functions, Linz, August 2008.
– IME Conference (Insurance : Mathematics and Economics), Dalian, China, July 2008.
– International Workshop in Applied Probability, Compiègne, July 2008.
– Workshop : Evaluating and Covering Extreme Risks, Paris Dauphine University, June 2008.
– Joint SSC-SFDS (French and Canadian Statistical Societies) congress, Ottawa, Canada, May 2008.
– Lyon-Lausanne Seminar, Lausanne, Switzerland, March 2008.
– 1st International workshop on mortality and longevity risk, Paris, February 2008.
– PRMIA Conference on Insurance Linked Securities, Paris, January 2008.
– Adventures in risk (Biennal convention of Australian Actuaries), Christchurch, New Zealand, September 2007.
– IME Conference (Insurance : Mathematics and Economics), Le Pirée, Grèce, July 2007.
– ASTIN congress, Orlando, June 2007.
– SéPIA : Séminaires Professionnels de l'Institut des Actuaires, Paris, June 2007.
– First ERMII research workshop, ISFA, Université Lyon 1, June 2007 (Chairman).
– ASMDA Conference (Applied Stochastic Models and Data Analysis), Chania, Crete, May 2007.
– Bachelier Paris seminar, Paris, March 2007.
– ICA Congress (International Congress of Actuaries), Paris, May-June 2006.
– IWAP Congress (International Workshop in Applied Probability), University of Connecticut, May 2006.
– Risk and stochastics seminar, London School of Economics (LSE), London, May 2006.
– Workshop about stochastic methods in finance ENPC-INRIA-UMLV, University of Marne-la-Vallée, May 2005.
– Applied maths seminar, UPPA (University of Pau), March 2006.
– Statistics and Actuarial Science Seminar, Hong-Kong University, February 2006.
– Numerical analysis seminar, University of Geneva, Switzerland, January 2006.
– Seminar of CERDALM on longevity risk, Paris, January 2006.
– PARC Conference, Louvain-la-Neuve, Belgium December 2005.
– Réavie Congress, Cannes, October 2005.
– *Workshop on New Mathematical Methods in Risk Theory in honour of Hans Bühlmann,* Florence, October 2005
– ASTIN-AFIR Colloquium, Zurich, September 2005.
– Seminar on stochastic models, Ecole Polytechnique, Palaiseau, March 2005.
– Applied mathematics seminar, METU, Ankara, March 2005.
– Workshop on financial mathematics, Evry, March 2005.
– Seminar on risk management in insurance, Hochiminh City, Vietnam, February 2005.
– 3rd Actuarial and Financial Mathematics Day, Brussels, February 2005.
– Lyon-Lausanne Seminar, Lyon, December 2004.
– IME Congress, Roma, June 2004.
– *Séminaire Ecole Doctorale MIF,* Lyon, May 2004.
– DeMoStaFi conference, Québec, May 2004.
– IME Congress, Lyon, June 2003.
– FNRS contact day, Louvain-la-Neuve, May 2003.

Ph.D. Students

– Mathieu Bargès (started in 2006, defended in March 2010), co-supervised with Etienne Marceau, Laval University, Quebec City, Canada. Now working in SCOR Germany.
– Florent Toureille (started in 2006, unfortunately passed away in 2010), co-supervised with Etienne Marceau, Laval University, Quebec City, Canada.

- Anthony Derien (started in 2006, defended on Sep. 30th, 2010), co-supervised with Jean-Paul Laurent (partnership with AON-Benfield). Now working for AON Benfield.
- Romain Biard (started in 2007, defended on Oct. 7th, 2010), co-supervised with Jean-Claude Augros. Now Maître de Conférences at Université de Franche-Comté.
- Christophe Dutang (started in 2008, defended on May 31st, 2012), co-supervised with Véronique Maume-Deschamps (partnership with Axa). Now Maître de Conférences contractuel at Université de Strasbourg.
- Xavier Milhaud (started in 2008, defended on July 6th, 2012), co-supervised with Véronique Maume-Deschamps (partnership with Axa). Now Teaching assistant at ENSAE.
- Yahia Salhi (started in 2008, defended in April 2013), partnership with SCOR Global Life. Now Maître de Conférences contractuel at Université Lyon 1.
- Manel Kacem (started in 2008, defended in March 2013), co-supervised with Véronique Maume-Deschamps. Now Temporary Lecturer at CNAM, Paris.
- Alexandre Mornet (started in 2008), co-supervised with Jean Claude Augros (partnership with Allianz).
- Julien Azzaz (started in 2011), co-supervised with Christian Robert.
- Pierre-Oliver Goffard (started in Dec. 2011), co-supervised with Denys Pommeret (partnership with Axa France).
- Julien Védani (started in Jan. 2012), co-supervised with Jean-Luc Prigent (partnership with Milliman).
- Alexandre Boumezoued (started in Sept. 2012), co-supervised with Nicole El Karoui.