Areski COUSIN - Born on March 14, 1981, French

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Current position

Assistant Professor at ISFA Actuarial School, University of Lyon, since September 2009

Education

2009	- **Post-Doc in Finance**, under the supervision of Professor Monique JEANBLANC, Evry University and CRIS project, France
2008	- **Ph.D. in Finance** under the supervision of Professor Jean-Paul LAURENT, ISFA Actuarial School, University of Lyon, France. Thesis awarded by the price *Euronext-AFFI-PRMIA 2008.*
	- **Actuarial Studies Degree** of ISFA Actuarial School, University of Lyon, France
2006	- **Professional Master Degree** in Financial and Actuarial Sciences, ISFA Actuarial School, University of Lyon, France
2005	- **Research Master Degree** in Financial and Actuarial Sciences, ISFA Actuarial School, University of Lyon, France
	- **Master Degree in Science and Executive Engineering**, major in Financial and Actuarial Sciences, ENSIMAG, Grenoble, France

Professional Experience

2008–2009	- **Postdoctoral fellowship** at the Mathematics Departement of Evry University, member of the CRIS project approved by the Pôle de Compétitivité "Finance Innovation" of Paris. The project is a partnership between five companies (Zeliade Systems, OTC conseil, JPLC conseil, Dexia CL, Microsoft) and Evry University. It aims at developing a platform for transparent valuation and risk management of credit derivatives.
Summer 2007	- **BNP Paribas** Fixed Income Research Team, London. Implementation and calibration of the model described in *Laurent, Cousin and Fermanian (2007)*
2005–2006	- **Adding Group**, Lyon, France. Scientific consultant
April–August 2005	- **Adding Group**, Lyon, France. Actuarial training period. Master report on IFRS 2 (International Financial Accounting Standard) and stock-options fair valuation. **Referee :** Benoît MEYER, Pension Department Manager, www.adding.fr, +33 4 72 18 5852
Summer 2004	- **Wimba**, Sophia-Antipolis, France. Engineer training period. JAVA development of statistical tests for a web vocal server and database request optimisation. **Referee :** Bruno VAN HAETSDAELE, Scientific Project Manager, www.wimba.com, +33 4 93 00 4580

Research

Articles

- Delta-Hedging Correlation Risk ?, 2011, with Stéphane Crépey and Yu Hang Kan, Review of Derivatives Research
- Hedging Default Risks of CDOs in Markovian Contagion Models, with Jean-Paul Laurent and Jean-David Fermanian, Quantitative Finance, volume 11, Issue 12, 1773-1791, 2011
- Comparison Results for Exchangeable Credit Risk Portfolios, with Jean-Paul Laurent, Insurance : Mathematics and Economics, volume 42, Issue 3, 1118-1127, 2008

Book chapters

- Valuation of Portfolio Loss Derivatives in An Infectious Model, 2011, with Diana Dorobantu and Didier Rullière, in the book - Mathematical and Statistical Methods for Actuarial Sciences and Finance – edited by C. Perna and M. Sibillo, Springer.
- Dynamic Hedging of Synthetic CDO Tranches : Bridging the Gap Between Theory and Practice, 2011, with Jean-Paul Laurent, in the book - Credit Risk Frontiers – edited by T. Bielecki, D. Brigo and F. Patras, Wiley
- Hedging Portfolio Loss Derivatives with CDSs, 2011, with Monique Jeanblanc, Festschrift in honour of Robert Elliott, World Scientific
- Hedging CDO Tranches in a Markovian Environment, 2010, with Monique Jeanblanc and Jean-Paul Laurent, in the book - Paris-Princeton Lectures on Mathematical Finance 2010 – Springer
- Hedging Default Risks of CDOs in Markovian contagion models, 2009, with Jean-Paul Laurent and Jean-David Fermanian in the book - Financial Risks : New Developments in Structured Product & Credit Derivatives – edited by C. Gourieroux and M. Jeanblanc, Economica
- Hedging Issues for CDOs, 2008, with Jean-Paul Laurent, in the book - The Definitive Guide to CDOs – edited by G. Meissner, Chapter 17, 461-480, Risk Books
- An Overview of Factor Modeling for Pricing CDO Tranches, 2008, with Jean-Paul Laurent, in the book - Frontiers In Quantitative Finance : Credit Risk and Volatility Modeling – edited by R. Cont, Chapter 7, 185-216, Wiley

Submitted papers

- A Multivariate Extension of Value-at-Risk and Conditional-Tail-Expectation, 2011, with Elena Di Bernardino, submitted to Journal of Multivariate Analysis
- Dynamic Modeling of Portfolio Credit Risk with Common Shocks, 2011, with Tom Bielecki, Stéphane Crépey and Alexander Herbertsson, submitted to Journal of Optimization Theory and Application
- An Extension of Davis and Lo's Contagion Model, 2010, with Didier Rullière and Diana Dorobantu, submitted to Quantitative Finance

Working papers

- Numerical studies of a Bottom-up Credit Portfolio Model with Common shocks, 2011, with Tom Bielecki, Stéphane Crépey and Alexander Herbertsson
- A note on the computation of Waring formula, with D. Rullière and D. Dorobantu, 2010
- A Tree-Based Approach to Price Leverage Super-Senior Tranches, 2009, CRIS project and Evry University

Conferences

Invitation to International Conferences

- 5th Financial Risks International Forum, Paris, 22 March 2012
- Sino-French Summer Institute 2011, Beijing, China, 29 June 2011
- Young Researcher Workshop on Finance 2011, Tokyo Metropolitan University Finance Group, Tokyo, Japan, 1-4 March 2011
- Third Financial Risks International Forum, Paris, 25-26 March 2010
- Recent Advancements in the Theory and Practice of Credit Derivatives, Nice, France, 28-30 September 2009

International Conferences

- Bachelier Finance Society 7th World Congress 2012, Sydney, Australia, 19-22 June 2012
- Mathematical and Statistical Methods for Actuarial Sciences and Finance, Venice, Italy, 10 April 2012
- AFFI 2011 Spring International Meeting, Montpellier, 12 May 2011
- International Finance Conference 6, Hammamet, Tunisia, 10-12 March 2011
- Greta Credit Risk 2010 Conference, Venice, Italy, 30 Sept - 1st Oct 2010
- Institute of Mathematical Statistics 73rd Annual Meeting, Gothenburg, Sweden, 9-13 August 2010
- AFFI 2010 Spring Conference, Saint-Malo, France, 10-12 May 2010
- Mathematical and Statistical Methods for Actuarial Sciences and Finance, Ravello, Italy, 7-9 April 2010
- Worshop on Copula Theory and its Application, Warsaw, Poland, 25-26 September 2009
- AFFI 2009 Spring Conference, Brest, France, 13-15 May 2009
- Second International Financial Research Forum, Paris, 19-20 March 2009
- AFFI 2008 Spring Meeting, Lille School of Management, 20-22 May 2008

Seminars and working groups

- Bachelier seminar, Paris, 29 Avril 2011
- ESDES Ecole de Management, Lyon, 19 October 2011
- Lyon-Lausanne seminar, HEC Lausanne, Switzerland, 19 January 2011
- Seminar of ANR project Ast&Risk, Dijon, 17-18 January 2011
- Lyon-Lausanne seminar, HEC Lausanne, Switzerland, 19 March 2010
- Seminar of ANR project Ast&Risk, Ensimag, Grenoble, 31 August - 1st September 2009
- Evry University Credit Risk working group, Evry, 12 March 2009
- IGR/IAE seminar, University of Rennes, 25 November 2008
- Evry University credit Risk working group, Evry, 9 October 2008
- Evry University credit risk working group, Evry, 31 January 2008
- Evry University credit risk working group, Evry, 17 January 2008

Teaching

Credit Risk Modeling
- ENSIMAG engineering school 3$^{\text{rd}}$-year program in mathematical finance, 2008–
- ISFA 3$^{\text{rd}}$-year actuarial training program, 2009–
- ISFA Research Master, 2008–

Numerical Methods in Finance
- ISFA 3$^{\text{rd}}$-year actuarial training program, 2009–

Advanced Probability Theory with Applications to Actuarial Sciences
- ISFA 1$^{\text{st}}$-year actuarial training program, Hanoï, Vietnam, 2009–

Economics of Risk and Uncertainty
- ISFA 2$^{\text{sd}}$-year actuarial training program, Hanoï, Vietnam, 2007–

Money, Banking and Financial Market
- ISFA 1$^{\text{st}}$-year actuarial training program, Hanoï, Vietnam, 2008

Computer Skills

Languages	C/C++, Xll Excel add-in, Visual Basic, Matlab, R/S+, SAS, Java, HTML, SQL, LaTeX
Softwares	Visual C++, Matlab, Scilab, SAS, Maple, Microsoft Office

Languages and Personal Interests

French	mother tongue
English	fluent, several trips in UK and USA
Italian	academic
Personal interest	travelling, comics, squash, badminton
Miscellaneous	Musical formation in the national music school of Nice : Accordeon and Tuba