

Pierre-O. Goffard

Assistant professor in applied mathematics

ISFA
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French, 29 years old



Professional experience

- Since September 2018 **Assistant Professor (Maître de conférence)**, *ISFA*, Lyon, France.
- 2016–2018 **Visiting Assistant Professor**, *University of California in Santa Barbara*, Santa Barbara, USA.
- 2015–2016 **Post-Doctoral fellow**, *Université Libre de Bruxelles*, Brussels, Belgium.
- Aug.-November 2015 **Post-Doctoral fellow**, *Aarhus university*, Aarhus, Denmark.
- 2011–2015 **Ph.D. Student and junior actuary**, *Aix-Marseille university* and *AXA France* (french partnership named convention *CIFRE*), Marseille, France.

Education

- 2011–2015 **Ph.D. in applied mathematics**, *Aix-Marseille University* and *AXA France* (french partnership named convention *CIFRE*), Marseille, France.
Polynomial approximations of probability density function and applications to insurance.
Advisors: Denys Pommeret and Stephane Loisel.
- 2008–2011 **Master of Science (M. Sc.)**, *ENSAI*, Rennes, France.
 - Major: Advanced Statistical Engineering
 - Additional training (during the 3rd year, 2010-2011): Master of statistics and econometrics at the *University of Rennes 1*, focused on scientific research, in tandem with ENSAI engineering degree.
- 2006–2008 **Classes Préparatoires**, *Dupuy de Lôme High School*, Lorient, *MP*.
2 years of intensive training in Math, Physics and Chemistry.

Skills

- Technical Probability and statistics for finance and insurance (or anything else)
- IT R Studio, Python, SAS, Mathematica, Matlab, Java, HTML, CSS, Ruby, Markdown, *Latex*
- Languages French (*mother tongue*), English (*full professional proficiency*), Spanish (*notions*).

Research Expertise

Risk theory, numerical methods, boundary crossing problem, stochastic processes..

Teaching experience

- 2017-2018 **Instructor**, *UCSB*, Santa Barbara, USA.
Undergraduate and graduate students
 - PSTAT130: Introduction to SAS (undergraduate class)
 - PSTAT296: Research projects in actuarial science (Mentoring)
- 2016-2017 **Instructor**, *UCSB*, Santa Barbara, USA.
Undergraduate and graduate students
 - PSTAT130: Introduction to SAS (undergraduate class)
 - PSTAT120A: Introduction to probability (undergraduate class)
 - PSTAT160A: Applied stochastic process (undergraduate class)

- 2015 **Teaching assistant**, *Aarhus University*, Aarhus, Denmark.
Bachelor in various fields
 - Introduction to calculus (undergraduate class, 21h)
- 2013–2014 **Instructor**, *ENSAI*, Rennes, France.
Master in statistical engineering
 - Introduction to ruin theory (graduate class, 6h)
- 2011–2014 **Teaching assistant**, *Aix-Marseille University*, Marseille, France.
Bachelor of Biology
 - Introduction to statistical analysis (undergraduate class)
 Bachelor of mathematics applied to social science
 - Advanced probability and statistics (undergraduate class)
 Master in actuarial science
 - Introduction to ruin theory (graduate class)

Publications

Accepted/Published

- 2017 **P.O. Goffard, & Claude Lefèvre**, *Duality in ruin problems for ordered risk models, to appear in Insurance: Mathematics and Economics.*
- 2017 **P.O. Goffard**, *Two-sided exit problems in the ordered risk model, to appear in Methodology and Computing in Applied Probability.*
- 2017 **P.O. Goffard, & Claude Lefèvre**, *Boundary crossing problem of order statistic point processes*, 447(2):890-907, *Journal of Mathematical Analysis and Applications.*
- 2017 **P.O. Goffard, Stephane Loisel & Denys Pommeret**, *Polynomial approximations for bivariate aggregate claims amount probability distributions*, 19(1):151-174, *Methodology and Computing in Applied Probability.*
- 2016 **P.O. Goffard, Stephane Loisel & Denys Pommeret**, *A polynomial expansion to approximate the ultimate ruin probability in the compound Poisson ruin model*, 296:499-511, *Journal of Computational and Applied Mathematics.*
- 2015 **P.O. Goffard & Xavier Guerrault**, *Is it optimal to group policyholders by age, gender, and seniority for BEL computations based on model points?*, 5(1):165-180, *European Actuarial Journal.*

Chapter in books

- 2017 **Søren Asmussen, P.O. Goffard, & Patrick Laub**, *Orthonormal polynomial expansion and lognormal sum densities, to appear in Risk and Stochastics - Festschrift for Ragnar Norberg.*

Submitted/under revision

- 2018 **P.O. Goffard**, *Fraud risk assessment within blockchain transactions*, Working paper.
- 2017 **P.O. Goffard and Patrick Laub**, *Two numerical methods to evaluate stop-loss premiums*, Working paper.
- 2017 **P.O. Goffard and Andrey Sarantsev**, *Exponential convergence rate of ruin probability for Level-dependent Lévy driven risk process*, Working paper.

Under preparation

- 2017 **P.O. Goffard, Jose Garrido and Claude Lefèvre**, *Discrete-time insurance and dual risk models with claim sizes distributed as spacing levels*, Working paper.
- 2017 **P.O. Goffard, Sreenivas Jammalamadaka, and Simos Meintanis**, *Goodness-of-fit tests for compound distributions with applications in insurance*, Working paper.

Selected communications

- Spain 2018 9th **International Workshop on simulation**, *Barcelona.*
- Hungary 2018 **IWAP**, *Budapest.*
- USA 2018 **CFMAR Seminar at UCSB**, *Santa Barbara.*
- USA 2018 **Seminar at UCSB**, *Santa Barbara.*

- USA 2018 **Seminar at UCSD, Santa Cruz.**
- USA 2017 **CFMAR Seminar at UCSB, Santa Barbara.**
- USA 2017 **Seminar at UCSD, San Diego.**
- USA 2017 **Seminar at UIOWA, Iowa City.**
- Panama 2017 **2017 ASTIN AFIR/ERM Colloquium, Panama City.**
- USA 2017 **10th anniversary of the CFMAR conference , Santa Barbara.**
- USA 2017 **Seminar at USC, Los Angeles.**
- USA 2016 **Seminar at UCSB, Santa Barbara.**
- France 2016 **3rd European Actuarial Journal Conference, Lyon.**
- France 2016 **3rd of young researchers in probability, numerics and finance, Le Mans.**
- France 2016 **AMERISKA Conference, Paris.**
- Belgium 2016 **Joint ULB-UCL seminar, Brussels.**
- France 2016 **Thematic week on dependence, extreme and actuarial science, Marseille.**
- UK 2015 **CASS Business School Seminar, London.**
- Denmark 2015 **Thiele Seminar, Aarhus.**
- France 2015 **Université d'été de l'institut des actuaires, Brest.**
- France 2015 **PhD Thesis oral defense, Marseille.**
- UK 2015 **19th International Congress on insurance, mathematics, and economics, Liverpool.**
- France 2014 **46^{ème} journées de statistique, Rennes.**
- Germany 2013 **Conference on Advances in Financial and Insurance Risk Management, Munich.**
- France 2013 **5^{ème} Rencontre des Jeunes Statisticiens, Aussois.**
- France 2013 **45^{ème} journées de statistique, Toulouse.**
- Switzerland 2013 **Perspective on Actuarial Risks in Talks of Young Researchers, Ascona.**

Awards

- France 2015 **SCOR prize of the young doctor in actuarial science, Paris.**

Reviewing activities

- Methodology and Computing in Applied Probability , MCAP.**
- European Actuarial Journal , EAJ.**
- Risks.**
- Insurance: Mathematics and Economics, IME.**
- Operation Research Letters, ORL.**

Hobbies

- Music Campfire guitar player
- Sports Surf, windsurf, soccer