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 3^{rd} 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, Lateχ

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

2019 **P.O. Goffard**, *Fraud risk assessment within blockchain transactions*, *to appear in* Advances in Applied Probability.

2018 **P.O. Goffard, & Claude Lefèvre**, *Duality in ruin problems for ordered risk models*, *78, 44-52* 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 9^{th} **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 10^{th} **anniversary of the CFMAR conference** , *Santa Barbara*.
USA 2017 **Seminar at USC**, *Los Angeles*.
USA 2016 **Seminar at UCSB**, *Santa Barbara*.
France 2016 3^{rd} **European Actuarial Journal Conference**, *Lyon*.
France 2016 3^{rd} **of yound 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 19^{th} **International Congress on insurance, mathematics, and economics**, *Liverpool*.
France 2014 $46^{\text{ème}}$ **journées de statistique**, *Rennes*.
Germany 2013 **Conference on Advances in Financial and Insurance Risk Manangement**, *Munich*.
France 2013 $5^{\text{ème}}$ **Rencontre des Jeunes Statisticiens**, *Aussois*.
France 2013 $45^{\text{ème}}$ **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