Pierre-O. Goffard

Associate Professor

UFR de mathématique et d'informatique
Université de Strasbourg
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Français, 34 ans

Professional experience

Since 2022 **Associate Professor (Maître de conférence)**, *UNISTRA*, Strasbourg, France

March-June 2022 **Visiting Associate Professor**, *University of California in Santa Barbara*, Santa Barbara, USA

2018-2022 **Associate 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

2018-2021 **Master of science (M.Sc.)**, *ISFA*, Lyon, France
- Major: Financial and actuarial sciences
- French actuary diploma

2011–2015 **Ph.D. in applied mathematics**, *Aix-Marseille University and AXA France (french patnership 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

IT R Studio, Python, SAS, Mathematica, $Latex$

Languages French *(mother tongue)*, English *(full professional proficiency)*, Spanish *(notions)*.

Research Expertise

Blockchain mathematics, Bayesian statistics, risk theory, stochastic processes

Teaching experience

2022-2023 **Instructor**, *UNISTRA*, Strasbourg, France
Graduate students
- Survival analysis
- Applied Stochastic Calculus

2018-2022 **Instructor**, *ISFA*, Lyon, France

Undergraduate and graduate students

- Loss models in insurance (graduate class)
- Introduction to SAS (graduate class)
- Discrete stochastic processes (graduate class)
- Introduction to R (undergraduate class)
- Measure theory and integration (undergraduate class)

2016-2018 **Instructor**, *UCSB*, Santa Barbara, USA

Undergraduate and graduate students

- PSTAT296: Research projects in actuarial science (Mentoring)
- PSTAT130: Introduction to SAS (undergraduate class)
- PSTAT120A: Introduction to probability (undergraduate class)
- PSTAT160A: Applied stochastic process (undergraduate class)

Publications

2022 **P.O. Goffard**, *Sequential Monte Carlo samplers to fit and compare insurance loss models*, Scandinavian Actuarial Journal, *DOI*

2022 **P.O. Goffard & S. Rao Jammalamdaka & S. Meintanis**, *Goodness-of-Fit Procedures for Compound Distributions with an Application to Insurance*, Journal of Statistical Theory and Practice, *DOI*

2022 **K. Barigou & P.O. Goffard & S. Loisel & Y. Salhi**, *Bayesian model averaging for mortality forecasting using leave-future-out validation*, International Journal of Forecasting, *DOI*

2022 **H. Albrecher & D. Finger & P.O. Goffard**, *Blockchain mining in pools: Analyzing the trade-off between profitability and ruin*, Insurance: Mathematics and Economics, *DOI*

2021 **P.O. Goffard & P. Laub**, *Approximate Bayesian Computations to fit and compare insurance loss models*, Insurance: Mathematics and Economics, *DOI*

2021 **H. Albrecher & P.O. Goffard**, *On the Profitability of Selfish Blockchain Mining Under Consideration of Ruin*, Operations Research, *DOI*

2020 **P.O. Goffard & Patrick Laub**, *Orthogonal polynomial expansions to evaluate stop-loss premiums*, Journal of Computational and Applied Mathematics, *DOI*

2019 **Søren Asmussen, P.O. Goffard, & Patrick Laub**, *Orthonormal polynomial expansion and lognormal sum densities*, Risk and Stochastics - Festschrift for Ragnar Norberg, *DOI*

2019 **P.O. Goffard and Andrey Sarantsev**, *Exponential convergence rate of ruin probabilities for Level-dependent Lévy driven risk process*, Journal of Applied Probability, *DOI*

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

2019 **P.O. Goffard**, *Two-sided exit problems in the ordered risk model*, Methodology and Computing in Applied Probability, *DOI*

2018 **P.O. Goffard, & Claude Lefèvre**, *Duality in ruin problems for ordered risk models*, Insurance: Mathematics and Economics, *DOI*

2017 **P.O. Goffard, & Claude Lefèvre**, *Boundary crossing problem of order statistic point processes*, Journal of Mathematical Analysis and Applications, *DOI*

2017 **P.O. Goffard, Stephane Loisel & Denys Pommeret**, *Polynomial approximations for bivariate aggregate claims amount probability distributions*, Methodology and Computing in Applied Probability, *DOI*

2016 **P.O. Goffard, Stephane Loisel & Denys Pommeret**, *A polynomial expansion to approximate the ultimate ruin probability in the compound Poisson ruin model*, Journal of Computational and Applied Mathematics, *DOI*

2015 **P.O. Goffard & Xavier Guerrault**, *Is it optimal to group policyholders by age, gender, and seniority for BEL computations based on model points?*, European Actuarial Journal, *DOI*

Most recent communications

UK 2023 **Insurance: Mathematics and Economics conference**, *Edinburgh*

France 2023 **INFORMS Applied Probability Conference**, *Nancy*

USA 2023 **SIAM Meeting in Financial Mathematics**, *Philadelphia*

Awards

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

Reviewing activities

Scandinavian Actuarial Journal, Stochastic Processes and their Applications, Journal of the Royal Society Interface, Methodology and Computing in Applied Probability, European Actuarial Journal, Risks, Insurance: Mathematics and Economics, Operation Research Letters, Stochastic Models, Probability in the Engineering and Informational Sciences, Journal of Computationnal and Applied Mathematics, European Journal of Operational Research, Mathematics and Computers in Simulations, Annals of Actuarial Science, Non Linear Analysis

Hobbies

Music Guitar

Sports Surf, windsurf, soccer

Dance Salsa, Bachatta