

# Pierre-O. Goffard

Assistant professor in applied mathematics

UCSB  
Departments of Statistics  
and Applied Probability  
✉ goffard@pstat.ucsb.edu  
📧 pierre-olivier.goffard.me  
French, 29 years old



## Professional experience

- Since September 2016 **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<sup>rd</sup> 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

- 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<sup>th</sup> anniversary of the CFMAR conference**, Santa Barbara.
- USA 2017 **Seminar at USC**, Los Angeles.
- USA 2016 **Seminar at UCSB**, Santa Barbara.

- France 2016 **3<sup>rd</sup> European Actuarial Journal Conference**, *Lyon*.
- France 2016 **3<sup>rd</sup> 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 **19<sup>th</sup> International Congress on insurance, mathematics, and economics**, *Liverpool*.
- France 2014 **46<sup>ème</sup> journées de statistique**, *Rennes*.
- Germany 2013 **Conference on Advances in Financial and Insurance Risk Manangement**, *Munich*.
- France 2013 **5<sup>ème</sup> Rencontre des Jeunes Statisticiens**, *Aussois*.
- France 2013 **45<sup>ème</sup> journées de statistique**, *Toulouse*.
- Switzerland 2013 **Perspective on Actuarial Risks in Talks of Young Researchers**, *Ascona*.

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## Awards

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

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## Reviewing activities

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

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## Hobbies

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