

**emlyon business school launches a new research chair
“Climate Risk and Property Insurance” with Groupama Rhône Alpes
Auvergne (GRAA)**

emlyon business school launches with Groupama RAA (Rhône Alpes Auvergne) the “Climate Risk and Property Insurance” research chair. The objective is to build a conceptual and quantitative framework, describing the impact of climate transition over property risk in insurance.

Global warming, a major source of instability for economic actors

Climate warming is a major source of instability for all economic sectors and insurance is no exception. We are experiencing both a risk mutation (where the nature of hazards is evolving) and the onset of a high-level of uncertainty (that is a situation where risks can no longer be modeled, or very seldomly). Among the risks most affected by climate change, there are “**clay**” and “**hail**” hazards. The works of the chair will focus on “clay” hazards. Clay soil movements, mainly caused by drought, generate high-risk exposure for buildings.

Better understand insurance adaptation mechanisms to environmental transition

The objective is to conduct a **research work**, notably a **doctoral** one, around probabilistic modeling of climate risks, to gain a better understanding of the adaptation mechanisms of **property insurance** to environmental transition. Subjects studied:

- Risks generated by weather conditions and changes of seasonal models.
- Extreme risks, extreme value theory and joint distribution of extreme events.
- Reliability of climate data and stability of climate paradigms.

For Olivier Le Courtois and Lorenz Schneider, co-directors of the chair: “*We must not overlook how major the impact of property hazards can be on populations and agriculture across the whole territory: clay soil movements, hail, floods, etc. **This context is especially complicated for insurers whose goal is to continue protecting populations, by providing provisions available to the greatest number of people.***”

The “Climate Risk and Property Insurance” chair is part of the QUANT research center of emlyon business school

The “Climate Risk and Property Insurance” chair is part of the **QUANT research center** (<https://aim.em-lyon.com/quant/>) of **emlyon** business school. Its works cover all aspects of

mathematical modeling applied to economic and management sciences, with two major questions regarding property hazards:

- Can we model them as such, and if so, how?
- Can we model them as consequences of climate evolutions?

Both endogenous and exogenous modeling are to be designed in a context of environmental instability. **The ability to model risks depends on the ability to manage them, and consequently, on the ability to continue to provide an insurance coverage to individuals, companies and farms.** Indeed, providing this service cannot become a net source of costs for insurers, in a context of withdrawal from re-insurers.

Redefining underlying risk structure - their potential instability and their non-linearity - shall obviously go hand-in-hand with redefining contracts. This can be achieved by redefining the risks covered, based on deductible modifications, prevention, etc. In any case, modeling reconstruction and pricing taking into account climate hazards need to be associated with the reconstruction of the protection offer.

For four years, the chair's purpose will be to provide research output leading to scientific publications, to organize seminars on these subjects and general-public events.

An innovative chair conducted by two professors of emlyon business school

This chair is conducted by two professors of **emlyon** business school Olivier Le Courtois and Lorenz Schneider.-This chair will also pull together international research-professors, experts and doctoral students on climate aspects and risk modeling.

Professor in Finance and Insurance at **emlyon** business school, **Olivier Le Courtois** (<https://em-lyon.com/olivier-le-courtois/brievement>) specializes in probabilities and analysis applied to modeling in finance, insurance and economy. Former student of the École Normale Supérieure de Lyon, with a French “*agrégation*” in physics, and a doctorate with an Authorization to Direct Research in management science. As an actuary, he is a “Fellow of the Society of Actuaries”, he holds several certifications, accounts for a long experience in consulting and published many research articles in academic journals.

Professor in mathematical finance at **emlyon** business school, **Lorenz Schneider** (<https://em-lyon.com/lorenz-schneider/brievement>) has been a professor at the Technical University of Munich as part of the prestigious programs August-Wilhelm Scheer and KPMG. He worked as a quantitative analyst on raw materials and hybrid derivatives at Dresdner Kleinwort in the “Square Mile” of London. He holds a doctorate in mathematics from the université Paris VI Pierre et Marie Curie and an Authorization to Direct Research from the université d’Aix-Marseille. He was published in numerous international academic journals.

For Francis Thomine, CEO of Groupama Rhône-Alpes Auvergne:

*“Our region has been one of the most hit by large-scale climate events over the past few years. These extreme episodes have considerably impacted the lives of our policyholders and our cost of claims. To address these upheavals, we have created in September last, a new department called “Climate change and emerging risks” to adapt our model. We are proud to be partnering with **emlyon** business school right from the start of this chair, thereby marking our commitment to addressing the great climate change issues. Research results*

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will allow us to better anticipate, measure and design solutions to address such risks, so that our member-policy holders can build their lives safely.”

For Isabelle Huault, Executive President and Dean of emlyon business school:
“The launching of the “Climate Risk and Property Insurance” chair with Groupama illustrates both the profound commitment of emlyon business school to environmental issues and its proximity with businesses and their challenges. Research is essential for us - and I am glad that with this launching, we can work on such major subjects which are still rarely researched by the scientific community. Our ambition is to move forward in this direction, to keep on nurturing our research and permeating the socio-economic world. More than ever, it is paramount that these challenges are addressed within a scientific framework, with a critical and systematic approach made possible by the research centers of emlyon business school, for a real and positive impact on society.”

About emlyon business school:

Founded in 1872 by the Lyon CCI, **emlyon** business school has an enrollment of 9,050 students of 125 nationalities over 6 campuses worldwide (Lyon-Ecully, Saint-Etienne, Shanghai, Paris, Bhubaneswar and Mumbai). emlyon draws on a Faculty of 166 international professors and researchers, and a network of 200 global academic partners, to provide learning tracks of excellence opened to the world. emlyon runs a community of 41,700 alumni spread out in 130 countries. As a *Société à Mission* since July 2021, emlyon’s raison d’être consists in: *“providing life-long training and support to meaningful individuals able to transform organizations, for a fairer society, with more solidarity and respect for the planet.”* In its early makers pedagogy, action and reflection are closely intertwined. Skill hybridization and social responsibility are at the heart of its training programs, where the best of both socio-economic and academic worlds meet.
www.em-lyon.com

About Groupama Rhône-Alpes-Auvergne:

With 311 agencies and 8 management centers, Groupama Rhône-Alpes Auvergne is a major insurer for the region, it supports the territories’ development, where its policyholders and collaborators actually live. To be as close to real life as possible, the company relies on a mutualist model, based on values of proximity, solidarity and responsibility. More than 2.387 collaborators and 3.600 representatives embody the company’s model and values in their daily actions, at the service of the member-policy holders.

Press contacts:

KBZ Corporate for emlyon:

Laurence Martin - lmartin@kbzcorporate.com - 06 47 69 85 99

Karine Zimeray - kzimeray@kbzcorporate.com - 06 09 15 65 14

Alexandra Brun, corporate communication corporate for Groupama Rhône-Alpes Auvergne: alexandra.brun@groupama-ra.fr – 06 48 87 97 01