

# Sullivan Hué

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## Contact Information:

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## Research interests:

1<sup>st</sup> area: Financial econometrics,  
Financial risk measurement, Financial regulation  
2<sup>nd</sup> area: Big data, Machine learning,  
Interpretable Machine Learning

## Employment

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2022 - **Assistant professor**, Aix-Marseille School of Economics (AMSE)

2021 - 2022 **Post-Doctoral Fellow**, Aix-Marseille School of Economics (AMSE)

2020 - 2021 **Post-Doctoral Fellow**, Laboratoire d'Economie d'Orléans (LEO), ANR CaLiBank

## Education

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2017 -2020 **Ph.D. in Econometrics and Finance**

Laboratoire d'Economie d'Orléans

Title: “Four Essays on Financial Risk Measurement”

Supervisors: Sessi Tokpavi (LEO), Elena Dumitrescu (EconomiX)

Committee: Bertrand Candelon (Université catholique de Louvain), Olivier Darne (LEMNA), Sébastien Laurent (AMSE), Grégory Levieuge (Banque de France), Valérie Mignon (EconomiX), Jean-Paul Renne (HEC Lausanne)

Defense: December 11, 2020

2015 -2017 **Master in Econometrics and Applied Statistics**

University of Orléans

2012 - 2015 **Bachelor in Economic and Management**

University of Orléans

## Grants

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2021 **Monetary, Financial and Banking Thesis Prize**  
Fondation Banque de France

2017 - 2020 **Ph.D. Scholarship**  
French Ministry of Education and Scientific Research

## Research Work

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<b>Publications</b>	Measuring Network Systemic Risk Contributions: A Leave-one-out Approach, <i>Journal of Economic Dynamics and Control, Volume 100, March 2019, Pages 86–114</i> (Rank 1 CNRS, Rank A HCERES), joint with Yannick Lucotte (LEO) and Sessi Tokpavi (LEO)
	Machine Learning for Credit Scoring: Improving Logistic Regression with Non-Linear, Decision-Tree Effects, <i>European Journal of Operational Research, Volume 297, Issue 3, 16 March 2022, Pages 1178-1192</i> (Rank 1 CNRS, Rank A HCERES), joint with Elena Dumitrescu (EconomiX), Christophe Hurlin (LEO) and Sessi Tokpavi (LEO)
<b>Working Papers</b>	GAM(L)A: An econometric model for interpretable Machine Learning, joint with Emmanuel Flachaire (AMSE), Gilles Hacheme (AMSE) and Sébastien Laurent (AMSE), R&R in <i>Oxford Bulletin of Economics and Statistics</i> , (Rank 2 CNRS, Rank A HCERES)
	Granger-Causality in Conditional Quantiles and Financial Interconnectedness, joint with Jérémie Leymarie (EDHEC Business School),
	Latent Factor Model for Default Tail Risk: an Integrated Approach to Systemic Risk Evaluation
	Explainable Performance, joint with Christophe Hurlin (LEO), Christophe Pérignon (HEC) and Sébastien Saurin (LEO)
<b>Works in progress</b>	Backtesting expected shortfall: a duration-severity approach joint with Christophe Hurlin (LEO) and Yang Lu (Concordia University, Canada)

## Participation in Funded Research Projects

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<b>ANR MultiRisk 2017-2020</b> (ANR-16-CE26-0015-01)	Project: Econometric Methods for the Modelling of Multiple Risks Coordinators: Christophe Hurlin (LEO), Gaëlle LeFol (University Paris Dauphine), Jean-Michel Zakoian (CREST)
<b>ANR CaLiBank 2020-2023</b> (ANR-19-CE26-0002-02)	Project: The Post-Crisis Banking Industry: How will banks respond to tighter regulatory constraints ? Coordinator: Amine Tarazi (LAPE)
<b>APR-IA RedFlag 2020-2022</b> (Convention: 2019-00134941)	Project: Fraud detection and anti-money laundering Coordinators: Denisa Banulescu-Radu (LEO), Sandie Lacroix-De Sousa (CRJP)
<b>ANR MLEforRisk 2021-2024</b> (ANR-21-CE26-0007)	Project: Machine Learning and Econometrics for Risk Measurement in Finance Coordinators: Christophe Hurlin (LEO), Sébastien Laurent (AMSE), Gaëlle LeFol (University Paris Dauphine), Jean-Michel Zakoian (CREST)

## Seminars and Conferences

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**Alternative techniques in housing and construction during the Covid crisis**  
Institut Louis Bachelier (online), November 2022

**Séminaire interne**  
AMSE, November 2022

**STATA Conference**  
AMSE, June 2022

**Quantitative Finance and Financial Econometrics 2022**  
AMSE, June 2022

**Finance Seminar**  
CREST, June 2022

**Séminaire interne**  
Online, June 2021

**69th Annual Meeting of the French Economic Association (AFSE)**  
Online, June 2021

**37th Annual Conference of the French Finance Association (AFFI)**  
Online, May 2021

**2021 AAP/ANR CaLiBank Workshop**  
Online, May 2021

**Workshop ANR MultiRisk 2019**  
Villa Finaly, Florence, Italy, April 2019

**XXVII Rome International Conference on Money, Banking and Finance**  
LUISS University, Rome, Italy, December 2018

**3rd Panorisk Conference: Risk, Markets, and the Real Economy**  
Audencia Business School, Nantes, November 2018

**17ème Journée d'Econométrie : Développements récents de l'économétrie appliquée à la finance**  
University Paris Ouest - Nanterre La Défense, November 2018

**12th International Workshop of Methods in International Finance Network (MIFN)**  
University of Louvain-la-Neuve, Belgium, November 2018

**6th Applied Macroeconometric Workshop**  
MSH Paris Nord, October 2018

**Financial Econometrics Conference: Market Microstructure, Limit Order Books and Derivative Markets**

Lancaster University Management School, UK, September 2018

**International Association for Applied Econometrics (IAAE)**  
UQAM, Canada, June 2018

**35th Annual Conference of the French Finance Association (AFFI)**  
ESCP Europe, Paris, May 2018

**7th PhD Student Conference in International Macroeconomics and Financial Econometrics**  
University Paris Ouest - Nanterre La Défense, March 2018

**Séminaire interne**  
University of Orléans, February 2018

**16ème Journée d'Econométrie : Développements récents de l'économétrie appliquée à la finance**  
University Paris Ouest - Nanterre La Défense, November 2017

# Teaching

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## Aix-Marseille University

**Econometrics of Banking and Finance**  
(in english) Master in Economics - Quantitative Finance and Insurance,  
second year  
AMSE, Aix-Marseille University  
Lecture of 12H, since 2021

**Time Series**  
(in english) Master in Economics, first year  
AMSE, Aix-Marseille University  
Lecture of 24H, since 2021

**Big Data 1: Introduction**  
(in english) DESU Magistère Economist Engineer, first year  
AMSE, Aix-Marseille University  
Lecture of 24H, since 2022

**Automatic model selection methods**  
(in english) Master in Economics - Econometrics, Big Data and Statistics  
(EBDS), and Theoretical and Empirical Economics (ETE),  
second year  
AMSE, Aix-Marseille University  
Lecture of 24H, since 2022

**Financial Econometrics**  
(in egnlish) Master in Finance - Financial Risk Management (MRF),  
second year  
FEG, Aix-Marseille University  
Lecture of 18H, since 2022

**Introduction to Econometrics** Master in Finance, first year  
FEG, Aix-Marseille University  
Tutorial of 12H ( $\times 2$ ), 2021-2022

## University of Orléans

**Big Data with SAS** Graduate School of Orléans Numérique, first and second years  
The GSON is a university degree proposed to students of  
different masters from the University of Orléans  
Lecture of 16H, from 2017 to 2020

**Mathematical Statistics** Master Econometrics and Applied Statistics, first year  
DEG, University of Orléans  
Tutorial of 15H ( $\times 2$ ), from 2017 to 2020

**Advanced Linear Econometrics** Undergraduate (Economic and Management), third year  
DEG, University of Orléans  
Tutorial of 15H, from 2017 to 2020

**Personal and Professional Project** Undergraduate (Economic and Management), second year  
DEG, University of Orléans  
Tutorial of 8H, 2017

## **Refereeing activities**

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**Referee for the reviews:** Journal of Economic Dynamics and Control, Journal of Banking and Finance, (Publons profile) Journal of Financial Stability, Finance Research Letter, Economics Bulletin, Computational Economics, International Economics, Revue Économique, International Journal of Forecasting

## **Organization of conferences**

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Member of the local organisation committee of the AFSE, University of Orléans, June 2019

Member of the scientific committee of the QFFE, AMSE, 2022-2023

## **Other**

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Member of the evaluation jury of the course of “Interpretability and Algorithmic fairness” (MSc Data Science for Business - HEC Paris, 2021-2022).

Econometric Game contest, Online, 8-9 April, 2021. Captain of University of Orléans' team.

## **Languages and Computer Skills**

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**Languages:** French (native), English

**Computer:** Matlab, R, Stata, SAS, Python, OxMetrics