Arthur Charpentier

Full Professor, Université du Québec à Montréal, Canada – https://freakonometrics.github.io/

Education

2016 **Habilitation à Diriger des Recherches** Université de Rennes 1, France

2006 **PhD in Mathematics** (*Doctor in de Wetenschappen, Wiskunde*), KUL Leuven, Belgium

1999 **Master in Applied Mathematics** (DEA MASE), Université Paris Dauphine, Paris, France

1999 **Master in Statistics and Economics, ENSAE**, Paris, France

Professional Experience

2018/···	Full Professor, Mathematics Dpt, **Université du Québec à Montréal** (UQAM), Canada. (Quantact, HumanIA)
2017/2018	Full Professor, **Université Rennes 1**, Economics Dpt, Rennes, France (CREM).
2015/2018	Director, **Data Science for Actuaries** Program, Institut des Actuaires, Paris, France
2014/2017	Associate Professor, **Université Rennes 1**, Economics Dpt, France
2011/2014	Associate Professor, Mathematics Dpt, **Université du Québec à Montréal**, Canada
2010/2011	Sabbatical, Visiting Professor, **Université de Montréal**, Canada.
2009/2010	Associate Professor (PCC), **École Polytechnique**, Palaiseau, France.
2008/2011	Associate Professor, **Université Rennes 1**, Economics Dpt, France
2007/2008	Lecturer (ATER), **Université Rennes 1**, Economics Dpt, Rennes, France
2006/2007	Assistant Professor, **ENSAI**, National School of Statistics, Campus Ker Lan, Rennes, France
2002/2006	Assistant Professor, **ENSAE**, National School of Statistics, Paris, France
2001/2002	Researcher at the French Federation of Insurers **FFSA**, Paris, France
1999/2001	Assistant Manager, **AXA General Insurance Hong Kong Limited**, Hong Kong, China
1998/1999	Researcher at **Exane**, Fixed Income Department, Paris, France

Awards and grants

2019-2025	NSERC (*Natural Sciences and Engineering Research Council of Canada*), $100,000 (PI single)
2019	Institut des Actuaires Research Grant : 8,000€ (PI single)
2015-2019	ANR (*Agence Nationale pour la Recherche*, France), ORDINEQ project *Ordinal and Multivariate Inequalities* : 525,000€, PI Patrick Moyes (Université Bordeaux), portion obtained 24,000€
2015-2018	Chaire ACTINFO, Institut Louis Bachelier : 558,000€, co-PI with R. Elie (Université Paris-Est), portion obtained 279,000€
2015	PEPS MoMIS *Networks & Finance*, 15,000€, PI Frederic Giroire (INRIA), obtained 5,000€
2012-2014	NSERC (*Natural Sciences and Engineering Research Council of Canada*), $70,000 (PI single)
2011	Chaire Groupama-Dauphine, 10,000€ travel grant (Montréal, Canada)
2010-2012	Geneva Association on Risk and Insurance, 15,000 Francs Suisses (PI single)
2008-2012	ANR AST&Risk project *Approches spatio-temporelles pour la modélisation du risque*, 500,000€, PI Véronique Maume-Deschamps (Université Lyon 1), portion obtained 24,000€
2009-2012	Chaire AXA-X-ENSAE, 24,000€ grant (PI single)
2009-2012	PES (*Prime d'Excellence Scientifique*), 24,000€ (PI single)
2006	Scor-Tillinghast PhD Price (award)

Publication : Books

2014 *Computational Actuarial Science, with R.* Chapman & Hall, London.

2005 *Mathématiques de l'assurance non-vie: Tarification et provisionnement* (Tome 2). Economica, Paris [2nd ed. 2013], with M. Denuit

2005 *Mathématiques de l'assurance non-vie: Principes fondamentaux de théorie du risque* (Tome 1). Economica, Paris, with M. Denuit

Articles in Peer Reviewed International Journals (selection over past five years)

2019 Internal Migrations in France in the XIX-th Century. *The History of the Family*, with E. Gallic

2018 Econometrics and Machine Learning. *Economics & Statistics*, with E. Flachaire & A. Ly

2018 We are not alone ! (at least, most of us). Homonymy in large scale social groups . *Significance*, with B. Coulmont

2017 Probit transformation for nonparametric kernel estimation of the copula density. *Bernoulli*, with G. Geenens and D. Paindaveine

2016 Local Utility and Multivariate Risk Aversion. *Mathematics of Operations Research*, with A. Galichon and M. Henry

2016 Kernel density estimation based on Ripley's correction. *Geoinformatica*, with E. Gallic

2015 Tents, Tweets, and Events: The Interplay Between Ongoing Protests and Social Media. *Journal of Communication*, with M.T. Bastos and D. Mercea,

2015 Modeling earthquake dynamics. *Journal of Seismology*, with M. Durand

2014 Multivariate Archimax copulas. *Journal of Multivariate Analysis*, with A.-L. Fougères, C. Genest and J.G. Nešlehová

2014 Insuring natural catastrophes: When should government intervene? *Journal of Public Economics*, with B. Le Maux

27 published articles in peer reviewed international journals
23 published articles in French-speaking peer reviewed journals
1250 citations (730 over past five years)

Supervision (over past five years)

PostDoc E. Gallic (2017-2018, now Aix Marseille School of Economics, Assistant Professor) A. Goussebaïle (2016-2017, now ETH Zürich, PostDoc)

PhD E. Betz (2017-$\cdots$, Université Rennes), A. Ly (2015-2019, Université Paris Est, cosupervision R. Élie), A. Barry (2013-2019, UQAM, cosupervision K. Oualkacha)

MSc A. Barme (2019, ENSAE), M. James (2019, Université Brest), J. Martail (2017, Université Rennes), C. Davesne (2014, ENSAE), J. Viard (2014, Université Rennes)

BSc A. David (2015), C. Tremblay-Bergeron (2014)

Committees (PhD) et Reviews

Committees (PhD) : Telecom SudParis (2018), Université de Lyon (2019, 2017, 2011) École des Hautes Études en Sciences Sociales - PSE (2017), Université de Montpellier (2016), École Polytechnique (2015), Universitat de Barcelona (2015), Université Paris Pierre & Marie Curie (2014, 2010), Université de Louvain (2014), Universiteit van Amsterdam (2013), Université Paris Assas (2010, 2008)

Externatl Reviewer for Grant Agencies MITACS Québec, FNR Luxembourg CORE program, F.R.S.-FNRS, Belgium, IVADO, Montréal, Canada, National Security Agency (NSA), *Mathematical Sciences Grant Program*, Natural Sciences and Engineering Research Council (NSERC), Canada, Fonds de recherche du Québec - Nature et technologies (FRQNT), Canada, Agence nationale pour la recherche (ANR), France, AXA Research Fund.

Reviewer for academic journals (over 60 reviews in ten years)

Conferences and Seminars

55 conferences since 2010 (14 keynote speaker, 33 invited) Most recent : *Risk Analytics Conference* (Chicago, US), *UCSB InsurTech Summit* (Santa Barbara, US), *Natural Catastrophe Economics Workshop* (ETH Zürich, Swiss), *XXVIIIth International Biometric Conference* (Barcelona, Spain), *European R Users Meeting* (Budapest , Hungary), *Big data empirics and policy analysis* (Bank of England London, UK), *Statistical Learning and Data Science* (Rotterdam, Netherlands), *Big Data & Environment* (Buenos Aires, Argentina), *Sciences XXL* (INED Paris, France)

26 seminars since 2010 Most recent : Telecom ParisTech (France), Università degli Studi dell'Insubria, Varese (Italy), ESSEC (France), Université Laval (Canada), University of Michigan, Ann Arbor (US)

Editor (Editorial Boards)

Risks (2019/$\cdots$), REVSTat (2019/2023), ASTIN Bulletin (2018/$\cdots$), European Actuarial Journal (2014-2019), Bulletin Français d'Actuariat (2011-2014)

Editor of the blog https://freakonometrics.hypotheses.org/ (more than 1.2 million visitors & 3 million page views per year) and of the Twitter account @freakonometrics ($\sim$ 26,500 followers)

Teaching (over past five years)

INF7100 **Introduction to data science and artificial intelligence**, UQAM (Graduate, 2019)

Econometrics and Machine Learning, Summer School of the Italian Econometrics Society (2019), Universitat de Barcelona (2018), Università degli Studi dell'Insubria (2018), Université de Bretagne Loire (2017)

Use and value of unusual data in Insurance, Summer School of the Swiss Association of Actuaries, University of Lausanne (2019)

Non-life Actuarial Modeling, ENSAE (Master, 2015-2017)

Networks and Flows, Université de Rennes 1 (Master, 2017)

Income Inequalities, Université de Rennes 1 (Master, 2016-2018)

STT5100 **Applied Linear Regression**, UQAM (Undergraduate, 2018, 2019)