ANNA KIRILIOUK – CURRICULUM VITAE

Tenured assistant professor (*chargée de cours à titre définitif*)
Faculty of Economics Management Communication Politics and Department of Mathematics
Namur Research Institute for Complex Systems (NaXys)
Rempart de la Vierge 8, B-5000 Namur, Université de Namur, Belgium

Academic director (*responsable programme*) for the Bachelor program in *Economics and Management* and the Master program in *Management Sciences*.

• EDUCATION

2016	PhD "Modelling extreme-value dependence in high dimensions using threshold exceedances". *Institute of Statistics, Biostatistics and Actuarial Sciences, Université catholique de Louvain (UCLouvain), Belgium*. Supervised by Johan Segers and Michel Denuit.
2012	MSc in Statistics and Financial Mathematics. *School of Basic Sciences, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland.*
2010	BSc in Mathematics. *Faculty of Science, Radboud University, Nijmegen, the Netherlands.*

• CAREER

2025 – now	Tenured assistant professor. *Institut de statistique, biostatistique et sciences actuarielles (LIDAM/ISBA), Faculty of Sciences, UCLouvain, Belgium.*
2018 – 2025	Assistant professor (tenured since 2020). *Faculty of Economics Management Communication Politics and Department of Mathematics, Université de Namur (UNamur), Belgium.*
2017 – 2018	Assistant professor (fixed-term), *Econometric Institute, Erasmus School of Economics, Erasmus University Rotterdam (EURotterdam), the Netherlands.*
2016 – 2017	Postdoctoral researcher (F.R.S.-FNRS scholarship), *Institute of Statistics, Biostatistics and Actuarial Sciences, UCLouvain, Belgium.*
2012 – 2016	PhD student (F.R.S.-FNRS Research Fellow), *Institute of Statistics, Biostatistics and Actuarial Sciences, UCLouvain, Belgium.*
2016	Trading risk analyst, *Department of Market Risk Management and Product Control, ING Bank, the Netherlands*.

• RESEARCH GRANTS

2025 – 2034	FED-tWIN (*UNamur—RMIB Royal Meteorological Institute of Belgium*), ~ **1250k**, jointly with Stéphane Vannitsem (*Royal Meteorological Institute of Belgium)* and Valérie Trouet (*Belgian Climate Centre*). Creates a ten-year research position shared between *UNamur* and *RMIB*, funded by *BELSPO*.
2024 – 2029	Action de Recherche Concertée (*UNamur—UCLouvain*), ~ **1150k**, as a **coordinator**, jointly with François Massonnet, Francesco Ragone, Hugues Goosse and Johan Segers (*UCLouvain*).
2024 – 2028	Mandat d'Impulsion Scientifique (FNRS), ~ **420k**.
2024 – 2025	NARC (Namur Research College) fellow, ~ **30k**. UNamur grant for outstanding young researchers, https://www.unamur.be/fr/recherche/narc/anna-kiriliouk.
2020 – 2025	Projet de Recherche (FNRS), ~ **370k**, as a co-promotor, jointly with Johan Segers (*UCLouvain*).
2019 – 2023	Crédit de Recherche (FNRS), ~ **30k**.

2018 Chargé de Recherches (FNRS), *post-doctoral grant declined to accept the position of assistant professor at UNamur*.

2013 – 2017 FRIA (FNRS), doctoral grant.

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL RESEARCHERS**

2025 – 2026 Lídia André (Postdoctoral fellow at *UNamur & UCLouvain*) , jointly with Johan Segers.

2024 – now Mirco Lescart (PhD student at *UNamur & UCLouvain)*.

2024 – now Robert Paulus (PhD student at *UNamur & UCLouvain*), jointly with Francesco Ragone.

2024 – now Alexandre Tytgat (PhD student at *UCLouvain*), jointly with François Massonnet.

2022 – 2024 Jeongjin Lee (Postdoctoral fellow at *UNamur*), jointly with Johan Segers.

2021 – now Anas Mourahib (PhD student at *UCLouvain*), jointly with Johan Segers.

- **WORKING PAPERS**

2025+ Mourahib, A., Kiriliouk, A., and Segers, J. A penalized least squares estimator for extreme-value mixture models, https://arxiv.org/abs/2506.15272.

2025+ Kiriliouk, A. and Zhou, C. Estimating probabilities of multivariate failure sets based on pairwise tail dependence coefficients, https://arxiv.org/abs/2210.12618.

- **PUBLICATIONS**

2025+ Kiriliouk, A. and Zhou, C. Tail Risk Analysis for Financial Time Series. Book chapter to be published in the *Handbook on Statistics of Extremes* (edited by M. de Carvalho, R. Huser, P. Naveau and B. Reich), CRC Press.

2025+ Mourahib, A., Kiriliouk, A., and Segers, J. Multivariate generalized Pareto distributions along extreme directions, https://doi.org/10.1007/s10687-024-00501-4. Accepted in *Extremes*.

2025+ Kiriliouk, A., Lee, J., and Segers, J. X-Vine models for multivariate extremes, https://doi.org/10.1093/jrsssb/qkae105. Accepted in the *Journal of the Royal Statistical Society: Series B (Statistical Methodology).*

2021 Kiriliouk, A., Segers, J. and Tsukahara, H. Resampling procedures with empirical beta copulas. Book chapter in *Pioneering works on extreme value theory: in honor of Masaaki Sibuya* (edited by N. Hoshino, S. Mano and T. Shimura), Springer.

2020 Kiriliouk, A. and Naveau, P. Climate extreme event attribution using multivariate peaks-over-thresholds modeling and counterfactual theory. *Annals of Applied Statistics 14(3), 1342-1358.*

2020 Kiriliouk, A. Hypothesis testing for tail dependence parameters on the boundary of the parameter space. *Econometrics and Statistics 16, 121-135.*

2019 Kiriliouk, A., Rootzén, H., Segers, J., and Wadsworth, J. Peaks over thresholds modelling with multivariate generalized Pareto distributions. *Technometrics 61(1), 123-135.*

2018 Kiriliouk, A., Segers, J. and Tafakori, L. An estimator of the stable tail dependence function based on the empirical beta copula. *Extremes 21(4), 581-600.*

2018 van Loenhout, J.A.F., Delbiso, T. Kiriliouk, A. Rodriguez-Llanes, J. Segers, J. and Guha-Sapir, D. Heat and emergency room admissions in the Netherlands. *BMC Public Health 18(108), 1-9.*

2018 Einmahl, J.H.J., Kiriliouk, A., and Segers, J. A continuous updating weighted least squares estimator of tail dependence in high dimensions. *Extremes 21(2), 205-233.*

2016 Einmahl, J.H.J., Kiriliouk, A., Krajina, A., and Segers, J. An M-estimator of spatial tail dependence. *Journal of the Royal Statistical Society: Series B (Statistical Methodology), 78, 275-298.*

2016 Kiriliouk, A., Segers, J., and Warchol, M. Nonparametric estimation of extremal dependence. Book chapter in *Extreme Value Modelling and Risk Analysis: Methods and Applications* (edited by D. Dey and J. Yan), Chapman & Hall/CRC Press.

2015 Denuit, M., Kiriliouk, A., and Segers, J. Max-factor individual risk models with application to credit portfolios. *Insurance: Mathematics and Economics 62, 162-172.*

- **TEACHING ACTIVITIES AND THESIS SUPERVISION**

2024	**Short course** ‘*An introduction to extreme-value analysis, with applications to climate data*’ (8h), jointly with Johan Segers, for the doctoral school in statistics (*UCLouvain)*.
2021 – 2023	**Inferential statistics and regression,** third-year bachelor students Information and Communication and in Political Sciences, *UNamur*.
2020 – now	**Statistics**, first-year bachelor students in Information and Communication and in Political Sciences, *UNamur*.
2019 – now	**Regression,** optional course for third-year bachelor students in Mathematics, *UNamur*.
2019 – now	**Advanced Quantitative Methods**, first-year master students in Management Engineering, *UNamur*.
2019 – now	**Project: sectoral diagnosis**, first-year bachelor students in Economics and Management and in Management Engineering, *UNamur.*
2019	**Short course** ‘*Introduction to extreme-value theory*’ (3h) within the PhD course ‘*Advanced topics in econometrics*’ *(UNamur)*.
2018 – now	**Statistics**, first-year bachelor students in Economics and Management and in Management Engineering, *UNamur*..
2018 – now	**Mathematics for economics and management**, second-year bachelor students in Economics and Management and in Management Engineering, *UNamur*.
2018 – now	**Master thesis supervision** (average: 2–3 per year) for master students in Management Engineering.
2017 – 2018	**Statistics**, first-year (international) bachelor students in Econometrics & Operations Research and pre-master students in Econometrics & Management Science, *EURotterdam*.
2017 – 2018	**Seminar in Financial Econometrics**, second-year international bachelor students in Econometrics & Operations Research, *EURotterdam*.
2017 – 2018	**Bachelor thesis supervision** for third-year students in Econometrics & Operations Research, *EURotterdam*.
2017 – 2018	**Master thesis supervision** for master students in Econometrics & Management Science, *EURotterdam*

- **ACADEMIC SERVICE**

2024 – now	Member of the PhD thesis committee of Kamal Gasser (*UCLouvain*).
2023	Pre-examiner of the PhD thesis of Nourhan Shafik (*Aalto University, Finland*).
2023	Examining board member for the PhD defense of Stefka Asenova (*UCLouvain*).
2022 – now	Member of the PhD thesis committee of Gaëtan Louvet (*UNamur*).
2021 – 2025	Member of the PhD thesis committee of Stéphane Lhaut (*UCLouvain*).
2019	Pre-examiner and opponent of the PhD thesis of Matias Heikkilä (*Aalto University, Finland*).

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

2022 – now	Management committee member of the COST action CA21163 “*Text, functional and other high-dimensional data in econometrics: new models, methods, applications*”.
2018 – now	Board member of the Belgian Royal Statistical Society.

- **SHORT SCIENTIFIC STAYS**

2018 prof. Philippe Naveau, Université Paris VI Pierre et Marie Curie *(France).*
2015, 2014 prof. Holger Rootzén, Chalmers University *(Sweden).*

- **INVITED SEMINAR TALKS**

2025 Vrije Universiteit Amstersam *(the Netherlands).*
2023 One World Extremes seminar (*virtual*).
2023 Research Institute Earth and Life Center *(UClouvain, Belgium).*
2019 Research Institute naXys *(UNamur, Belgium).*
2018 Université Libre de Bruxelles (*Belgium).*
2018 Katholieke Universiteit Leuven (*Belgium).*
2017 Erasmus University Rotterdam *(the Netherlands).*
2017 Université Paris VI Pierre et Marie Curie *(France).*
2014 Chalmers University Gothenburg *(Sweden).*
2013 Université de Strasbourg *(France).*

- **CONTRIBUTED & INVITED CONFERENCE TALKS**

2025 *(forthcoming)* **Invited talk**, 65th ISI World Statistics Congress *(The Hague, the Netherlands).*
2025 *(forthcoming)* **Invited talk**, 14th International Conference on Extreme Value Analysis *(Chapel Hill, USA).*
2024 **Invited keynote talk**, workshop on Dependence Models, Vines, and their Applications (*Munich, Germany*).
2023 **Invited talk**, workshop in honour of John Einmahl *(Oisterwijk, the Netherlands).*
2023 Contributed talk, 54th Journées de Statistique de la SFDS *(Brussels, Belgium).*
2023 Contributed talk, 13th International Conference on Extreme Value Analysis *(Milan, Italy).*
2023 **Invited talk**, workshop on "Modern Statistical and Machine Learning Approaches for High-Dimensional Compound Spatial Extremes" *(Granada, Spain).*
2023 **Invited talk**, Master of Statistical Analysis day of Ghent University *(Ghent, Belgium).*
2022 **Invited plenary talk**, 29th Annual Meeting of the Royal Belgian Statistical Society *(Brussels, Belgium).*
2022 **Invited talk**, workshop on causal inference and extremes *(Banff, Canada - Virtual).*
2022 **Invited talk**, workshop on behalf of the 30th anniversary of the Institute of Statistics *(Louvain-la-Neuve, Belgium).*
2020 **Invited talk**, 13th International Conference on Computational and Methodological Statistics (*London, UK – Virtual).*
2020 **Invited talk**, New Frontiers in Statistics of Extremes Workshop *(Lisbon, Portugal).*
2019 **Invited talk**, 62nd ISI World Statistics Congress *(Kuala Lumpur, Malaysia).*
2019 **Invited talk**, 11th International Conference on Extreme Value Analysis *(Zagreb, Croatia).*
2019 **Invited talk**, CRoNoS Workshop on Multivariate Data Analysis *(Limassol, Cyprus).*
2019 Contributed talk, VALPRED workshop on assessment of ensemble forecasts *(Aussois, France).*
2018 **Invited talk**, 11th International Conference on Computational and Methodological Statistics *(Pisa, Italy).*
2018 Contributed talk, 26nd Annual Meeting of the Royal Belgian Statistical Society *(Ovifat, Belgium).*
2018 Contributed talk, ATMS Workshop *(Leuven, Belgium).*
2018 **Invited talk**, workshop on Self-Similarity, Long-Range Dependence and Extremes *(Oaxaca, Mexico).*
2017 Contributed talk, European Meeting of Statisticians *(Helsinki, Finland).*

2017 **Invited talk**, 10th International Conference on Extreme Value Analysis *(Delft, the Netherlands).*

2017 Contributed talk, workshop on Risk Quantification and Extreme Values in Applications *(Lausanne, Switzerland).*

2016 **Invited talk**, 9th International Conference on Computational and Methodological Statistics *(Sevilla, Spain).*

2016 **Invited talk**, workshop on Statistics for High-Dimensional & Complex Data *(Thuwal, Saudi Arabia).*

2016 **Invited talk**, workshop on Flexible Statistical Modelling *(Ghent, Belgium).*

2016 **Invited talk**, Second Joint Conference of the Belgian, Royal Spanish and Luxembourg Mathematical Societies *(Rioja, Spain).*

2015 **Invited talk**, 8th International Conference on Computational and Methodological Statistics *(London, UK).*

2015 Contributed talk, 23rd Annual Meeting of the Belgian Statistical Society *(Antwerp, Belgium).*

2015 Contributed talk, 9th International Conference on Extreme Value Analysis *(Ann Arbor, USA).*

2014 **Invited talk**, workshop on Extreme Value Theory: Spatial and Temporal Aspects *(Besançon, France).*

2014 Contributed talk, workshop on High-dimensional and multivariate extremes *(Bristol, England).*

- **ORGANISATION OF SCIENTIFIC MEETINGS AND SESSIONS**

2025 – now Member of the One World Extremes seminar organization committee (https://sites.google.com/view/ow-extremes/home).

2023 Member of the scientific committee of the 30th Annual Meeting of the Belgian Statistical Society (*UClouvain*).

2023 Organizer of an invited session for the 13th International Conference on Extreme Value Analysis (*Milan, Italy*).

2022 Organizer of an invited session for the 5th International Symposium on Nonparametric Statistics (*Paphos, Cyprus*).

2020 Organizer of an invited session for the 13th International Conference on Computational and Methodological Statistics (*London, UK*).

2019 Member of the scientific and the organizing committee of the 27th Annual Meeting of the Belgian Statistical Society (*Sint-Truiden, Belgium*).

2016 Co-organizer of a workshop on Extremal Dependence Modelling (*Louvain-la-Neuve, Belgium*).

- **R PACKAGES PUBLISHED ON CRAN**

2016 Kiriliouk, A. *tailDepFun*: Minimum distance estimation of tail dependence models. R package version 1.0.1.

2014 Kiriliouk, A. and Segers, J. *spatialTailDep*: Estimation of spatial tail dependence models. R package version 1.0.2.

- **REVIEWING ACTIVITIES**

2013 – now *Refereeing for peer-reviewed journals (number of reviews in parentheses):* Advances in Statistical Climatology, Meteorology and Oceanography (1), The American Statistician (1), Annals of Statistics (1), Annals of Applied Statistics (4), Journal of Climate (1), Computational Statistics & Data Analysis (1), Dependence Modelling (1), Econometrics and Statistics (2), Extremes (7), Environmental and Ecological Statistics (1), Geoscientific Model Development (1), International Journal of Computer Mathematics (1), Journal of the American Statistical Association (1), Journal of Applied Probability (1), Journal of Applied Statistics (1), Journal of Computational and Graphical Statistics (2), Journal of Hydrology (1), Journal of Multivariate Analysis (3), Journal of the Royal Statistical Society: Series B (1), Journal of the Royal Statistical Society: Series C (1), Quantitative Finance (1), Royal Society Open Science (1), Scandinavian Journal of Statistics (1), Statistics (1), TEST (1), Water Resources Research (1), Weather and Climate Extremes (1)