Xuefei LU

Professeur associé

Académie : Digitalisation

Centre de recherche : SKEMA Centre for Analytics and Operations

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Intérêts de recherche

Statistical Machine Learning Uncertainty Quantification Big Data Problems Bayesian Non-Parametrics, Uncertainty Quantification, Operations Research, Artificial Intelligence

Formation

2019	Ph.D. in Statistics, Bocconi University, Italie
2013	MSc in Analytics: Operational Research and Risk Analysis, The University of Manchester, Royaume Uni

Expérience Professionnelle

Positions académiques principales

Depuis 2025	Professeur associé, SKEMA Business School, France
Depuis 2021	Assistant Professor, SKEMA Business School, France
2020 - 2021	Assistant Professor, Management Science and Business Economics Group, University of Edinburgh Business School, Royaume Uni
2018 - 2020	Chercheur postdoctoral, Politecnico di Milano, Italie

Contrats de recherche, prix et distinctions

Prix et distinctions

2024	2024 INFORMS Data Mining Best Paper Awards (Runner-Up), Institute for Operations Research and the Management Sciences (INFORMS), Etats-Unis d'Amérique
2024	European Journal of Operational Research 2024 Editors' awards for excellence in reviewing, European Journal of Operational Research (EJOR)
2024	Clemen-Kleinmuntz Decision Analysis Best Paper Award, Institute for Operations Research and the Management Sciences (INFORMS), Etats-Unis d'Amérique
2023	European Journal of Operational Research 2023 Editors' awards for excellence in reviewingEuropean Journal of Operational Research 2023 Editors' awards for excellence in reviewing, European Journal of Operational Research (EJOR)
2020	European Journal of Operational Research 2020 Editors' awards for excellence in reviewing, European Journal of Operational Research (EJOR)

Publications

Articles académiques revus

LU, X. et BORGONOVO, E. (2026). How do I explain that decision? A new approach combining counterfactuals and sensitivity analyses. *European Journal of Operational Research*, 334(1), pp. 200-215.

FLOREALE, G., BARALDI, P., LU, X., ROSSETTI, P. et ZIO, E. (2024). Sensitivity Analysis by Differential Importance Measure for Unsupervised Fault Diagnostics. *Reliability Engineering and System Safety*, 243, pp. 109846.

LU, X. et BORGONOVO, E. (2023). Global Sensitivity Analysis in Epidemiological Modeling. *European Journal of Operational Research*, 304(1), pp. 9-24.

LU, X., BORGONOVO, E. et RABITTI, G. (2023). Sensitivity Analysis of Pandemic Models Can Support Effective Policy Decisions. *Journal of Computational and Graphical Statistics*, 32(3), pp. 767-768.

HAZEN, G., BORGONOVO, E. et LU, X. (2023). Information Density in Decision Analysis. *Decision Analysis*, 20(2), pp. 85-185-C2.

LU, X. et CALABRESE, R. (2023). The Cohort Shapley value to measure fairness in financing small and medium enterprises in the UK. *Finance Research Letters*, 58(Part C), pp. 104542.

LU, X., XU, M., BARALDI, P. et ZIO, E. (2022). Generative Adversarial Networks With AdaBoost Ensemble Learning for Anomaly Detection in High-Speed Train Automatic Doors. *IEEE Transactions on Intelligent Transportation Systems*, 23(12), pp. 23408-23421.

CERVI, E., LU, X., CAMMI, A., DI MAIO, F. et ZIO, E. (2022). Sensitivity-Analysis-Driven Surrogate Model for Molten Salt Reactors Control. *Journal of Nuclear Engineering*, 3(4), pp. 277 - 294.

LU, X., BARALDI, P. et ZIO, E. (2020). A Data-Driven Framework for Identifying Important Components in Complex Systems. *Reliability Engineering and System Safety*, 204(107197), pp. 107197.

LU, X., RUDI, A., BORGONOVO, E. et ROSASCO, L. (2020). Faster Kriging: Facing High-Dimensional Simulators. *Operations Research*, 68(1), pp. 233-249.

ANTONIANO-VILLABOS, I., BORGONOVO, E. et LU, X. (2020). Nonparametric estimation of probabilistic sensitivity measures. *Statistics and Computing*, 30, pp. 447-467.

BORGONOVO, E., LU, X., PLISCHKE, E. et RAKOVEC, O. (2017). Making the Most Out of a Hydrological Model Data Set: Sensitivity Analyses to Open the Model Black-Box. *Water Resources Research*, 53(9), pp. 7933-7950.

Actes d'une conférence

LU, X., ANTONELLO, F., BARALDI, P. et ZIO, E. (2019). Data-Driven Identification of Critical Components in Complex Technical Infrastructures Using Bayesian Additive Regression Trees., Proceedings of the 29th European Safety and Reliability Conference, pp. 1-5.

Présentations dans des conférences

LU, X. et BORGONOVO, E. (2025). Combining Counterfactuals and Sensitivity Analysis: A New Approach to Explaining Black-Box Models. Dans: 11th International Conference on Sensitivity Analysis of Model Output. Grenoble.

LU, X. (2025). Enhancing Transparency in Black-Box Models: An Explainability Approach Using Sensitivity Analysis and Counterfactual Insights. Milan.

LU, X., BORGONOVO, E., RUDIN, C. et PLISCHKE, E. (2025). Explaining Explainations. Dans: 2025 INFORMS Annual Meeting. Atlanta.

LU, X. et BORGONOVO, E. (2024). Unveiling the Path to Desired Predictions: An Interpretability Approach for Black-Box Models. Dans: 2024 SIAM Conference on Uncertainty Quantification. Trieste.

LU, X. et BORGONOVO, E. (2023). What Can a Person Change to Obtain a Desired Prediction? An Interpretability Approach. Dans: 2023 INFORMS Annual Meeting. Phoenix.

LU, X., BORGONOVO, E. et HAZEN, G. (2021). Information Density in Simulation Experiments. Dans: INFORMS Annual Meeting. Anaheim.

LU, X. (2019). Data-Driven Identification of Critical Components in Complex Technical Infrastructures Using Bayesian Additive Regression Trees. Dans: The annual European Safety and Reliability Conference (ESREL). Hannover.

Présentations dans des séminaires de recherche

LU, X. (2024). Unveiling the Path to Desired Predictions: An Explainable Approach for Black-Box Models. Dans: Statistics Seminars at Department of Decision Sciences, Bocconi University. Milan.

Autres activités de recherche

Membre d'un comité éditorial

Depuis 2026	European Journal of Operational Research

Affiliations

Depuis 2023	Council member of INFORMS Decision Analysis Society

Supervision de thèses / HDR

Depuis 2023	K. SAHATOVA, SKEMA Business School, Doctorat, Co-directeur de thèse
Depuis 2021	Z. OUYANG, University of Edinburgh Business School, Doctorat, Co-directeur de thèse
2023	M. BUDZINSKI, Bocconi University, Doctorat, Rapporteur

Autres activités académiques

Depuis 2026	Scientific Committee Member of Sensitivity Analysis of Model Output (SAMO)