Jan BROEKAERT
Postdoctoral researcher

Academy: Digitalization

Research center: SKEMA Centre for Analytics and Management Science

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Education

1994	PhD in Physics, Vrije Universiteit Brussel, Belgium
1987	Master of Science in Physics, Vrije Universiteit Brussel, Belgium

Experience

Full-time academic positions

2019 - 2020	Postdoctoral researcher, University of Leeds, Great Britain
2017 - 2019	Postdoctoral researcher, Indiana University Bloomington, United States of America
2010 - 2017	Adjunct Faculty, Vrije Universiteit Brussel, Belgium

Other academic affiliations and appointments

2016 - 2017	Research team member, City, University of London, Great Britain

Publications

Peer-reviewed journal articles

BROEKAERT, J., LA TORRE, D. and HAFIZ, F. (2024). Competing control scenarios in probabilistic SIR epidemics on social-contact networks. *Annals of Operations Research*, 336, pp. 2037-2060.

HAFIZ, F., BROEKAERT, J., LA TORRE, D. and SWAIN, A. (2024). A multi-criteria approach to evolve sparse neural architectures for stock market forecasting. *Annals of Operations Research*, 167(106680), pp. 1-45.

BROEKAERT, J., LA TORRE, D. and HAFIZ, F. (2024). The impact of the psychological effect of infectivity on Nash-balanced control strategies for epidemic networks. *Annals of Operations Research*.

BROEKAERT, J., LA TORRE, D., HAFIZ, F. and REPETTO, M. (2024). A comparative cost assessment of coalescing epidemic control strategies in heterogeneous social-contact networks. *Computers & Operations Research*.

HAFIZ, F., BROEKAERT, J., LA TORRE, D. and SWAIN, A. (2023). Co-evolution of Neural Architectures and Features for Stock Market Forecasting: A Multi-objective Decision Perspective. *Decision Support Systems*, 174, pp. 114015.

MUBASHIR WANI, M., HAFIZ, F., SWAIN, A. and BROEKAERT, J. (2023). Balancing energy consumption and thermal comfort in buildings: a multi-criteria framework. *Annals of Operations Research*.

HANCOCK, T., BROEKAERT, J., HESS, S. and CHOUDHURY, C. (2020). Quantum probability: a new method for modelling travel behaviour. *Transportation Research - Part B: Methodological*, 139, pp. 165-198.

HANCOCK, T., BROEKAERT, J., HESS, S. and CHOUDHURY, C. (2020). Quantum choice models: A flexible new approach for understanding moral decision-making. *Journal of Choice Modelling*, 37, pp. 100235.

BROEKAERT, J., BUSEMEYER, J. and POTHOS, E. (2020). The Disjunction Effect in two-stage simulated gambles. An experimental study and comparison of a heuristic logistic, Markov and quantum-like model. *Cognitive Psychology*, 117.

Book chapters

BRUSSET, X., LA TORRE, D. and BROEKAERT, J. (2022). Algorithms, Analytics and Artificial Intelligence - Harnessing Data to Make Supply Chain Decisions. In: Bart MacCarthy, Dmitry Ivanov eds. *The Digital Supply Chain*. 1st ed. Amsterdam: Elsevier, pp. 93-110.

Professional articles

BROEKAERT, J. and BUSEMEYER, J. (2019). Episodic source memory over-distribution by quantum-like dynamics – A model exploration. *Lecture Notes in Computer Science.*

Conference proceedings

BROEKAERT, J. and LA TORRE, D. (2021). A Vector Logistic Dynamical Approach to Epidemic Evolution on Interacting Social-Contact and Production-Capacity Graphs. *Springer*, 633.

Other research activities

PhD supervision

2017   F. U. KAPUTU, Vrije Universiteit Brussel, PhD thesis, Thesis director

2013   K. DE LOOZE, Vrije Universiteit Brussel, PhD thesis, Thesis director