THOMAS HALSKOV

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EDUCATION

Copenhagen Business School   *2023 - Present*
PhD Fellow, Department of Economics

- Title: *Interpretability, Fairness, and Causality Using Mathematical Optimization*

University of Copenhagen   *2021 - 2023*
MSc in Statistics

- Master's thesis titled *Beyond Prediction and Classification With Decision Trees*

Copenhagen Business School   *2018 - 2021*
BSc in Business Administration and Mathematical Business Economics, Ha(mat.)

- Bachelor thesis on Least Square Monte Carlo and its sensitivity to choice of basis functions.

TECHNICAL REPORTS

On Fair Lasso Regression, Emilio Carrizosa, Dolores Romero Morales, Thomas Halskov
https://www.researchgate.net/publication/381011517_On_Fair_Lasso_Regression

Wasserstein SVM: Support Vector Machines Made Fair, Emilio Carrizosa, Dolores Romero Morales, Thomas Halskov
https://www.researchgate.net/publication/371857277_Wasserstein_SVM_Support_Vector_Machines_Made_Fair

WORK IN PROGRESS

CLIME: Collective Local Interpretable Model-Agnostic Explanations, Emilio Carrizosa, Dolores Romero Morales, Thomas Halskov

Restricted Benchmarking, Dolores Romero Morales, Peter Bogetoft, Thomas Halskov

INVITED AND CONTRIBUTED TALKS

- *Distance-Based Fairness in Classification and Regression*
  at the 25th International Symposium on Mathematical Programming (ISMP), Montréal, Canada, July 2024

- *Making Black-Boxes Explainable and Fair Through Mathematical Optimization*
  at the 33rd European Conference on Operational Research, Copenhagen, Denmark, July 2024

- *On Distance-Based Fair Regression and Classification*
  PhD Seminar, Universidad de Sevilla, Seville, Spain, February 2024

- *Fair Regression and Classification Using Mathematical Optimization*
  Danish Graduate Programme in Economics (DGPE) Workshop, Copenhagen, Denmark, November 2023

- *Wasserstein SVM: Support Vector Machines Made Fair*
  at the 23rd Conference of the International Federation of Operational Research Societies (IFORS), Santiago, Chile, July 2023

- *A Mathematical Optimization Formulation For Fairness in LASSO Regression*
  at the 2nd NeEDS Workshop, Copenhagen, Denmark, December 2022

- *On a mathematical optimization formulation to trade off accuracy and fairness in LASSO regression*
  at the 32nd European Conference on Operational Research (EURO), Espoo, Finland, July 2022

PROJECTS

- R & D project granted by Ministerio de Ciencia e Innovación, Spain, on *Mathematical Optimization And Statistics For Explainable And Fair Machine Learning*, led by Prof. Carrizosa and Dr. Ramírez-Cobo, Universidad de Sevilla. September 2023-August 2027.

- H2020-MSCA-RISE granted by the EU on Research and Innovation Staff Exchange Network of European Data Scientists (NeEDS). Project ID 822214.

PROFESSIONAL ACTIVITIES

- Co-organizer of [Machine Learning NeEDS Mathematical Optimization Online Seminar](), 2022 - Present.

- Member of the Steering Board as Early Career Researcher for Research and Innovation Staff Exchange Network of European Data Scientists (NeEDS) project.

- Co-organizer of a stream of sessions on Machine Learning and Mathematical Optimization at IFORS2023, Santiago, Chile, July 2023.
  https://ifors2023.com/

- Volunteer at the 32nd European Conference on Operational Research, Espoo, Finland, July 2022
  https://euro2022.euro-online.org/

GRANTS AND SCHOLARSHIPS

- PhD Scholarship at the Department of Economics, Copenhagen Business School.

- Travel grant from Danish Data Science Academy

WORK EXPERIENCE

Copenhagen Business School   *Sept 2021- 2023*
Student Assistant

- As a student assistant for Professor Dolores Romero Morales, I helped with research in fair machine learning. During this time we started two projects, that have now been submitted.

Mark & Wedell   *2019-2020*
Student Assistant

- Conducted analyses for production expansion initiatives

- Performed market research in Bioenergy Sector and Material Handling Industry

- Helped implement quality control system in production

TEACHING EXPERIENCE

Copenhagen Business School   *2024*
Teaching Assistant in Operations Research for ha(mat.) program

Copenhagen Business School   *2024*
Teaching Assistant in Introduction to Machine Learning for cand.ocoen program

Copenhagen Business School   *2022, 2024*
Teaching Assistant in elective course Data Science: Data Driven Decision Making for cand.merc program

Copenhagen Business School   *2020-2021*
Teaching Assistant in Statistics for the the bachelor program International Business

COMPUTATIONAL SKILLS

C++, Python, R, Gurobi, GAMS, JMP