



Celso G. S. Sikora | CV

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Education

Universität Hamburg (UHH) <i>PhD, Institute for Operations Research – Faculty of Business Administration – Summa cum Laude</i>	Hamburg 2017–2021
Universidade Tecnológica Federal do Paraná (UTFPR) <i>MSc, Graduate Program for Electrical Engineering and Industrial Informatics</i>	Curitiba, Brazil 2015–2017
Universidade Tecnológica Federal do Paraná (UTFPR) <i>BSc, Industrial Mechanical Engineering (10 semesters course)</i>	Curitiba, Brazil 2009–2014
Rheinisch-Westfälische Technische Hochschule (RWTH Aachen) <i>Exchange Program: Mechanical Engineering</i>	Aachen, Germany 2012–2013

Research experience

Universität Hamburg <i>Postdoc, Institute for Operations Research - HafenPlanZen (IHATEC financed Project)</i> Optimization of harbor master plan in cooperation with the Port of Hamburg using simulation.	Hamburg, Germany 2022 – present
Universität Hamburg <i>Postdoc, Institute for Operations Research</i> Optimization algorithms for production and logistic applications.	Hamburg, Germany 2022 – 2022
Universität Hamburg <i>Graduate Researcher, Institute for Operations Research</i> Optimization algorithms for the assembly line balancing under stochastic demand. <ul style="list-style-type: none">○ Combined optimization of the balancing and sequencing of assembly lines for uncertain demand.○ Robust optimization of assembly lines under random production sequences.○ Online optimization of buffer between paint shop and final assembly for random inputs.	Hamburg, Germany 2017 – 2021
RENAULT <i>Graduate Researcher / Production engineer</i> Partner: RENAULT, Fundação Araucária, and Universidade Tecnológica Federal do Paraná (UTFPR) Development of modeling techniques and solution procedures for real-world optimization problems of the chassis production lines. <ul style="list-style-type: none">○ Optimization of multi-robot spot welding line.○ Layout design of assembly line with robotic transporters and parallelization.○ Treating of data and validation of robot routs feasibility using simulation.	São José dos Pinhais, Brazil 2015 – 2017
Universidade Tecnológica Federal do Paraná (UTFPR) <i>Internship, Undergraduate Research</i> Development of assembly line balancing optimization models and tools from industrial partners Renault, Volvo, and Faurecia.	Curitiba, Brazil 2014 – 2015
UNIVERSIDADE TECNOLÓGICA FEDERAL DO PARANÁ (UTFPR) <i>Internship, Undergraduate Research, Partner: Petrobrás</i> Numerical simulation of a submersible pump for oil extraction.	Curitiba, Brazil 2011 – 2012

Teaching experience

Universität Hamburg, Institute for Operations Research

Hamburg, Germany

Docent (Postdoc)

2022–present

Expository classes:

- Integer Optimization (English, MSc): WS 2022/23
- Advanced Topics on Supply Chain Management (English, MSc): SS 2022

Universität Hamburg, Institute for Operations Research

Hamburg, Germany

Teaching Assistant

2017–2022

Tutorials:

- Foundations of Operations Research (German, BSc): SS 2018, SS 2019, SS 2020, SS 2021, SS 2022
- Operations Research (German, BSc): WS 2017/28, WS 2018/2019, WS 2019/20, WS 2020/21
- Advanced Topics in Operations Research (German/English, MSc): SS 2018, SS 2019, SS 2020, SS 2021, SS 2022

Universidade Tecnológica Federal do Paraná (UTFPR)

Curitiba, Brazil

Voluntary tutor, Formação Solidária

2014–2014

Social project for the preparation of low-income students to the university entry exams.

Didactic training

Universität Hamburg

Hamburg, Germany

Hamburg Center for University Teaching and Learning (HUL)

2017–2022

Workshops on:

- Methods of examination
- Preparing and grading exams
- Motivating students' participation
- PowerPoint for teaching
- Planning the amount of content in classes
- Supervising theses
- Digital learning materials
- Voice training for teachers

Supervisory and Mentoring Experience

Universität Hamburg

Hamburg, Germany

Institute for Operations Research

2017–2022

Supervision:

- 12 BSc and 5 MSc Theses co-supervised with Prof. Dr. Brüggemann
- Seminary - BSc Operations Research: SS 2018, SS 2019, SS 2020, WS 2020/21, SS 2021, SS 2022
- Seminary - MSc Operations Research: WS 2017/18, WS 2018/19, WS 2019/20, WS 2020/21, WS 2021/22, WS 2022/23

Mentoring:

- Mentoring of BSc and MSc students during research internship resulting in a publication (VHB Jourqual B)

Awards and honors

2021: 7th Prize for application-oriented scientific achievements in the subject area "Planning and optimization in the automotive and related innovative industries" - Initiative Wissenschaft und Automobilindustrie (IWA) e.V.

2016 and 2017: Roberto Diéguez Galvão Award - Selected between the five best papers at the Brazilian Operations Research Symposium (SBPO)

2015-2017: Fundação Araucária (Research funding agency of the state of Paraná) Scholarship

2014: Renault Experience Challenge - Brazil – Second best project in the engineering category

Publication output

Research on optimization procedures applied to the automotive industry. Products: 1 patent, 13 publications in international journals (<https://celso-sikora.com/publication-list/>), 20 publications in national and international conferences, and participation in 11 conferences.

Academic Service

Reviewer: 30 reviews in European Journal of Operational Research, Computers & Operations Research, International Journal of Production Research, OR Spectrum, Computers & Industrial Engineering, Annals of Operations Research, Operational Research, Business Research, Flexible Services and Manufacturing Journal, and others.

Languages

Portuguese (Native tongue), **English** (Fluent, Toefl IBT: 110) **German** (Fluent, DSH-3), **French** (B1 Level)

Computer skills

Basic: C, C++, Java, Matlab, R; **Intermediary:** C#, L^AT_EX, Simio, Python;
Advanced: CPLEX, GAMS, Gurobi, Microsoft Office, VB.NET

Updated on March 22, 2023