Publication List

List of publications from Celso Gustavo Stall Sikora organized by category. All journal accepted manuscripts are available at `https://celso-sikora.com/publication-list`. Most of the conference full papers can be found in the Google Scholar profile.

Journal Articles

- Lübben, M., Pries, S., Sikora, C. G. S.: **Online resequencing of buffers for automotive assembly lines**. (2023) *Computers & Industrial Engineering*, 175, 108857.

- Sikora, C. G. S., Weckenborg, C.: **Balancing of assembly lines with collaborative robots: comparing approaches of the Benders' decomposition algorithm**. (2022) *International Journal of Production Research*, in press.

- Sikora, C. G. S.: **Benders' decomposition for the balancing of assembly lines with stochastic demand**. (2021) – *European Journal of Operational Research*, 292 (1), 108-124.

- Lopes, T. C., Michels, A. S., Sikora, C. G. S., Brauner, N., Magatão, L.: **Assembly line balancing for two cycle times: Anticipating demand fluctuations**. (2021) – *Computers & Industrial Engineering*, 162, 107685.

- Lopes, T. C., Sikora, C. G. S., Michels, A. S., Magatão, L.: **An iterative decomposition for asynchronous mixed-model assembly lines: combining balancing, sequencing, and buffer allocation**. (2020) – *International Journal of Production Research*, 58 (2), 615-630.

- Lopes, T. C., Sikora, C. G. S., Michels, A. S., Magatão, L.: **Mixed-model assembly lines balancing with given buffers and product sequence: model, formulation comparisons, and case study**. (2020) – *Annals of Operations Research*, 286, 475-500.

- Michels, A. S., Lopes, T. C., Sikora, C. G. S., Magatão, L.: **A Benders' decomposition algorithm with combinatorial cuts for the multi-manned assembly line balancing problem**. (2019) – *European Journal of Operational Research*, 278 (3), 796-808.

- Lopes, T. C., Michels, A. S., Sikora, C. G. S., Magatão, L.: **Balancing and cyclical scheduling of asynchronous mixed-model assembly lines with parallel stations**. (2019) – *Journal of Manufacturing Systems*, 50, 193-200.

- Lopes, T. C., Michels, A. S., Sikora, C. G. S., Molina, R. G., Magatão, L.: **Balancing and cyclically sequencing synchronous, asynchronous, and hybrid unpaced assembly lines**. (2018) – *International Journal of Production Economics*, 203, 216-224.

- Michels, A. S., Lopes, T. C., Sikora, C. G. S., Magatão, L.: **The Robotic Assembly Line Design (RALD) problem: Model and case studies with practical extensions**. (2018) – *Computers & Industrial Engineering*, 120, 320-333.

- Lopes, T. C., Sikora, C. G. S., Molina, R. G., Schibelbain, D., Rodrigues, L. C. A., Magatão, L.: **Balancing a robotic spot welding manufacturing line: An industrial case study**. (2017) – *European Journal of Operational Research*, 263 (3), 1033-1048.

- Sikora, C. G. S., Lopes, T. C., Schibelbain, D., Magatão, L.: **Integer based formulation for the simple assembly line balancing problem with multiple identical tasks**. (2017) – *Computers & Industrial Engineering*, 104, 134-144.

- Sikora, C. G. S., Lopes, T. C., Magatão, L.: **Traveling worker assembly line (re) balancing problem: Model, reduction techniques, and real case studies**. (2017) – *European Journal of Operational Research*, 259 (3), 949-971.

Published patents

- Schibelbain, D., Lopes, T. C., Sikora, C. G. S., Molina, R. G., Magatão, L.: **Procédé de réduction de temps de cycles d' une ligne automatisée de soudage et installation de soudage correspondante**. (2020) – FR3062492A1 – *Institut National de la Propriété Industrielle (INPI)*, France. `https://patents.google.com/patent/FR3062492A1`

Dissertations and Theses

- Sikora, C. G. S.: **Assembly line balancing under demand uncertainty**. (2022) – *Springer Gabler, Wiesbaden*, 1-178, `https://doi.org/10.1007/978-3-658-36282-9`.

- Sikora, C. G. S.: **Scheduling projects in operating systems: an application on assembly line balancing**. (2017) – *Master thesis - Universidade Tecnológica Federal do Paraná*. `http://repositorio.utfpr.edu.br/jspui/handle/1/2859`

Conferences Proceedings - Full papers

- Michels, A. S., Sikora, C. G. S.: **A Survey on Benders Decomposition Methods Applied to Assembly Line Balancing Problems**. – 10th *IFAC Conference on Manufacturing Modelling, Management and Control*, June 2022, Nantes, France.

- Lopes, T. C., Sikora, C. G. S., Michels, A. S., da Silva, A. C. L., Magatão, L.: **Modeling the Stochastic Steady-State of Mixed-Model Asynchronous Assembly Lines with Markov Chains**. – *XIX Latin-Iberoamerican Conference on Operations Research (CLAIO)*, September 2018, Lima, Peru, 183-190.

- Lopes, T. C., Sikora, C. G. S., Michels, A. S., Magatão, L.: **A matheuristic for makespan minimization of asynchronous stochastic mixed-model assembly lines**. – *Annals of the L Brazilian Symposium of Operations Research*, August 2018, Rio de Janeiro, Brazil, 1-12.

- Michels, A. S., Sikora, C. G. S., Lopes, T. C., Magatão, L.: **An MILP formulation for local search k-Opt improvement procedures**. – *Annals of the L Brazilian Symposium of Operations Research*, August 2018, Rio de Janeiro, Brazil, 1-12.

- Lopes, T. C., Sikora, C. G. S., Michels, A. S., Magatão, L.: **A new model for simultaneous balancing and cyclical sequencing of asynchronous mixed-model assembly lines with parallel stations**. – *Annals of the XLIX Brazilian Symposium of Operations Research*, August 2017, Blumenau, Brazil, 3570-3581.

- Sikora, C. G. S., Lopes, T. C., Magatão, L.: **Implementing Changes in the Balancing of Assembly Lines: a Sequencing Problem Addressed by MILP**. – *Annals of the XLVIII Brazilian Symposium of Operations Research*, September 2016, Vitória, Brazil, 73-83.

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- Michels, A. S., de Assis Dias, F., Sikora, C. G. S., Magatão, L.: **Using a LP model for the design analysis of an integrated renewable energy system**. – *Annals of the XLVIII Brazilian Symposium of Operations Research*, September 2016, Vitória, Brazil, 1029-1040.

- Sikora, C. G. S., Lopes, T. C., Lopes, H. S., Magatão, L.: **Genetic algorithm for type-2 assembly line balancing**. – *2015 Latin America Congress on Computational Intelligence (LA-CCI)*, October 2015, Curitiba, Brazil, 1-6.

- Sikora, C. G. S., Lopes, T. C., Magatão, L.: **Variable Sets Reduction for Assembly Line Balancing Problem: MILP Model and Case Studies**. – *Annals of the XLVII Brazilian Symposium of Operations Research*, August 2015, Porto de Galinhas, Brazil, 166-176.

Conference Abstracts / Presentations

- Sikora, C. G. S.: **Considering Correlation in Customer's Orders in the Balancing of Assembly Lines**. – *Operations Research Conference (OR2022)*, September 2022, Karlsruhe, Germany.

- Sikora, C. G. S.: **Branch-and-bound for the balancing of paced assembly lines under random sequences**. – *Operations Research Conference (OR2021)*, September 2021, Bern, Switzerland.

- Pries, S., Sikora, C. G. S.: **Decomposition approach for integrated production and maintenance scheduling of parallel machines**. – *Operations Research Conference (OR2021)*, September 2021, Bern, Switzerland.

- Sikora, C. G. S., Weckenborg, C.: **Benders decomposition for the balancing of assembly lines with collaborative robots**. – 31st *European Conference on Operational Research (EURO)*, July 2021, Athens, Greece.

- Lübben, M., Sikora, C. G. S., Pries, S.: **Online sequencing of buffers for automotive assembly lines**. – 31st *European Conference on Operational Research (EURO)*, July 2021, Athens, Greece.

- Sikora, C. G. S.: **Balancing of mixed-model assembly lines under random demand**. – *Operations Research Conference (OR2019)*, September 2019, Dresden, Germany.

- Sikora, C. G. S.: **Balancing and sequencing assembly lines for stochastic demand product mixes**. – 29th *European Conference on Operational Research (EURO)*, July 2018, Valencia, Spain, 298.

- Michels, A. S., Lopes, T. C., Sikora, C. G. S., Magatão, L.: **A new mathematical formulation with search-space reduction techniques for the multi-manned assembly line balancing problem**. – 29th *European Conference on Operational Research (EURO)*, July 2018, Valencia, Spain, 135.

- Sikora, C. G. S., Michels, A. S., Lopes, T. C., Magatão, L.: **Combining k-Opt Improvement Procedure and Tabu-Search to Solve the Symmetric TSP via MILP Formulation**. – *Annals of the XLIX Brazilian Symposium of Operations Research*, August 2017, Blumenau, Brazil, 3533.

- Lopes, T. C., Michels, A. S., Sikora, C. G. S., Molina, R. G., Magatão, L.: **An MILP formulation for robotic assembly line design with parallel stations, dead time and equipment selection**. – *Annals of the XLVIII Brazilian Symposium of Operations Research*, September 2016, Vitória, Brazil, 3256-3257.