Curriculum Vitae

Ondřej Benedikt

Personal Data

Nationality: Czech
Birth date: 29^{th} October, 1993
Email: benedond@gmail.com

Education

2018 – 2023 PhD. in Electrical Engineering and Information Technology (CTU in Prague)
Advisor: Doc. Ing. Přemysl Šůcha, PhD.

2016 – 2018 Ing. in Artificial Intelligence (CTU in Prague)
Thesis: "Algorithms for Energy-Aware Production Scheduling with Power-Saving Modes"
Advisor: Doc. Ing. Přemysl Šůcha, PhD.
Graduated with honors, A+

2013 – 2016 Bc. in Computer and Information Science (CTU in Prague)
Thesis: "Steiner Point and Its Fuzzy Generalization"
Advisor: Prof. Ing. Mirko Navara, DrSc.
Graduated with honors, A+

2005 – 2013 Grammar school Opatov, Konstantinova 1500, Prague
Graduated with honors

Work Experience

Sep 2022 – Present | Optimization Systems Developer in ČEZ – specializing in unit-commitment problem, mathematical modeling and optimization

Jan 2020 – Jan 2022 | Project participation – Thermac: Thermal-aware Resource Management for Modern Computing Platforms in the Next Generation of Aircraft
European project – Horizon-2020 in collaboration with Honeywell

Jan-Sep 2019-2022 | Teaching activity – Tutorials of Combinatorial Optimization (B4M35KO) at Czech Technical University in Prague

Jul 2018 – Jun 2022 | Research assistant – Czech Institute of Informatics, Robotics and Cybernetics in Prague
Energy efficient scheduling, combinatorial optimization problems

Jul-Sep 2017 | Summer job – Department of Control Engineering
Scheduling parallel identical machines while minimizing the total energy consumption – testing ILP models.

Jul-Sep 2016 | Summer job – Department of Cybernetics
Survey of the polynomial ϵ-greatest common divisor and its practical application for reconstruction of blurry images.

Languages

Czech: Native speaker
English: Fluent
French: Basic knowledge

Selected publications

- Benedikt, O., Alikoc, B., Šůcha, P., Čelikovský, S., Hanzálek, Z. A polynomial-time scheduling approach to minimise idle energy consumption: an application to an industrial furnace. Computer & Operations Research. 2021, 128 ISSN 0305-0548. DOI: https://doi.org/10.1016/j.cor.2020.105167
- Benedikt, O., Módos, I., Hanzálek, Z. Power of Pre-Processing: Production Scheduling with Variable Energy Pricing and Power-Saving States. CONSTRAINTS. 2020, 25(3), 300-318. ISSN 1383-7133. DOI: 10.1007/s10601-020-09317-y
- Benedikt, O., Sojka, M., Zaykov, P., Hornof, D., Kafka, M., Šůcha, P., Hanzálek, Z. Thermal-Aware Scheduling for MPSoC in the Avionics Domain: Tooling and Initial Results. In: 2021 IEEE 27th International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA). Piscataway: IEEE, 2021. p. 159-168. ISSN 2325-1301. ISBN 978-1-6654-4188-9. DOI: https://doi.org/10.1109/RTCSA52859.2021.00026

Scholarships, Awards and Certificates

Aug. 2021	Best paper award obtained at RTCSA 2021 conference
Sep. 2020	Best student's paper award obtained at CPAIOR 2020 conference
Feb. 2020	Best student's paper award obtained at ICORES 2020 conference
Sep. 2019	Dean's scholarship for outstanding study results
Aug. 2018	Dean's award for Master's thesis
Aug. 2016	Dean's award for Bachelor's thesis
Aug. 2015	Scholarship: Support of Talented Students; *granted to 70 students of CTU for outstanding study results*
2013 – 2018	Scholarship for excellent study results awarded per semester (avg. grade 1.0, GPA 4.0)
Mar. 2013	First Certificate in English (FCE): grade A (level C1)
Feb. 2013	National Comparative Exams, Math: 95.5^{th} percentile

Short Summary

Ondřej Benedikt was born in Prague, Czech Republic, in 1993. He received his bachelor's and master's degrees in 2016 and 2018, respectively, in the Open Informatics study program at Czech Technical University in Prague. During his studies, Ondřej specialized in Computer Science and Artificial Intelligence. He graduated with honors and ranked first among the other graduates. After obtaining the master's degree, Ondřej started a Ph.D. program at the Department of Control Engineering on scheduling with energy consumption considerations.

During the first two years of his Ph.D. studies, Ondřej worked on productions optimization problems. Two papers were published in impacted journals. The first one (in Computers & Operations Research) studied the scheduling of tasks on an industrial furnace, assuming its thermal behavior. The research was motivated by problems tackled in real production in Škoda Auto. In the second paper (published in Constraints), scheduling problem assuming both machine states and variable energy prices was considered. During the other two years of his Ph.D. studies, Ondřej participated in the Thermac H2020 project tackling thermal management challenges for avionics systems in small aircraft. Several conference papers were published at the international conferences (FedCSIS, EMSOFT, RTCSA). Overall, the conference presentations were positively acclaimed, and Ondřej received Best Paper Awards at ICORES-2020, CPAIOR-2020 and RTCSA-2021 conferences.

Throughout the whole Ph.D. study, Ondřej participated in teaching activities. He led the labs for the Combinatorial Optimization course at FEE CTU and helped with the digitalization of the lab's materials. Moreover, he successfully supervised two master's students, David Hornof and Radek Bumbálek.

Since 2022, Ondřej has been working for major Czech power generation/delivery company as optimization system developer.