VATIKIOTIS STAVROS

PERSONAL INFORMATION

Date of Birth	18/10/1993
Place of Birth	Rethymnon, Rethymnon
Citizenship	Greek

EDUCATION

Athens University of Economics & Business, Athens *November 2020 - March 2025*

PhD in Combinatorial Optimization on industrial applications

Thesis: Scheduling variants in manufacturing and process industries

National Technical University of Athens, Athens *September 2017 - June 2019*

MSc in Mathematical Modeling in Modern Technologies and Financial Engineering, School of Applied Mathematical and Physics Science GPA: 9.13/10

- Major: Finance Engineering

National Technical University of Athens, Athens *September 2011 - September 2017*

BSc & MSc in Electrical & Computer Engineering. GPA: 7.1/10

- Major: Energy Systems and Electrical Machinery
- Minor: Management and Decision

FIELDS OF INTEREST

Combinatorial Optimization, Operations Research, Scheduling, (Meta-)heuristics, Machine Learning

PUBLICATIONS

Avgerinos, I., Besis, A., Mourtos, I., Psarros, A., Vatikiotis, S. & Zois, G. (2025). An Integrated Optimisation Method for Aluminium Hot Rolling. In: Tack, G. (eds) Integration of Constraint Programming, Artificial Intelligence, and Operations Research. CPAIOR 2025. Lecture Notes in Computer Science, vol 15762. Springer, Cham. https://doi.org/10.1007/978-3-031-95973-8_2

Avgerinos, I., Mourtos, I., Vatikiotis, S., & Zois, G. (2025). One Benders cut to rule all schedules in the neighbourhood. European Journal of Operational Research, 323(1), 62-85. https://doi.org/10.1016/j.ejor.2024.12.009

Vatikiotis, S., Avgerinos, I., Plitsos, S., & Zois, G. (2025). A decision support system for optimised industrial water management. Expert Systems with Applications, 271, 126673. https://doi.org/10.1016/j.eswa.2025.126673

Vatikiotis, S., Mpourdakos, I., Papathanasiou, D., Mourtos, I. (2024). Makespan Minimisation in Hybrid Flexible Flowshops with Buffers and Machine-Dependent Transportation Times. APMS 2024. IFIP Advances in Information and Communication Technology, vol 733. Springer,

Cham. https://doi.org/10.1007/978-3-031-71645-4_18

Avgerinos, I., Mourtos, I., Vatikiotis, S., & Zois, G. (2023). Weighted tardiness minimisation for unrelated machines with sequence-dependent and resource-constrained setups. International Journal of Production Research, 62(12), 359379. https://doi.org/10.1080/00207543.2023.2275634

Avgerinos I., Mourtos I., Vatikiotis, S., & Zois G. (2022). Exact methods for tardiness objectives in production scheduling. IFAC-PapersOnLine, https://doi.org/10.1016/j.ifacol.2022.10.082.

Avgerinos, I., Mourtos, I., Vatikiotis, S., & Zois, G. (2022). Scheduling unrelated machines with job splitting, setup resources and sequence dependency. International Journal of Production Research, 61(16), 55025524. https://doi.org/10.1080/00207543.2022.2102948

Mourtos, I., Vatikiotis, S., & Zois, G. (2021). Scheduling jobs on unrelated machines with job splitting and setup resource constraints for weaving in textile manufacturing. APMS 2021. IFIP Advances in Information and Communication Technology, https://doi.org/10.1007/978-3-030-85874-2_45

CONFERENCES

Vatikiotis, S., Mpourdakos, I., Papathanasiou, D., & Mourtos, I. (2024). Exact methods and (meta-)heuristic solution methods for the Hybrid Flexible Flowshop problem. European Conference on Operational Research, Copenhagen, Denmark

Avgerinos, I., Mourtos, I., Vatikiotis, S., & Zois, G. (2024). Local Branching techniques to strengthen Logic-Based Benders Decomposition. European Conference on Operational Research, Copenhagen, Denmark

Zois, G., Avgerinos, I., Besis A., Mourtos, I., Psarros A., & Vatikiotis, S. (2024). Integrated optimisation for aluminium rolling. European Conference on Operational Research, Copenhagen, Denmark

Avgerinos, I., Mourtos, I., Vatikiotis, S., & Zois, G. (2023). Optimizing the wastewater treatment flow in process industries through Digital Twins. LEADING AND MANAGING IN THE DIGITAL ERA: Shaping the Future of Work and Business Education (LMDE), Athens, Greece

Mourtos, I., & Vatikiotis, S. (2023). MODAPTO: modular manufacturing and distributed control via interoperable digital twins. LEADING AND MANAGING IN THE DIGITAL ERA: Shaping the Future of Work and Business Education (LMDE), Syros, Greece

Vatikiotis, S. (2023). Combinatorial Optimization on Industrial Applications. LEADING AND MANAGING IN THE DIGITAL ERA: Shaping the Future of Work and Business Education (LMDE), Syros, Greece

Zois, G., Avgerinos, I., Mourtos, I., & Vatikiotis, S. (2022). Exact methods for tardiness objectives in production scheduling. European Conference on Operational Research, Helsinki,

Finland

TEACHING EXPERIENCE

Operations Research II - Adjunct Lecturer
University of Piraeus ***October 2025 - Today***
Department of Industrial Management and Technology
Full Course on Operations Research for 5th-semester students.

Stochastic Modeling & Simulation - Teaching Assistant
Athens University of Economics & Business ***November 2024 - January 2025***
Department of Management Science & Technology
Courses on the "SIMUL8" simulation tool for 7th-semester students.

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ACADEMIC THESES

Scheduling variants in manufacturing and process industries - Doctoral Thesis
This thesis aims at developing advanced hybrid optimization frameworks combining metaheuristic algorithms with exact methods to solve large instances of complex scheduling problems, such being (the Unrelated Parallel Machines and Hybrid Flexible Flowshops). The proposed methods demonstrate strong performance across benchmark and industrial data sets, offering practical solutions for production planning and resource management.
Available Online at: `https://www.didaktorika.gr/eadd/handle/10442/58537`

Introducing Financial Derivatives in Football Transfer Markets - Master Thesis - Graded: (10/10)

This thesis aims at creating a new financial product in football transfer markets using the financial derivatives theory. The main objectives were to create a unique dataset using Python's web scrapping and data analysis tools, and construct two statistical models related to football players' market values with respect to the appropriate features.
Available Online at: `https://dspace.lib.ntua.gr/xmlui/handle/123456789/49411`

Approaches and Optimal Policies for Adaptation to Climate Change - Bachelor Thesis - Graded: (10/10)

The aim of this diploma thesis is to draw up an action plan consisting of feasible and optimal solutions for adapting to the phenomenon of climate change in the European continent. This work focuses on gathering data regarding the recorded climatic changes, future climate forecasts as well as the economic sectors of vulnerability. Through this process, solutions and optimal policies were proposed with the corresponding indicative costing estimations.

Available Online at: https://dspace.lib.ntua.gr/xmlui/handle/123456789/46410

WORK EXPERIENCE

Athens University of Economics & Business, Athens, Greece February 2025 - Present
Senior Researcher

· Algorithmic design for Combinatorial Optimization problems, Proposal writing, Product Owner

Athens University of Economics & Business, Athens, Greece January 2021 - February 2025
Researcher

· Algorithmic design for Combinatorial Optimization problems.

Greek Army, Greece 10 October 2019- 10 July 2020
Military Duty

· Member of the Warfare Simulation Team. Indicative duties including updating the simulation software database and training the army officers regarding the software's operation and utilisation.

GRNet, Athens, Greece March 2017- September 2019
Helpdesk Agent

· Customer Service for four projects (Apella, Academic id, okeanos IaaS, Zeus). Indicative duties including identifying problems, troubleshooting, suggesting possible improvements on procedures, examining project applications.

Datamed SA, Athens, Greece November 2016- January 2017
Helpdesk Agent

· Customer Service for e-rantevou application. Indicative duties including informing the health units of the app implementation, troubleshooting, constructing weekly programs on behalf of the health units.

SKILLS

Software & Tools	MS Office, Minitab, STATA, Latex, Simul8
Programming Languages	Python
Mathematical Skills	Statistical Modeling, Combinatorial Optimization Algorithms

PROJECTS (INDICATIVE)

Tec4MaaSEs (2024 -)
Tec4MaaSEs - Technologies for Manufacturing as a Service Ecosystems(https://www.tec4maases.eu/) - Creating optimization solutions on manufacturing systems with resources.
Modapto (2023 -)
Modapto - Modular Manufacturing and Distributed Control via Interoperable Digital Twins (https://modapto.eu/) - Creating optimization solutions on complex flexible manufacturing systems.
Plooto (2023 -)
Plooto - Product Passport Through Twinning of Circular Value Chains (https://www.plooto-project.eu/) - Creating optimization solutions on circular value chains.
AquaSPICE (2020 - 2025)
AquaSPICE - Advancing Sustainability of Process Industries through Digital and Circular Water Use Innovations (https://aquaspice.eu/) - Transforming wastewater treatment networks to combinatorial optimization formulations.
Machine Learning in Football (2018-2020)

Creating and Handling large datasets for football players for machine learning applications

LANGUAGES

English:	ECPE of Michigan (Examination for the Certificate of Proficiency in English)
French:	Delf B2
Greek:	Native