

Curriculum Vitae

Emmanouil Zachariadis

A. PERSONAL INFORMATION

Name: Zachariadis Emmanouil

Address: Kodringtonos 11, 3rd floor, 10434, Athens

Date of Birth: 28 December 1981

e-mail: ezach@aueb.gr

B. EDUCATION

PhD in Operations Research – Transportation Logistics Optimization

National Technical University of Athens

School of Chemical Engineering, Process Analysis & Plant Design

Dates: Oct 2006 - Nov 2010

Dissertation Title: Optimization Methodologies for Large--Scale Vehicle Routing Problems

MSc in Computing Science

Imperial College of Science, Technology and Medicine, London, UK

Department of Computing

Dates: September 2004 - June 2005

Diploma in Chemical Engineering

National Technical University of Athens

School of Chemical Engineering, Process Analysis & Plant Design

Dates: Sept 1999 - Jun 2004

C. PROFESSIONAL POSITIONS

- February 2018 - present **Assistant Professor**
Athens University of Economics and Business
School of Business – Department of Management Science and Technology
 Management Science – Quantitative Methods
- September 2016 - February 2018 **Data Scientist**
Signal Ocean
- Development of Machine Learning Algorithms
 - Data Analysis
 - Predictive Analytics
- September 2011 - September 2016 **Research Fellow**
Athens University of Economics and Business
- *Management Science Laboratory, Operations Research & Decision Systems Center*
 - Research Activities
 - Management Science – Operations Research
 - Quantitative methods for tackling combinatorial optimization problems
 - Analysis and Optimization of Supply Chain Systems
 - Study, Analysis and Optimization of the Environmental Impact of Transportation Logistics
 - Participation in National and European research projects
 - Tutoring of doctoral candidates
 - Teaching (Postgraduate courses)
- January 2014 - September 2016 **Operations Research Consultant**
- Identification of cost-ineffective operations
 - Development of optimization models for real-life applications
 - Building intelligent applications for solving combinatorial practical combinatorial optimization models

October 2006 - **Researcher**

November 2010 National Technical University of Athens

School of Chemical Engineering, Process Analysis & Plant Design

- Research Activities:
 - Combinatorial optimization
 - Operations research & heuristic computing
 - Stochastic optimization algorithms for Transportation Logistics, Packing and Inventory Management models
- Participation in National and European research projects
- Teaching (Undergraduate & Postgraduate courses)

D. RESEARCH

D.1. RESEARCH INTERESTS

- **Development of Mathematical Models & Optimization Methods for Operations Research Problems:**
Tackling optimization problems of high complexity under practical operational constraints, Quantitative methods for solving combinatorial optimization problems, Mathematical Programming methods, Development of computational strategies for dealing with large-scale optimization problem instances
- **Management of Transportation Networks, Freight Transportation & Distribution Logistics Systems:**
Routing and scheduling of vehicles, Product and services distribution and planning, Production and inventory planning, Supply network management
- **Production and Service Operations Management:** Optimal production planning, inventory management
- **Supply Chain management & Environment:** Study of the environmental impact of transportation logistics, fuel savings, minimization of fleet GHG emissions, Reverse logistics systems
- **Business Analytics & Data Science:**
- Quantitative methods for extracting useful information from historical data towards effective decision making. Machine Learning Algorithms for clustering and classification applications.

D.2. JOURNAL PAPERS

1. Nikolopoulou A.I., Repoussis, P.P., Tarantilis, C.D., Zachariadis, E.E. (2017). Moving products between location pairs: Cross-Docking versus Direct-Shipping. *European Journal of Operational Research* 256 (3), 803-819 (ABS Rating: 4, JCR Impact Factor: 2.679).

2. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2016) The Vehicle Routing Problem with Simultaneous Pick-Ups and Deliveries and Two Dimensional Loading Constraints. *European Journal of Operational Research* 251 (2), 369-386 (ABS Rating: 4, JCR Impact Factor: 2.679).
3. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2015). The Load-Dependent Vehicle Routing Problem and its Pick-up and Delivery Extension. *Transportation Research Part B: Methodological* 71, 158-181 (ABS Rating: 4, JCR Impact Factor: 3.769).
4. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2013). Designing vehicle routes for a mix of different request types, under time windows and loading constraints. *European Journal of Operational Research* 229 (2), 303-317 (ABS Rating: 4, JCR Impact Factor: 2.679).
5. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2013). Integrated distribution and loading planning via a compact metaheuristic algorithm. *European Journal of Operational Research* 228 (1), 56-71 (ABS Rating: 4, JCR Impact Factor: 2.679).
6. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2012). The Pallet-Packing Vehicle Routing Problem. *Transportation Science* 46 (3), 341-358 (ABS Rating: 3, JCR Impact Factor: 3.295).
7. Zachariadis, E.E., Kiranoudis, C.T. (2012). An effective local search approach for the Vehicle Routing Problem with Backhauls. *Expert Systems with Applications* 39 (3), 3174-3184 (ABS Rating: 3, JCR Impact Factor: 2.981).
8. Zachariadis, E.E., Kiranoudis, C.T. (2011). Local Search for the Undirected Capacitated Arc Routing Problem. *European Journal of Operational Research* 210 (2), 358-367 (ABS Rating: 4, JCR Impact Factor: 2.679).
9. Zachariadis, E.E., Kiranoudis, C.T. (2011). A local search metaheuristic algorithm for the vehicle routing problem with simultaneous pick-ups and deliveries. *Expert Systems with Applications* 38 (3), 2717-2726 (ABS Rating: 3, JCR Impact Factor: 2.981).
10. Zachariadis, E.E., Kiranoudis, C.T. (2010). An open vehicle routing problem metaheuristic for examining wide solution neighborhoods. *Computers & Operations Research* 37 (4), 712-723 (ABS Rating: 3, JCR Impact Factor: 1.988).
11. Zachariadis, E.E., Kiranoudis, C.T. (2010). A strategy for reducing the computational complexity of local search-based methods for the vehicle routing problem. *Computers & Operations Research* 37 (12), 2089-2105 (ABS Rating: 3, JCR Impact Factor: 1.988).
12. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2010). An Adaptive Memory Methodology for the Vehicle Routing Problem with Simultaneous Pick-ups and Deliveries. *European Journal of Operational Research* 202 (2), 401-411 (ABS Rating: 4, JCR Impact Factor: 2.679).

13. Tarantilis, C.D., Zachariadis, E.E., Kiranoudis, C.T. (2009). A Hybrid Metaheuristic Algorithm for the Integrated Vehicle Routing and Three-Dimensional container-loading problem. *IEEE Transactions on Intelligent Transportation Systems* 10(2), 255-271 (JCR Impact Factor: 2.534).
14. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2009). An Integrated Local Search Method for Inventory and Routing Decisions. *Expert Systems with Applications* 36 (7), 10239-10248 (JCR Impact Factor: 2.981)
15. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2009). A Guided Tabu Search for the Vehicle Routing Problem with Two-Dimensional Loading Constraints. *European Journal of Operational Research* 195 (3), 729-743 (ABS Rating: 4, JCR Impact Factor: 2.679).
16. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2009). A Hybrid Metaheuristic Algorithm for the Vehicle Routing Problem with Simultaneous Delivery and Pick-up service. *Expert Systems with Applications* 36 (2 PART 1), 1070-1081 (ABS Rating: 3, JCR Impact Factor: 2.981).
17. Tarantilis, C.D., Zachariadis, E.E., Kiranoudis, C.T. (2008). A Hybrid Guided Local Search for the Vehicle Routing Problem with Intermediate Replenishment Facilities. *INFORMS Journal on Computing* 20 (1), 154-168 (ABS Rating: 3, JCR Impact Factor: 1.246).
18. Tarantilis, C.D., Zachariadis, E.E., Kiranoudis, C.T. (2008). A Guided Tabu Search for the Heterogeneous Vehicle Routing Problem. *Journal of the Operational Research Society* 59 (12), 1659-1673 (ABS Rating: 3, JCR Impact Factor: 1.225).
19. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. Vehicle routing strategies for pick-up and delivery service under two dimensional loading constraints. *Operational Research*, In Press, DOI: 10.1007/s12351-015-0218-5 (ABS Rating: 1, JCR Impact Factor: 0.600).
20. Nikolopoulou, A.I., Repoussis, P.P., Tarantilis, C.D., Zachariadis, E.E. (2015). Adaptive Memory Programming for the Many-to-Many Vehicle Routing Problem with Cross-Docking. *Operational Research*, In Press, DOI: 10.1007/s12351-016-0278-1 (ABS Rating: 1, JCR Impact Factor: 0.600).

D.3. CONFERENCE PAPERS

1. Nikolopoulou A.I., Repoussis P.P., Tarantilis C.D., Zachariadis E.E. (2016). An Adaptive Memory Programming Framework for Optimizing Transportation Activities between Suppliers and Customers with Cross-Docking, 5th International Symposium and 27th National Conference on Operational Research (HELORS), June 9-11, Athens, Greece.
2. Nikolopoulou A.I., Repoussis P.P., Tarantilis C.D., Zachariadis E.E. (2015). Direct shipping vs. cross-docking for the distribution of products between supplier and customer pairs, 3rd Olympus International Conference in Supply Chains, November 7-8, Athens, Greece.

3. Nikolopoulou, A.I., Repoussis, P.P., Tarantilis, C.D., Zachariadis, E.E. (2015). Moving Products between Location Pairs: Consolidation against Direct Shipping. Odysseus 2015, 6th International Workshop on Freight Transportation and Logistics. May 21 – June 2015, Ajaccio, France.
4. Kiranoudis, C.T., Zachariadis, E.E., Keramitsoglou, I., Saini, K., Kakaliagou, O., Kleitsikas, E. (2014). Wildfire Evacuation Trigger Buffers for Sensitive Areas: EVITA project. Earth Observation and Remote Sensing Applications, EORSA 2014. 12-14 June, Changsha, Hunan, China.
5. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2012). A Rich Vehicle Routing Problem with Three-Dimensional Loading Aspects. Odysseus 2012, 5th International Workshop on Freight Transportation and Logistics, Proceedings of the Extended Abstracts, pp. 530-533. May 21-25, Mykonos, Greece.
6. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2007). A Hybrid Metaheuristic Algorithm for the Capacitated Vehicle Routing Problem with Two-Dimensional Loading Constraints. Proceedings of the 7th Metaheuristics International Conference (CD-ROM). 25-29 June 2007. Montreal, Canada.
7. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2007) A tabu search algorithm for the vehicle routing problem with loading constraints, Proceedings of the 4th Management Science & Technology Student Conference, pp. 151-160. 17 May 2007, DAIS Center, Athens, Greece.
8. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2007) A tabu search for solving a new variant of the vehicle routing problem, Proceedings of the 3rd Management Science & Technology Student Conference, pp. 126-134. 10 May, DAIS Center, Athens, Greece.

D.4. CONFERENCE PRESENTATIONS

1. Manousakis L., Repoussis P., Zachariadis E., Tarantilis C. (2019). A Two Commodity-Based Branch-and-Cut Algorithm for the Inventory Routing Problem. 30th European Conference on Operational Research (EURO). 23rd - 26th June 2019, Dublin, Ireland
2. Zachariadis E., Nikolopoulou A., Repoussis P., Tarantilis C. (2019). The vehicle routing problem with cross-docking under cross-dock capacity restrictions. 30th European Conference on Operational Research (EURO). 23rd - 26th June 2019, Dublin, Ireland
3. Nikolopoulou A.I., Repoussis P.P., Tarantilis C.D., Zachariadis E.E. (2016). Adaptive Memory Programming for the Multi-Product Vehicle Routing Problem with Cross-Docking, 5th Meeting of the EURO Working Group on Vehicle Routing and Logistics optimization (VEROLOG), June 6-8, Nantes, France.
4. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2015). The Vehicle Routing Problem with Simultaneous Pick-Ups and Deliveries and Two-Dimensional Loading Constraints. VEROLOG 2015. June 8-10, Vienna, Austria.
5. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2014). The Load-Dependent Vehicle Routing Problem and its Pick-up and Delivery Extension. VEROLOG 2014. June 22-25, Oslo, Norway.

6. Zachariadis, E.E., Tarantilis, C.D., Kiranoudis, C.T. (2013). Solving the vehicle routing problem with cargo weight considerations. EURO-INFORMS 2013, 26th International Conference on Operational Research. June 1-4, Rome, Italy.
7. Nikolopoulou, A., Repoussis P., Tarantilis, C.D., Zachariadis, E.E. (2014). Tabu Search Algorithm for the Vehicle Routing Problem with Cross – Docking. 11th Management Science & Technology Student Conference, May 2014, Athens, Greece.

D.5. DISSERTATIONS & THESES

1. Zachariadis E.E. Optimization Methodologies for Large-Scale Vehicle Routing Problems. Diploma Thesis, National Technical University of Athens, Greece, 2010. Thesis to obtain the Doctorate of Philosophy in Operations Research
2. Zachariadis E.E. Genetic Algorithms for University Timetabling. Master thesis. Imperial College, UK, 2005. Thesis to obtain the Diploma of Imperial College and Master of Science in Computing Science
3. Zachariadis E.E. Optimization Methodologies for the Traveling Salesman Problem. Diploma Thesis, National Technical University of Athens, Greece, 2002. Thesis to obtain the Diploma in Chemical Engineering (in Greek)

D.6. RESEARCH PROJECTS

Project: Exact and Heuristic Optimization Frameworks for Inventory Routing Problems

Funding program: Action 1: Support for faculty members - AUEB

Organization: Athens University of Economics and Business

Dates: 24/01/2019 - 20/01/2021

Project: Optimal Policies and Decision Support Tools for Multi-Echelon Distribution Networks with Cross-Docking

Funding program: Research Projects for the support of Post-doctoral researchers I, Hellenic Foundation for Research and Innovation (HFRI) and the General Secretariat for Research and Technology (GSRT):

Organization: Athens University of Economics and Business

Dates: 30/8/2018 - 30/08/2021

- Project:** Energy efficiency in the Supply Chain Through Collaboration, Advanced Decision Support and Automatic Sensing “e-SAVE”
- Funding program:** FP7 STReP Project - ICT for a Low Carbon Economy Program
- Organization:** Athens University of Economics and Business
- Dates:** 01/01/2012 – 31/06/2014
-
- Project:** Studying vehicle routing problems with environmental considerations “Route-Env”
- Funding program:** Action 2: Support Program for postdoctoral researchers - AUEB
- Organization:** Athens University of Economics and Business
- Dates:** 10/10/2013 - 30/09/2014
-
- Project:** Vehicle Routing Optimization: The combined case of bi-directional product flows with loading constraints
- Funding program:** IKY Fellowships of Excellence for Postgraduate Studies in Greece - Siemens Program
- Organization:** State Scholarship Foundation (IKY)
- Dates:** 01/11/2013 – 31/10/2015
-
- Project:** Forest Fire Risk Management Project “ARTEMIS”
- Funding program:** EC DG Environment
- Organization:** National Technical University of Athens
- Dates:** 1/1/2008-31/12/2009
-
- Project:** Mediterranean Risk Management (MEDRISK)
- Funding program:** INTERREG ARCHIMED
- Organization:** National Technical University of Athens
- Dates:** 1/1/2006-31/12/2007
-
- Project:** Decision Support System for Vehicle Routing in the Waste Collection Service of the municipality of Elefsina
- Funding program:** Municipality of Elefsina
- Organization:** National Technical University of Athens
- Dates:** 01/01/2006 – 31/12/2006

E. TEACHING

E.1. UNDERGRADUATE COURSES

- **Quantitative Methods for Economics and Business I**

Dept. Management Science and technology

Athens University of Economics and Business

Years: 2017-2018

E.2. POSTGRADUATE COURSES

- **Large Scale Optimization**

MSc Business Analytics – Athens University of Economics and Business

Co-teaching

Years: 2015-2016

- **Advanced Methods in Supply Chain Management**

MSc in Computational Mechanics

School of Chemical Engineering – National Technical University of Athens

Co-teaching

Years: 2007-2010

E.3. DIPLOMA THESES

- **Tutoring and co-supervision of diploma theses**

- Diploma Thesis: Metaheuristic methodologies for vehicle routing problems

Author: Christos Iliopoulos

Supervisor: Christos T. Kiranoudis

- Diploma Thesis: Container Loading Problems

Author: Ilias Mallis

Supervisor: Christos T. Kiranoudis

- Diploma Thesis: Heuristic Approaches for the One-Dimensional Bin Packing Problem

Author: Konstantinos Pappas Zountouridis

Supervisor: Christos T. Kiranoudis

F. ACADEMIC IMPACT

F.1. CITATIONS

Academic Database:	SCOPUS
Publications:	21
Author ID:	23037595100
Citations:	718
h-index	15

Academic Database:	Google Scholar
Publications:	21
Author ID:	Emmanouil E. Zachariadis
Citations:	1242
h-index	18

F.2. BIBLIOMETRIC IMPACT

Academic Database: SCOPUS

h-index: 15

Academic Database: Google Scholar

h-index: 18

G. OTHER ACADEMIC ACHIEVEMENTS, HONORS, AND ACTIVITIES

G.1. AWARDS

- Technical Chamber of Greece Award for excellent performance during the 5th year of my Chemical Engineering studies (2005).
- Thomaidio Award for Advances in Science and Arts on the publication of the article: Tarantilis, C.D., Zachariadis, E.E., Kiranoudis, C.T. A Guided Tabu Search for the Heterogeneous Vehicle Routing Problem. Journal of the Operational Research Society 59 (12), 1659-1673, 2008.
- Thomaidio Award for Advances in Science and Arts on the publication of the article: Tarantilis, C.D., Zachariadis, E.E., Kiranoudis, C.T. A hybrid metaheuristic algorithm for the integrated vehicle routing and three-dimensional container-loading problem. IEEE Transactions on Intelligent Transportation Systems 10(2), 255-271, 2009.
- Best Group Project PHILIPS Award. MSc in Computing Science, Imperial College, 2005.
Project: Iris Recognition

G.2. SCHOLARSHIPS

- Vehicle Routing Optimization: The combined case of bi-directional product flows with loading constraints
IKY Fellowships of Excellence for Postgraduate Studies in Greece - Siemens Program
Dates: November 2013 – October 2015
- Studying Vehicle Routing Problems with Environmental Considerations
Action 2: Support for postdoctoral researchers
Athens University of Economics and Business
- My doctoral studies were supported by the Scholarship Program of the National Technical University of Athens. Dates: May 2007 – October 2010

G.3. INTERNATIONAL CONFERENCE SESSION CHAIRMANSHIP

- Chairman of Session “Pickup and Delivery” Vehicle Routing and Logistics Optimization VEROLOG 2014, Oslo, Norway, 22-25 June, 2014.

G.4. REVIEWER FOR INTERNATIONAL JOURNALS

- Transportation Research Part B – Methodological
- Transportation Science
- European Journal of Operational Research
- Computers & Operations Research
- Swarm Intelligence
- Discrete Applied Mathematics
- Expert Systems with Applications
- Computational Intelligence
- Annals of Operations Research
- Transportation Research Part E - Logistics and Transportation Review
- Journal of Operations Research Society
- IEEE Transactions on Parallel and Distributed Systems
- TOP - Spanish Society of Statistics and Operations Research
- Optimization Letters
- Operational Research
- Optimization and Engineering