

# Maria Battarra

She received her “Laurea Vecchio Ordinamento” (five years, combined BSc and MSc) in Industrial Engineering, from the University of Bologna, in December 2005 with highest grade cum laude. She obtained her PhD degree in Operational Research in March 2010 at DEIS, Department of Computer Science and Engineering of the University of Bologna.

Since June 2015, she is Senior Lecturer at the School of Management of the University of Bath (UK). She is author of articles published in prestigious international journals and books in the field of Operational Research. She works mainly on heuristic and exact algorithms for Routing and Scheduling Problems.

## Education

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2007 - 2010	<b>Alma Mater Studiorum - University of Bologna</b> <b>DEIS, Dept. of Electronics, Informatics, and Systems</b> Ph.D. in Control System Engineering and Operations Research, with grant Thesis: <i>Exact and Heuristic Algorithms for Rich Vehicle Routing Variants</i> Advisor: <i>Prof. Daniele Vigo</i>	<i>Bologna, Italy</i>
2006 - 2007	<b>Alma Mater Studiorum - University of Bologna</b> <b>DEIS, Dept. of Electronics, Informatics, and Systems</b> Researcher with Grant <i>Real Time Routing Algorithms in a City Logistics context</i> Advisor: <i>Prof. Daniele Vigo</i>	<i>Cesena, Italy</i>
2000 - 2005	<b>Alma Mater Studiorum - University of Bologna</b> Degree in Industrial Engineering (BS and MS) Thesis: <i>Heuristic algorithms for the Vehicle Routing Problem</i> Advisors: <i>Proff. Daniele Vigo, Bruce Golden, Paolo Toth</i> Final grade: <i>100/100 summa cum laude</i>	<i>Bologna, Italy</i>
1995 - 2000	<b>Liceo Scientifico Alessandro Volta</b> Scientific high school diploma Final grade: <i>100/100</i>	<i>Riccione, Italy</i>

## Languages

**Italian:** Mother Tongue  
**English:** Fluent  
**French:** Basic  
**Turkish:** Elementary

## IT Skills

**Programming Languages:** C, C++, Java, Matlab  
**Integrated Development Environments:** Visual Studio, Eclipse  
**Optimization Software:** Cplex, MPL, Xpress-Mosel  
**Document Preparation Software:** Office Package, Latex

## Scientific Activity

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### Research Interests

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**Combinatorial Optimization**  
**Exact and Heuristic Optimization Algorithms**  
**Vehicle Routing Problem, Logistics, Scheduling, Disaster relief**

### Working Experience

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Jun.2015 - ...	<b>University of Bath</b> School of Management, IDO division Senior Lecturer	<i>Bath, UK</i>
Oct.2011 - May 2015	<b>Southampton University</b> School of Mathematics Lecturer (maternity leave Sept.2014 - May 2015)	<i>Southampton, UK</i>
Oct.2010 - Sept.2011	<b>Kadir Has University</b> Industrial Engineering Department Assistant Professor	<i>Istanbul, Turkey</i>
Feb.2010 - May.2010	<b>Özyeğin University</b> Industrial Engineering Department Visiting Instructor	<i>Istanbul, Turkey</i>

### International Exchanges

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Jul.2005 - Nov.2005	<b>University of Maryland</b> <b>R.H. Smith School of Business</b> Visiting Scholar, with grant (University of Bologna grant) <i>Tuning a parametric Clarke-Wright through a Genetic Algorithm</i> Advisor: <i>Prof. Bruce Golden</i>	<i>College Park (MD), US</i>
Jan.2008 - Jul.2008	<b>Université de Montreal</b> <b>HEC and CIRRELT</b> Visiting PhD student, with grant (Marco Polo grant competition, XIII edition) <i>The Multiple Trip VRP</i> Advisor: <i>Proff. Jean-Francois Cordeau, Gilbert Laporte</i>	<i>Montreal, Canada</i>
Jul.2009 - Nov.2009	<b>Boğaziçi University</b> <b>Industrial Engineering Dept.</b> Visiting PhD student, with grant (Marco Polo grant competition, XVI edition) <i>Tuning a parametric Esau-William algorithm through a genetic algorithm</i> Advisor: <i>Proff. Kuban Altınel, Temel Öncan</i>	<i>Istanbul, Turkey</i>

### *International Journals*

- [1] Maria Battarra, Bruce Golden, Daniele Vigo. Tuning a Parametric Clarke-Wright Heuristic for the Vehicle Routing Through a Genetic Algorithm. *Journal of the Operational Research Society* (2008), 59: 1568–1572.
- [2] Maria Battarra, Michele Monaci, Daniele Vigo. An Adaptive Guidance Approach for the Heuristic Solution of a Multi-Trip Vehicle Routing Problem. *Computers & Operations Research* (2009), 36: 3041–3050.
- [3] Roberto Baldacci, Maria Battarra, Daniele Vigo. Valid Inequalities for the Fleet Size and Mix Vehicle Routing Problem with Fixed Costs. *Networks* (2009), 54: 178–189.
- [4] Maria Battarra, Güneş Erdoğan, Gilbert Laporte, Daniele Vigo. The Traveling Salesman Problem with Pickups, Deliveries and Handling Costs. *Transportation Science* (2010), 44: 383-399.
- [5] Maria Battarra. Exact and Heuristic Algorithms for Routing Problems. Thesis extended abstract. *4OR*(2011), 421-424.
- [6] Stefano Benedettini, Maria Battarra, Andrea Roli. A Master-Slave Genetic Algorithm Enhancing Saving Heuristics. *Engineering Applications of Artificial Intelligence* (2011), 24: 555-566.
- [7] Maria Battarra, Temel Öncan, Kuban Altınel, Bruce Golden, Daniele Vigo. An Evolutionary Approach for Tuning Parametric Esau and Williams Heuristics. *Journal of the Operational Research Society*(2012) 63: 368-378.
- [8] Maria Battarra, Güneş Erdoğan, Gilbert Laporte, Daniele Vigo. Metaheuristics for the Traveling Salesman Problem with Pickups, Deliveries and Handling Costs. *Computers & Operations Research*(2012)39: 1074-1086.
- [9] Anand Subramanian, Maria Battarra. An Iterated Local Search algorithm for the Traveling Salesman Problem with Pickups and Deliveries. *Journal of the Operational Research Society*(2013) 64:402-409.
- [10] Maria Battarra, Güneş Erdoğan, Daniele Vigo. Exact algorithms for the Clustered Vehicle Routing Problem. *Operations Research*(2014) 62:58-71.
- [11] Maria Battarra, Artur Pessoa, Anand Subramanian, Eduardo Uchoa. Exact algorithms for the Traveling Salesman Problem with Draft Limits. *European Journal of Operational Research* (2014) 235: 115-128.
- [12] Anand Subramanian, Maria Battarra, Chris N. Potts. An Iterated Local Search heuristic for the Single Machine Total Weighted Tardiness Problem with Sequence-Dependent Setup Times. *International Journal of Production Research* (2014) 52: 2729-2742.

- [13] Güneş Erdoğan, Maria Battarra, Gilbert Laporte. Scheduling Twin Robots on a Line. *Naval Research Logistics* (2014) 61: 119-130.
- [14] Michela Lai, Maria Battarra, Massimo Di Francesco, Paola Zuddas. An adaptive guidance meta-heuristic for the Vehicle Routing Problem with Splits and Clustered Backhauls. *Journal of the Operational Research Society* (2015) 66, 1222-1235.
- [15] Thibaut Vidal, Maria Battarra, Anand Subramanian, Güneş Erdoğan. Hybrid Metaheuristics for the Clustered Vehicle Routing Problem. *Computers & Operational Research* (2015) 58: 87-99.
- [16] Güneş Erdoğan, Maria Battarra, Roberto Wolfler Calvo. An Exact Algorithm for the Static Rebalancing Problem arising in Bicycle Sharing Systems. *European Journal of the Operational Research Society* (2015) 245, 667-679.
- [17] Benjamin Shelbourne, Maria Battarra and Chris N. Potts. The vehicle routing problem with job availability constraints . *INFORMS Journal of Computing* (2017) 29, 705-723.
- [18] Honora Smith, Daniel Cakebread, Ben Shelbourne, Maria Battarra, Naseem Cassim, Lindi Coetzee. Location of a hierarchy of HIV/AIDS test laboratories in an inbound hub network: case study in South Africa. *Journal of the Operational Research Society* (2017) 68: 1068-1081.
- [19] Marcos De Melo Da Silva, Gunes Erdogan, Maria Battarra, Vitaly Strusevich. The Block Retrieval Problem. *EJOR* (2018), 265, 931-950.
- [20] Vito Nesello, Anand Subramanian, Maria Battarra, and Gilbert Laporte. Exact solution of the single-machine scheduling problem with periodic maintenances and sequence-dependent setup times. *EJOR* (2018), 266, 498-507.
- [21] Oliver Thomasson, Maria Battarra, Gunes Erdogan and Gilbert Laporte. Scheduling Twin Robots in a Palletising Problem. In press, *IJPR*, <https://doi.org/10.1080/00207543.2017.1401249>.
- [22] Maria Battarra, Burcu Balcik and Huifu Xu. A new method to assess risk for earthquake preparedness. *EJOR* (2018), 269, 423-435.
- [23] Matteo Salani, Maria Battarra. The opportunity cost of time windows violations. *EURO Journal on transportation and logistics* (2018), <https://doi.org/10.1007/s1367>.
- [24] Walton Coutino, Maria Battarra, Joerg Fliege. The Unmanned Aerial Vehicle Routing and Trajectory Optimisation Problem. *Comp & Industrial Engineering* (2018), 120, 116-128.
- [25] Walton Coutino, Joerg Fliege, Maria Battarra. Glider Routing and Trajectory Optimisation in Disaster Assessment. *EJOR* (2019), <https://doi.org/10.1016/j.ejor.2018.10.057>.
- [26] Maria Battarra, Federico Fraboni, Oliver Thomasson, Gunes Erdogan, Gilbert Laporte. Algorithms for the Calzedonia workload allocation problem. *JORS* (2020), [doi.org/10.1080/01605682.2020.1755897](https://doi.org/10.1080/01605682.2020.1755897).

### ***Submitted for publication***

- [1] Gunes Erdogan, Antonio Manuel Rodriguez-Chia, Maria Battarra. The Hub Location and Pricing Problem. Submitted to *EJOR*.
- [2] Walton Coutino, Joerg Fliege, Maria Battarra, Anand Subramanian. Heuristics for the glider Routing and Trajectory Optimisation in Disaster Assessment. To be submitted to Transportation Research Part B.
- [3] Oliver Thomasson, Maria Battarra Gunes Erdogan, Gilbert Laporte. Pallet location, in automated palletising problems. Under review COMP&OR.
- [4] Muyun Wu, Maria Battarra, Vaggelis Giannikas. Routing a fleet of very diverse vehicles. Work in progress.
- [5] Burcu Balcik, Maria Battarra, Melih Celik, Anand Subramanian. Scheduling appointments at refugees supply delivery centres. Work in progress.
- [6] Gunes Erdogan, Maria Battarra. On splitting routes in vehicle routing problems. Work in progress.

### ***Chapters in International Books***

- [1] Roberto Baldacci, Maria Battarra, Daniele Vigo. Routing an Heterogeneous Fleet of Vehicles. B.Golden, S.Raghavan, E.Wasil editors. *The Vehicle Routing Problem: Latest Advances and New Challenges*. Springer Verlag, 3-20, 2007.
- [2] Maria Battarra, Jean-Francois Cordeau, Manuel Iori. Pickup and Delivery Problems for Goods Transportation. *Vehicle Routing Problems, Methods and Applications*, SIAM (2014). Booked edited by Paolo Toth and Daniele Vigo.
- [3] Xingyin Wang, Maria Battarra, Bruce Golden, Edward Wasil. Vehicle Routing and Scheduling. *The Routledge Handbook of Transportation, Routledge (2015)*. Booked edited by Dusan Teodorovic.

### ***Master Thesis***

- [1] *Algoritmi euristici per problemi di Vehicle Routing*. Advisor: Prof. Daniele Vigo, Co-advisors: Prof. B. Golden, I. Gamvros, P.Toth.

### ***PhD Dissertation***

- [1] *Exact and Heuristic Algorithms for Routing Problems* Advisor: Prof. Daniele Vigo.

### **International Conferences**

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- Sept.15, 2006    **AIRO 2006, Cesena, Italy**  
*Tuning a Parametric Clarke-Wright Heuristic for the Vehicle Routing through a Genetic Algorithm*  
Speaker: Maria Battarra.
- May.13, 2007    **Route 2007, Jekyll Island, US**  
*Valid Inequalities for the FSMVRP with Fixed Costs*

Speaker: Prof. Daniele Vigo.

- Sept.5, 2007 **AIRO 2007**, *Genova, Italy*  
*Valid Inequalities for the FSMVRP with Fixed Costs*  
Speaker: Maria Battarra.
- May 13, 2008 **CORS/JOPT 2008**, *Quebec City, Canada*  
*An Adaptive Guidance Approach for the Heuristic Solution of a Multi Trip VRP*  
Speaker: Maria Battarra.
- Sept.10, 2008 **AIRO 2008**, *Ischia, Italy*  
*An Adaptive Guidance Approach for the Heuristic Solution of a Multi Trip VRP*  
Speaker: Maria Battarra.
- Oct.23, 2008 **EU/MEeting 2008**, *Troyes, France*  
*An Adaptive Guidance Approach for the Heuristic Solution of a Multi Trip VRP*  
Speaker: Prof. Daniele Vigo.
- May.27, 2009 **Odysseus 2009**, *Çeşme, Turkey*  
*The Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*  
Speaker: Maria Battarra.
- Jun.23, 2009 **Route 2009**, *Rolighed, Denmark*  
*The Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*  
Speaker: Prof. Daniele Vigo.
- Sept.8, 2009 **AIRO 2009**, *Siena, Italy*  
*The Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*  
Speaker: Maria Battarra.
- Aug.24, 2010 **NOW 2010**, *Ajaccio, Corsica*  
*Metaheuristics for the Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*  
Speaker: Güneş Erdoğan.
- Jul.2, 2011 **Route 2011**, *Sitges, Spain*  
*Metaheuristics for the Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*  
Speaker: Daniele Vigo.
- May.21, 2012 **Odysseus 2012**, *Mykonos, Greece*  
*The Clustered Vehicle Routing Problem*  
Speaker: Maria Battarra.
- June.18, 2012 **VeRoLog 2012**, *Bologna, Italy*  
*The Clustered Vehicle Routing Problem*  
Speaker: Maria Battarra.
- July 1, 2013 **EURO/INFORMS 2013**, *Rome, Italy*

*Metaheuristics for the Clustered Vehicle Routing Problem*

Speaker: Maria Battarra.

July 8, 2013

**VeRoLog 2013**, *Southampton, UK*

*Metaheuristics for the Clustered Vehicle Routing Problem*

Speaker: Maria Battarra.

Sept.10, 2015

**AIRO 2015**, *Pisa, Italy*

*An adaptive guidance meta-heuristic for the vehicle routing problem with splits and clustered backhauls*

Speaker: Maria Battarra.

Sept.10, 2015

**AIRO 2015**, *Pisa, Italy*

*An adaptive guidance meta-heuristic for the vehicle routing problem with splits and clustered backhauls*

Speaker: Maria Battarra.

June, 2016

**Route 2016**, *Rambouillet, France*

*The Block Retrieval Optimisation Problem*

Speaker: Maria Battarra.

June, 2017

**VeRoLog 2017**, *Amsterdam, Holland*

*Glider Routing and Trajectory Optimisation in Disaster Assessment*

Speaker: Walton Coutinho.

June, 2017

**VeRoLog 2017**, *Amsterdam, Holland*

*The Twin Robot Routing Problem*

Speaker: Ollie Thomasson.

May, 2018

**Route 2018**, *Copenhagen, Denmark*

*The Hub Location and Pricing Problem*

Speaker: Maria Battarra.

June, 2018

**Odysseus 2018**, *Cagliari, Italy*

*The Hub Location and Pricing Problem*

Speaker: Gunes Erdogan.

June, 2018

**Euro/Alio 2018**, *Bologna, Italy*

*The Twin Robot Routing Problem*

Speaker: Ollie Thomasson.

June, 2018

**Euro/Alio 2018**, *Bologna, Italy*

*Workload allocation in the apparel industry: The Calzedonia case study*

Speaker: Maria Battarra.

## Seminars or Invited Talks

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Mar.23, 2008

**Université de Montreal** *Montreal, Canada*

**CIRRELT**

*Valid inequalities for the FSMVRP with Fixed Costs*

- Nov.20, 2008 **Alma Mater Studiorum - University of Bologna** *Bologna, Italy*  
**DEIS, Dept. of Electronics, Informatics, and Systems**  
Report on the Activities Performed over the First 2 Years of Ph.D.  
*Exact and Heuristic Approaches for Rich Vehicle Routing Variants*
- Oct.16, 2009 **Boğaziçi University** *Istanbul, Turkey*  
**Industrial Engineering Department**  
*The Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*
- Nov.15, 2009 **University of Maryland** *College Park (MD), US*  
**R.H. Smith School of Business**  
*An evolutionary approach for tuning parametric Esau-Williams heuristics*
- Jul.13, 2011 **Southampton University** *Southampton, UK*  
**School of Mathematics**  
*The Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*
- Jul.13, 2011 **Universidade Federal du Paraiba** *Joao Pessoa, Brazil*  
**Industrial Engineering**  
*The Traveling Salesman Problem with Pickups, Deliveries and Handling Costs*
- Sept.11, 2013 **Université de Montreal** *Montreal, Canada*  
**CIRRELT**  
*Modelling Demand Uncertainty in Prepositioning of Emergency Supplies*
- June, 2014 **University of Bath** *Bath, UK*  
**Management school, IDO**  
*Overview of my research activity*



## Grants, Awards, Administrative duties and Memberships

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### Grants

Grant for Master Thesis abroad, University of Bologna, 2005.  
*Marco Polo* grant, University of Bologna, 2007.  
*Marco Polo* grant, University of Bologna, 2009.  
*Santander Internationalization Grant*, Southampton, 2012.  
*CNPq, CAPES and FAPERJ*, grant co-investigator, 2013.  
*EPSRC GCRF Healthcare technology*, 2016, grant co-investigator, RC-MN1104 ZR-A1732D.  
*Impact Initiator grant*, grant investigator, Internal Funding.  
*CNPq, MCTI/CNPq 01/2016, scientific partner in grants.*  
*OptTruck, Map Mechanics* (London), consultancy agreement, 2014.

### Qualifications

Exam to be allowed to practice the profession of Engineer, University of Bologna, 2006.  
*Higher Education Academy*, fellow status (reference PR062875), 2013.

### Editorial/Scientific/Organising committees

*Invited editor, special issue of Networks, 2013, with R. Eglese and G. Erdoğan.*  
*VeRoLog 2013, member of the organizing committee*, Southampton, 2013.  
*ICOVACS 2015*, member of scientific committee, Turkey, 2015.  
*IMI-Institute of Mathematical Innovation*, Research Panel, University of Bath (2015-..).

### Nominations or award

*SUSU Teaching Excellence Awards* (Southampton), nominated by the students in 2013 and 2014.

### Administrative duties

*Director of Study*, Master in Management, School of Management, University of Bath (June 2016-..).  
*SLTQC Learning, Teaching and Quality Committee*, School of Management, University of Bath (2017-..).

### Referee Activity

*Networks, Annals of Operations Research, Applied Mathematical Modelling, European Journal of the Operational Research Society, Journal of the Operational Research Society, Transportation Science, 4OR, International Journal of Production and Research, Journal of Heuristics, RAIRO, Naval Research Logistics, Asia-Pacific Journal of Operational Research, Central European Journal of Operations Research, Carpatian Journal of Mathematics, Computers & OR, Transportation Research Part B, Transportation Research Part C, OR Insights, EURO Journal on Transportation and Logistics, Omega, Journal of Scheduling, IEEE Computational Intelligence Magazine, Operations Research for Healthcare, Nature scientific reports.*

## Teaching Experience

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### Teaching

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2006 - 2009	<b>Alma Mater Studiorum - University of Bologna</b> Role: <i>Teaching Assistant, 3 years</i> Prof: Roberto Baldacci Course: <i>Laboratory of Simulation and Optimization (BS)</i>	<i>Cesena, Italy</i>
2006 - 2007	<b>Alma Mater Studiorum - University of Bologna</b> Role: <i>Teaching Assistant</i> Prof. Daniele Vigo Course: <i>Optimization Algorithms (MS)</i>	<i>Cesena, Italy</i>
2008 - 2009	<b>Alma Mater Studiorum - University of Bologna</b> Role: <i>Teaching Assistant</i> Prof. Cinzia Daraio Course: <i>Economics and Business Organization L-A (BS)</i>	<i>Cesena, Italy</i>
2009 - 2010	<b>Özyeğin University</b> Role: <i>Visiting Instructor</i> <i>February - March, 2010</i> Course: <i>Computational Methods for Industrial Engineers (BS)</i>	<i>Istanbul, Turkey</i>
2010 - 2011	<b>Kadir Has University</b> Role: <i>Assistant Professor</i> <i>October - January, 2010</i> Course: <i>Computational Methods for Industrial Engineers (BS)</i>	<i>Istanbul, Turkey</i>
2010 - 2011	<b>Kadir Has University</b> Role: <i>Assistant Professor</i> <i>October - January, 2010</i> Course: <i>Probability and Stochastic Processes (MS)</i>	<i>Istanbul, Turkey</i>
2010 - 2011	<b>Kadir Has University</b> Role: <i>Assistant Professor</i> <i>February - May, 2011</i> Course: <i>Simulation (BS)</i>	<i>Istanbul, Turkey</i>
2010 - 2011	<b>Kadir Has University</b> Role: <i>Assistant Professor</i> <i>February - May, 2011</i> Course: <i>Engineering Optimization and Applications (MS)</i>	<i>Istanbul, Turkey</i>
2011 - 2013	<b>University of Southampton</b> Role: <i>Lecturer</i> <i>November - December, 2011, 2012, 2013.</i> Course: <i>Mathematical Programming (BS)</i>	<i>Southampton, UK</i>
2011 - 2013	<b>University of Southampton</b> Role: <i>Lecturer</i> <i>February - May, 2012, 2013, 2014</i> Course: <i>Algorithms (BS)</i>	<i>Southampton, UK</i>

2015 - 2015	<b>University of Bath</b> Role: <i>Senior Lecturer</i> <i>September - December, 2015</i> Course: <i>Business Analytics (BS)</i>	<i>Bath, UK</i>
2015 - 2017...	<b>University of Bath</b> Role: <i>Senior Lecturer</i> <i>September - December, 2015, 2016, 2017</i> Course: <i>Analysis for decision making (MBA, FT and Exec)</i>	<i>Bath, UK</i>
2016 - 2017...	<b>University of Bath</b> Role: <i>Senior Lecturer</i> <i>February - May, 2015, 2016</i> Course: <i>Intermediate Business Analytics (2 year BSc)</i>	<i>Bath, UK</i>
2016 - 2017 ...	<b>University of Bath</b> Role: <i>Senior Lecturer</i> <i>February - May, 2016</i> Course: <i>Heuristics and Simulation (MSc in Business Analytics)</i>	<i>Bath, UK</i>

## Theses Supervised or Co-Supervised

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### PhD supervision

Sept.2012-2015	<b>Southampton University</b> <b>School of Mathematics</b> PhD in Operational Research Candidate: <i>Benjamine Shelbourne</i> Supervisor: <i>myself</i> . Co-supervisor: <i>Dr. Chris Potts</i> . Tentative Title: <i>Metaheuristics for Rich Variants of the Vehicle Routing Problem</i> , Articles published in INFORMS JOC and JORS.	<i>Southampton, UK</i>
Sept.2010–May 2013	<b>University of Cagliari</b> <b>Computer Science</b> PhD in Mathematics and Computer Science Candidate: <i>Michela Lai</i> Supervisor: <i>Prof. Paola Zuddas</i> . Co-supervisor: <i>myself and Dr. Massimo Di Francesco</i> Tentative Title: <i>Containers repositioning problems</i> , Article published in JORS.	<i>Cagliari, Italy</i>
Sept.2016–	<b>University of Bath</b> <b>School of Management</b> PhD in Operational Research Candidate: <i>Ollie Thomasson</i> Supervisor: <i>myself</i> . Co-supervisor: <i>Dr. Gunes Erdogan</i> . Tentative Title: <i>Scheduling algorithm for production applications</i> , Article published in IJPR, second article under review EJOR, third article in preparation.	<i>Bath, UK</i>
Sept.2013– July 2017	<b>University Paris Nord</b> <b>Computer Science</b> PhD in Operational Research Candidate: <i>Marcos de Melo da Silva</i> Supervisor: <i>Roberto Wolfler Calvo, Sophie Toulouse</i> . Co-supervisor: <i>myself, Dr. Gunes Erdogan</i> . Tentative Title: <i>Algorithms for container retrieval</i> , Article published in EJOR.	<i>Paris, France</i>

Dec.2014–

**University of Southampton**

*Southampton, UK*

**School of Mathematical Sciences**

PhD in Operational Research

Candidate: *Walton Pereira Coutinho*

Supervisor: *Joerg Fliege*. Co-supervisor: *myself*.

Tentative Title: *Routing a fleet of Unmanned Vehicles*,

Articles accepted in EJOR, published in Comp & IE. Third paper to be submitted.

**Other supervision**

Mar.2006

**Alma Mater Studiorum - University of Bologna**

*Cesena, Italy*

**Second Faculty of Engineering**

BS in Computer Science Engineering

Candidate: *Marco Forti*. Supervisor: *Prof. Daniele Vigo, myself*

*Realizzazione di un database bibliografico su problemi di routing di veicoli*

Mar.2006

**Alma Mater Studiorum - University of Bologna**

*Bologna, Italy*

MS in Industrial Engineering

Candidate: *Monia Ricci*. Supervisor: *Proff. D.Vigo, A.Bonoli, myself*

*Integrazione tra analisi LCA ed ottimizzazione dell'allocazione strategica dei flussi nello smaltimento dei rifiuti*

Mar.2009

**Alma Mater Studiorum - University of Bologna**

*Cesena, Italy*

**Second Faculty of Engineering**

MS in Computer Science Engineering

Candidate: *Michele Mei*. Supervisor: *Prof. Daniele Vigo*,

*Algoritmi Metaeuristici per Problemi di Instradamento di veicoli con Viaggi Multipli*

Mar.2009

**Alma Mater Studiorum - University of Bologna**

*Cesena, Italy*

**Second Faculty of Engineering**

BS in Computer Science Engineering

Candidate: *Jean Mauricio Venturini*. Supervisor: *Prof. Daniele Vigo*

Title: *Algoritmi esatti di impaccamento di veicoli*

Dec.2010

**Kadir Has University**

*Istanbul, Turkey*

**Industrial Engineering Department**

BS in Industrial Engineering

Supervisor: *Myself*. Co-supervisors: *Assist. Proff. Burcu Balcik, Funda Samanlioglu*.

Title: *A Tourist Tour Design Problem: the Istanbul case study*

Dec.2010

**Kadir Has University**

*Istanbul, Turkey*

**Industrial Engineering Department**

BS in Industrial Engineering

Supervisor: *Myself*. Co-supervisor: *Assist. Prof. Burcu Balcik*.

Title: *Optimizing the layout of a mechanical factory*

Dec.2010

**Kadir Has University**

*Istanbul, Turkey*

**Industrial Engineering Department**

BS in Industrial Engineering

Supervisor: *Assist. Prof. Burcu Balcik*. Co-supervisor: *Myself*.

Title: *An inventory-routing application*

Dec.2010

**Kadir Has University**

*Istanbul, Turkey*

**Industrial Engineering Department**

BS in Industrial Engineering

	Supervisor: <i>Assist. Prof. Burcu Balçik</i> . Co-supervisor: <i>Myself</i> . Title: <i>Disaster Relief in Turkey</i>	
Oct.2012	<b>Southampton University</b> <b>School of Mathematics</b> MS in Operational Research Candidate: <i>Benjamine Shelbourne</i> Supervisor: <i>myself</i> . Co-supervisor: <i>Dr. Honora Smith</i> .	<i>Southampton, UK</i>
Oct.2012	<b>Southampton University</b> <b>School of Management</b> MSc Business Analytics and Management Sciences Candidate: <i>Xinyu Yu</i> Supervisor: <i>myself</i> . Co-supervisor: <i>Dr. Ludwig Gredmaier</i> . Title: <i>Vehicle Routing Problem for Food Waste Collection ? a Case Study</i> Title: <i>Metaheuristics for scheduling problems with precedence constraints</i>	<i>Southampton, UK</i>
July 2013	<b>Alma Mater Studiorum - University of Bologna</b> <b>DEIS</b> MSc in Industrial Engineering Candidate: <i>Federico Fraboni</i> Supervisor: <i>Prof. Paolo Toth</i> . Co-supervisor: <i>Prof. Chris Potts, myself</i> .	<i>Bologna, Italy</i>
Oct.2013	<b>Southampton University</b> <b>School of Mathematics</b> MS in Operational Research Candidate: <i>Kang Siyuan</i> Supervisor: <i>myself</i> . Title: <i>Wayfinding problems in terminal building</i>	<i>Southampton, UK</i>
Oct.2013	<b>Southampton University</b> <b>School of Mathematics</b> MS in Operational Research Candidate: <i>Huaying Hu</i> Supervisor: <i>myself</i> . Title: <i>Airport ground access</i>	<i>Southampton, UK</i>
Oct.2014	<b>Southampton University</b> <b>School of Mathematics</b> MS in Operational Research Candidate: <i>Jingru Lin</i> Supervisor: <i>myself</i> . Title: <i>A Simulation Study for Workload Balance in an Assembly Line</i>	<i>Southampton, UK</i>
Oct.2014	<b>Southampton University</b> <b>School of Mathematics</b> MS in Operational Research Candidate: <i>Le Huong Tra Nguyen</i> Supervisor: <i>myself</i> . Title: <i>Assembly Line Balancing problems</i>	<i>Southampton, UK</i>
Summer 2016	<b>University of Bath</b> <b>School of Management</b> MS in International Management	<i>Bath, UK</i>

	Candidate: <i>Leelawan Limpasatapohn</i>	
	Supervisor: <i>myself.</i>	
	MS in Management	2016
	Candidates: <i>Lexi Guetschow, Onrumpa Kidmai</i>	
	Supervisor: <i>myself.</i>	
	MBA	2016
	Candidates: <i>Poorida Nirunpornphutta, Ajay Jhajhria, Li Qing (Alison)</i>	
	Supervisor: <i>myself.</i>	
Summer 2017	MS in Management	2017
	Candidates: <i>Will Faircloud, Rea Benfield, Kashish Agarwal</i>	
	Supervisor: <i>myself.</i>	
	MSc in Business Analytics	2017
	Candidates: <i>Toby Chow, Tiang Feng, Nonyelum Ubajaka</i>	
	Supervisor: <i>myself.</i>	
Summer 2018	MSc in Business Analytics	2018
	Candidates: <i>Lu Wan, Muyun Wu, Edwina Baiden, Yi Wu, Ziman Xiong.</i>	
	Supervisor: <i>myself.</i>	