# Martin **Luipersbeck**

✉ martin.luipersbeck@univie.ac.at
☎ +43 1 4277 38667

## Personal Details

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| Birth | 9th March 1988 – Güssing, Austria |
| Languages | German (native), English (fluent), French (basic knowledge) |
| Research Interests | Operations Research, Network Optimization, Mixed Integer Programming |

## Education

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|---|---|
| since 10/2014 | PhD candidate<br>Department of Statistics and Operations Research, University of Vienna |
| 04/2011 - 01/2014 | Dipl.-Ing. (Master's Degree) in Software Engineering / Internet Computing<br>Vienna University of Technology |
| 10/2007 - 04/2011 | B.Sc. in Computer Engineering<br>Vienna University of Technology |

## Professional Activities

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|---|---|
| 06/2014 - 09/2014 | Research Assistant<br>Department of Statistics and Operations Research, University of Vienna |
| 03/2012 - 05/2014 | IT Freelancer<br>Kurbad Tatzmannsdorf AG, Bad Tatzmannsdorf |
| 2007 - 20011 | Internships (software development)<br>Siemens AG Austria, Vienna |
| 2006 - 2007 | Emergency medical assistant (civilian service)<br>Austrian Red Cross, Oberwart |

## Teaching

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|---|---|
| 2015W/2016W | UE Mathematics 1<br>Department of Statistics and Operations Research, University of Vienna |
| 2016S | KFK OR: Operations Research 2<br>Department of Statistics and Operations Research, University of Vienna |
| 2010W | UE Digital Design<br>Embedded Computing Systems Group, Vienna University of Technology |

## Scholarships

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|---|---|
| 2014 | Uni:docs fellowship programme for doctoral candidates, University of Vienna |
| 2010 / 2012 | Achievement scholarships, Vienna University of Technology |

# Publications

### Journal Articles

1. M. Sinnl, M. Fischetti, I. Ljubić, M. Leitner, D. Salvagnin, M. Luipersbeck, M. Monaci, M. Resch. **Thinning out Steiner trees: A node based model for uniform edge costs**. Mathematical Programming Computation, 2016.
2. E. Álvarez-Miranda, H. Farhan, M. Luipersbeck and M. Sinnl, **A bi-objective network design approach for discovering functional modules linking Golgi apparatus fragmentation and neuronal death**. Annals of Operations Research, 2016.

### Refereed Conference and Workshop Proceedings

3. E. Álvarez-Miranda, M. Luipersbeck and M. Sinnl, **Optimal upgrading schemes for effective shortest paths in networks**. Proceedings of CPAIOR 2016, LNCS.
4. M. Leitner, I. Ljubić, M. Luipersbeck, M. Prossegger, M. Resch. **A partition-based heuristic for the Steiner tree problem in large graphs**. Proceedings of HM 2014, LNCS.

### Submitted Articles and Technical Reports

5. H. Calik, M. Leitner, and M. Luipersbeck, **A Benders decomposition based framework for solving cable trench problems**. Submitted, 2016.
6. M. Leitner, M. Luipersbeck, I. Ljubić and M. Sinnl, **A dual-ascent-based branch-and-bound framework for the prize-collecting Steiner tree and related problems**. Submitted, 2016.
7. E. Álvarez-Miranda, I. Ljubic, M. Luipersbeck and M. Sinnl, **Solving minimum-cost shared arborescence problems**. Submitted, 2016.
8. M. Leitner, I. Ljubić, M. Luipersbeck, M. Prossegger, M. Resch. **New real-world instances for the Steiner tree problem in graphs**. Technical Report, 2014.

### Thesis

8. M. Luipersbeck. **A new partition-based heuristic for the Steiner tree problem in large graphs**. Master's Thesis, Vienna University of Technology, Institute of Computer Graphics and Algorithms, 2014. Supervised by I. Ljubić and M. Leitner.