

# Ludwig Dierks

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## Research Fields

Market Design, Artificial Intelligence, Data Science, Operations Research

## Education

- Since 2015 **PhD Student**, *University of Zurich*, Switzerland.
- Computation and Economics Research Group, Advisor: Sven Seuken
- 2012–2015 **M.Sc. Mathematics in Operations Research**, *Technical University of Munich*, Germany.
- Cooperative Game Theory, Combinatorial Optimization, Advisor: Felix Brandt
- 2009–2012 **B.Sc. in Mathematics**, *Technical University of Munich*, Germany.

## Research Internships, Summer Schools, etc.

- Summer 2018 **Research Intern**, *Microsoft Office of the Chief Economist*, U.S.A.
- June 2017 **Student Visitor**, *Microsoft Research Cambridge*, Great Britain.
- July 2016 **Microsoft Research Summer School**, *Microsoft Research Cambridge*, Great Britain.
- 2012-2013 **Exchange Student**, *National Cheng Kung University*, Taiwan (R.O.C.).

## Research

### Peer-reviewed Journal Publications

**Cloud Pricing: The Spot Market Strikes Back** Ludwig Dierks and Sven Seuken; In *Management Science* (forthcoming); Previously appeared as an extended abstract at EC'19; Full paper: (PDF)

**On the cluster admission problem for cloud computing** Ludwig Dierks, Ian Kash and Sven Seuken; In *Journal of Artificial Intelligence Research (JAIR)* (forthcoming); Previously appeared as a 6-page extended abstract at NetEcon'19; Full paper: (PDF)

### Peer-reviewed Conference and Workshop Publications

**The Competitive Effects of Variance-based Pricing** Ludwig Dierks and Sven Seuken; In *Proceedings of the Twenty-Ninth International Joint Conference on Artificial Intelligence (IJCAI'20)*; Full paper: (PDF)

**Cloud Pricing: The Spot Market Strikes Back** Ludwig Dierks and Sven Seuken; In *Proceedings of the 20th ACM Conference on Economics and Computation (EC'19)*; Extended Abstract (full version in *Management Science*); Full paper: (PDF)

**On the cluster admission problem for cloud computing** Ludwig Dierks, Ian Kash and Sven Seuken; In *Proceedings of the 14th Workshop on the Economics of Networks* (NetEcon'19); 6-page Extended Abstract (full version in JAIR) Full paper: (PDF)

### Working Papers

**Revenue Maximization for Consumer Software: Subscription or Perpetual License?** Ludwig Dierks and Sven Seuken; Full paper: (PDF)

**Efficiency Gains from Flexible Scheduling Policies in the Cloud** Ludwig Dierks, Jacob LaRiviere, Ishai Menache, Aadharsh Kannan, and Thomas Moscibroda; Draft available on request

### Ongoing Research Projects

**Search and Matching in Adoption Markets** with Nils Olberg, Sven Seuken, Vincent Slauch and Utku Ünver

**Domestic Sourcing of Essential Goods: Implications in the Face of Global Demand Shocks** with Sven Seuken

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## Talks

- 11/09/2020 Invited Talk "The Competitive Effects Of Variance-based Pricing"; *Inform's Annual Meeting 2020*; Virtual
- 10/20/2019 Invited Talk "Cloud Pricing: The Spot Market Strikes Back"; *Inform's Annual Meeting 2019*; Seattle, Washington, USA
- 06/28/2019 Talk "On the cluster admission problem for cloud computing"; *The 14th Workshop on the Economics of Networks, Systems and Computation*; Phoenix, Arizona, USA
- 06/26/2019 Talk "Cloud Pricing: The Spot Market Strikes Back"; *20th ACM Conference on Economics and Computation*; Phoenix, Arizona, USA, Recording: <https://youtu.be/3EK5ldZppSM>
- 11/04/2018 Invited Talk "The Power of Machine Learning and Market Design for Cloud Computing Admission Control"; *Inform's Annual Meeting 2018*; Phoenix, Arizona, USA
- 07/24/2016 Talk "Cloud Pricing: The Spot Market Strikes Back"; *Workshop on the Economics of Cloud Computing*; Maastricht, Netherlands

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## Teaching

### At University of Zurich

- Fall 2020 Lecturer; Lecture: Economics and Computation
- Spring 2019 Thesis Supervision; Bachelor Thesis of David Lehnerr
- Spring 2019 Teaching Assistant; Lecture: Market Design and Machine Learning
- Fall 2018 Teaching Assistant; Lecture: Economics and Computation
- Spring 2018 Teaching Assistant; Lecture: Market Design: Theory and Practice
- Fall 2017 Teaching Assistant; Lecture: Economics and Computation
- Fall 2016 Teaching Assistant; Lecture: Economics and Computation

### At Technical University of Munich

- Fall 2011 Student Teaching Assistant; Lecture: Discrete Structures

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## Other Employment

- 2013–2014 Working Student; Berner & Mattner; Munich, Germany

2012 Intern; iic engineers (now mosaic); Munich, Germany

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## Service

Program Committee:  
AAA'21

Other reviews:

EC'16, EC'17, IEEE Transactions on Network and Service Management, NetEcon'17,  
AAAI'18, Operations Research

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## Personal Information

**Citizenship** German

**Languages** German (native), English (fluent)

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## References

- Sven Seuken  
Department of Informatics  
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✉ [seuken@ifi.uzh.ch](mailto:seuken@ifi.uzh.ch)
- Ian A. Kash  
Department of Computer Science  
University of Illinois at Chicago  
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- Jacob LaRiviere  
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