

Curriculum Vitae

Dr.-Ing. Arne Kesting

Position Post-doctoral Researcher
Chair of Traffic Modelling and Econometrics
Institute for Transport & Economics
Department of Transport and Traffic Sciences "Friedrich List"
Technische Universität Dresden, Germany

Research Interests

Microscopic traffic modeling and simulation, traffic data analysis, advanced driver-assistant systems & Intelligent Transportation Systems (ITS), and car-to-car communication.

Education

- 2002–2008 Doctoral Thesis, Technische Universität Dresden (Germany)
Title: *Microscopic Modeling of Human and Automated Driving: Towards Traffic-Adaptive Cruise Control*. Advisors: Dirk Helbing, Martin Treiber
- 03/2005 Visiting Scholar (Erasmus fellowship), Technische Universiteit Delft (Netherlands)
Serge Hoogendoorn
- 04–07/2004 Visiting Scholar, University of Maryland (USA)
Hani Mahmassani, PhD
- 1996–2002 Studies in Physics, Freie Universität Berlin (Germany)
Diploma Thesis: *Topologische Dotierung im Hubbard Modell*. Advisor: Carsten Timm
- 1998–1999 Visiting Student (Erasmus-Scholarship), Ecole Polytechnique Fédérale des Lausanne (Switzerland)

Professional Activities

Research Projects (TU Dresden)

- since 2009 KOLINE [Translation: Cooperative and Optimized Traffic Lights in City Networks]
ITS-Project in cooperation with Volkswagen AG, funded by the German Federal Ministry of Economics and Technology
- since 2006 AKTIV [Translation: Adaptive and Cooperative Technologies for Intelligent Traffic]
ITS-Project in cooperation with Volkswagen AG, funded by the German Federal Ministry of Economics and Technology
- 2002–2006 INVENT [Translation: Intelligent Traffic and User-Friendly Technology]
ITS-Project in cooperation with Volkswagen AG, funded by the German Federal Ministry of Education and Research

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Freelance Work

- 2009 TransVer GmbH
Traffic Consultant
- 2008 Autostadt Wolfsburg
Software Development for the Exhibition LEVEL GREEN
- since 2005 Volkswagen AG
Traffic Modeling and Simulation projects

Awards

- 10/2009 IEEE ITS Best Ph.D. Dissertation Award
First prize sponsored by IEEE Intelligent Transportation Systems Society
- 11/2008 Friedrich-List-Preis
sponsored by "Friedrich-List-Forum e.V." for best Ph.D. dissertation
- 10/2008 Siemens ITS Award Straßenverkehrstechnik
First prize sponsored by Siemens AG
- 1997–2002 Student Scholarship
sponsored by "Evangelischen Studienwerk e.V. Villigst"

Teaching

- 2005–2008 Lecturing tutor for *Traffic Dynamics and Simulation*
- 2008 Lecturing tutor for *Transportation Economics*
- 2005–2006 Lecturing tutor for *Transportation Planning*
- 2005 Lecturing tutor for *Stochastic Modeling of Transport Processes*
- 2002–2004 Lecturing tutor for *Statistics I* and *Statistics II*
- 2000–2002 Lecturing tutor for Physics for Medical Students, FU Berlin

Selected Publications

- A. Kesting, M. Treiber, M. Schönhof, D. Helbing, *Adaptive Cruise Control Design for Active Congestion Avoidance*
Transportation Research Part C: Emerging Technologies, Vol. 16(6), p. 668–683 (2008)
- A. Kesting, M. Treiber, *How reaction time, update time and adaptation time influence the stability of traffic flow*
Computer-Aided Civil and Infrastructure Engineering, Vol. 23(2), p. 125–137 (2008)
- A. Kesting, M. Treiber, D. Helbing, *General Lane-Changing Model MOBIL for Car-Following Models*
Transportation Research Record, Vol. 1999, p. 86–94 (2007)
- M. Treiber, A. Kesting, D. Helbing, *Understanding widely scattered traffic flows, the capacity drop, and platoons as effects of variance-driven time gaps*
Physical Review E 74, 016123 (2006)
- M. Treiber, A. Kesting, D. Helbing, *Delays, inaccuracies and anticipation in microscopic traffic models*
Physica A, Vol. 360(1), p. 71–88 (2006)

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