

Lebenslauf Kai Nagel

Professor (C4), Technische Universität Berlin, Fakultät V (Verkehrs- und Maschinensysteme), Institut für Land- und Seeverkehr, Fachgebiet Verkehrssystemplanung und Verkehrstelematik

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1 Abschlüsse

1994, Promotion in Informatik, Universität zu Köln

1991, Diplom in Physik, Universität zu Köln

1989, DEA (französisches Diplom) in Ozeanologie und Meteorologie, Universität Paris 6

1987, Vordiplom in Physik, Vordiplom in Meteorologie, Universität zu Köln

1984, Abitur, Köln

2 Berufliche Erfahrung

Seit 2004 C4-Professor im Fachgebiet “Verkehrssystemplanung und Verkehrstelematik”, TU Berlin

1999–2004, Assistenzprofessor für Informatik, Eidgenössische Technische Hochschule Zürich (ETHZ)

1995–1999, Los Alamos National Laboratory

- 1998–1999 Team Leader Research Team
- 1996–1999 Technical Staff Member (permanente Stelle)
- 1995–1996 Postdoc

1991–1994, Doktorand, Mathematisches Institut und Zentrum für Paralleles Rechnen, Univ. zu Köln

- 1993–1994 Stipendiat des Graduiertenkolleg Scientific Computing Köln/St. Augustin
- 1991–1993 Wissenschaftlicher Mitarbeiter

3 Forschungsaufenthalte

Okt–Dez 2008, Center for Urban Systems and Policy Analysis (“Urbansim”), University of Washington, Seattle (Forschungssemester)

Mär 2001, Department of Mathematics, Imperial College, London

Sep 2000, Jul 2001, Jul 2002, Cowles Foundation for Research in Economics, Yale University

Feb–Mär 2000, Santa Fe Institute

Jul–Sep 1999, Niels Bohr Institut, Universität Kopenhagen (Dänemark)

Sep–Okt 1995, Höchstleistungsrechenzentrum (HLRZ) Jülich

Okt 1993–Jan 1994 und Apr–Jul 1994, Brookhaven National Laboratory

Jul–Okt 1993 und Jan–Apr 1994, Los Alamos National Laboratory

4 Patente

U.S. Patent 20040088392 für “Population mobility generator and simulator” (einer von vielen Patentinhabern)

5 Tätigkeit als Herausgeber

Seit 2008: “Applied Spatial Analysis and Policy”

2007–2011: “Advances in Complex Systems” (area editor)
Seit 2005: “International Journal of Modern Physics C”
Seit 2004: “disP” (ETH Zürich)
Seit 1999: “Networks and spatial economics” (area editor)

6 Ämter (Auswahl)

Mitglied des Preiskomitees für den Heinz-Maier-Leibnitz-Preis der DFG, 2014 –
DFG Fachkollegiat im Fachkollegium 407 (Systemtechnik) für den Bereich “Verkehrs- und Transportsysteme, Logistik”, 2008 – 2012 und 2016 –
Gutachter des Wissenschaftsrates, 2008, 2011, 2012, 2015
Mitglied des Transportation Research Board (TRB) Ausschusses für Verkehrsverhalten und Wertesysteme (Travel Behavior and Values, ADB10), 2008 –
Mitglied des Expertengremiums “Gesamtverkehrsprognose 2025 für Berlin und Brandenburg”, Projekt der Planungsorganisationen von Berlin und Brandenburg , 2007 – 2009
Mitglied des Senats- und Bewilligungsausschusses der DFG für Graduiertenkollegs, 2007 – 2008 (beendet wg. Wahl zum Fachkollegiaten)
Mitglied des MATSim Entwicklerteams, seit Beginn ca. 2005

Zehn ausgewählte Veröffentlichungen

- [1] Nagel, K. and M. Schreckenberg. A cellular automaton model for freeway traffic. *Journal de Physique I France*, 2, 2221, 1992.
- [2] Nagel, K. and M. Rickert. Parallel implementation of the TRANSIMS micro-simulation. *Parallel Computing*, 27(12), 1611, 2001.
- [3] Nagel, K., P. Wagner, and R. Woesler. Still flowing: Approaches to traffic flow and traffic jam modeling. *Operations Research*, 51(5), 681, 2003.
- [4] Balmer, M., N. Cetin, K. Nagel, and B. Raney. Towards truly agent-based traffic and mobility simulations. In *Autonomous agents and multiagent systems (AAMAS'04)*. New York, NY, July 2004.
- [5] Balmer, M., B. Raney, and K. Nagel. Adjustment of activity timing and duration in an agent-based traffic flow simulation. In H. Timmermans, ed., *Progress in activity-based analysis*, pp. 91–114. Elsevier, Oxford, UK, 2005.
- [6] Nagel, K. and F. Marchal. Computational methods for multi-agent simulations of travel behaviour. In K. Axhausen, ed., *Moving through nets: The physical and social dimensions of travel*, pp. 131–188. Elsevier, 2007. ISBN 0-08-944213-7.
- [7] Nagel, K. and G. Flötteröd. Agent-based traffic assignment: Going from trips to behavioural travelers. In R. Pendyala and C. Bhat, eds., *Travel Behaviour Research in an Evolving World – Selected papers from the 12th international conference on travel behaviour research*, chap. 12, pp. 261–294. International Association for Travel Behaviour Research, 2012. ISBN 978-1-105-47378-4.
- [8] Flötteröd, G., M. Bierlaire, and K. Nagel. Bayesian demand calibration for dynamic traffic simulations. *Transportation Science*, 45(4), 541, 2011. doi:10.1287/trsc.1100.0367.
- [9] Kickhöfer, B., D. Grether, and K. Nagel. Income-contingent user preferences in policy evaluation: application and discussion based on multi-agent transport simulations. *Transportation*, 38(6), 849, 2011. ISSN 0049-4488. doi:10.1007/s11116-011-9357-6.
- [10] Kickhöfer, B. and K. Nagel. Towards high-resolution first-best air pollution tolls. *Networks and Spatial Economics*, pp. 1–24, 2013. doi:10.1007/s11067-013-9204-8.

Fünf ausgewählte Veröffentlichungen

Mit Qualitätssicherung

Nagel, K. and M. Schreckenberg (1992) A cellular automaton model for freeway traffic, *Journal de Physique I France*, 2, 2221–2229.

Nagel, K. and M. Rickert (2001) Parallel implementation of the TRANSIMS micro-simulation, *Parallel Computing*, 27 (12), 1611–1639.

Nagel, K., P. Wagner and R. Woesler (2003) Still flowing: Approaches to traffic flow and traffic jam modeling, *Operations Research*, 51 (5), 681–710.

Nagel, K. and F. Marchal (2007) Computational methods for multi-agent simulations of travel behaviour, in K. W. Axhausen (Ed.), *Moving through nets: The physical and social dimensions of travel*, Elsevier, ISBN 0-08-944213-7.

Flötteröd, G., M. Bierlaire and K. Nagel (2011) Bayesian demand calibration for dynamic traffic simulations, *Transportation Science*, 45 (4), 541–561, doi:10.1287/trsc.1100.0367.

Lehre

Vorlesungen:

1. "Grundlagen der Verkehrssystemplanung und Verkehrsinformatik", Veranstaltung des Grundstudiums im Verkehrswesen, TU Berlin, SS 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015.
2. "Verkehrssystemanalyse: Analyse und Bewertung von Verkehrssystemen", Veranstaltung des Hauptstudiums in Verkehrswesen, TU Berlin, SS 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015.
3. "Methoden der Verkehrstelematik", Veranstaltung des Hauptstudiums in Verkehrswesen, TU Berlin, SS 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015.
4. "Multiagenten-Simulationen für Verkehr", Veranstaltung des Hauptstudiums in Verkehrswesen, TU Berlin, SS 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2015, 2015.
5. "Objektorientiertes Programmieren für (Verkehrs-)Ingenieure", Veranstaltung des frühen Hauptstudiums in Verkehrswesen, TU Berlin, WS 2004/05, 2005/06, 2006/07, 2007/08, 2009/10, 2010/11, 2011/12, 2012/13, 2014/15.
6. "Grundlagen der Modellierung und Simulation von Verkehr", Veranstaltung des Hauptstudiums in Verkehrswesen, TU Berlin, WS 2004/05, 2005/06, 2006/07, 2007/08, 2009/10, 2010/11, 2011/12, 2012/13, 2014/15.
7. "Simulation sozialer Systeme", Veranstaltung des Hauptstudiums im Verkehrswesen, TU Berlin, SS 2009.
8. "Planungsverfahren für Verkehrsmaßnahmen" (teilweise), Veranstaltung des Grundstudiums im Verkehrswesen, TU Berlin, SS 2004, 2005, 2006, 2007.
9. "Simulation of Complex Systems" (in Englisch), Fokusfach in Informatik, Vertiefung in Rechnergestützten Wissenschaften, Physik, ETH Zürich, SS 2001, WS 2002/03 und 2003/04, einschl. Übungen
10. "Simulation methods for transportation planning" (in Englisch), Vertiefung in Informatik, Rechnergestützte Wissenschaften, Bauingenieurwesen, ETH Zürich, SS 2000, 2002, and 2003, einschl. Übungen
11. "Symbolisches und Numerisches Rechnen", 3. Semester Informatik, ETH Zürich, WS 1999/2000, 2000/01, und 2001/02

Betreuung von Doktorarbeiten:

1. Benjamin Kickhöfer, Economic Policy Appraisal and Heterogeneous Users, TU Berlin Verkehrswesen, 2014.
2. Andreas Neumann, A paratransit-inspired evolutionary process for public transit network design, TU Berlin Verkehrswesen, 2014.
3. Dominik Grether, Extension of a multi-agent transport simulation for traffic signal control and air transport Systems, TU Berlin Verkehrswesen, 2014.
4. Manuel Moyo, Calibration of Public Transit Routing for Multi-Agent Simulation, TU Berlin Verkehrswesen, 2013.
5. Thomas Nicolai, MATSim for UrbanSim: Integrating an urban simulation model with a travel model, TU Berlin Verkehrswesen, 2013.
6. Yu Chen, Adding a comprehensive Calibration Methodology to an Agent-Based Transportation Simulation, TU Berlin Verkehrswesen, 2012.
7. Johannes Illenberger, Social Networks and Cooperative Travel Behaviour, TU Berlin Verkehrswesen, 2012.

8. Gregor Lämmel, Escaping the Tsunami: Evacuation Strategies for Large Urban Areas – Concepts and Implementation of a Multi-Agent Based Approach, TU Berlin Verkehrswesen, 2011
9. Marcel Rieser, Adding transit to an agent-based transportation simulation – Concepts and implementation, TU Berlin Verkehrswesen, 2010
10. David Strippgen, Investigating the technical possibilities of real-time interaction with simulations of mobile intelligent particles, TU Berlin Verkehrswesen, 2009
11. Gunnar Flötteröd, Traffic state estimation with multi-agent simulations, TU Berlin Verkehrswesen, 2008
12. Nurhan Cetin, Large scale parallel graph-based simulations, ETH Zürich Informatik, 2005
13. Christian Gloor, Distributed intelligence in agent-based simulations, ETH Zürich Informatik, 2005
14. Bryan Raney, Large scale agent learning, ETH Zürich Informatik, 2005
15. Marcus Rickert, Traffic simulation on distributed memory computers, offizieller Betreuer Prof. Bachem, 1997

Koreferent bei Doktorarbeiten:

1. Luk Knapen, Refined tools for micro-modeling in transportation research, Hasselt University, 2015.
2. Evelien van der Hurk, Passengers, Information, and Disruptions, Rotterdam School of Management, 2015.
3. Christoph Dobler, Travel behaviour modelling for scenarios with unpredictable events – Methods and implementation, ETH Zürich Technische Wissenschaften, 2013
4. Martin Strehler, Signalized Flows: Optimizing Traffic Signals and Guideposts and Related Network Flow Problems, BTU Cottbus Mathematik, 2012
5. Stefan Schneider, A methodology for the extrapolation of trip chain data, TU Berlin Verkehrswesen, 2011
6. Stefan Lorkowski, Fusion von Verkehrsdaten mit Mikromodellen am Beispiel von Autobahnen, TU Berlin Verkehrswesen, 2009
7. Martin Winter, Essays in transport modelling – Methodology and case studies, TU Berlin Wirtschaftsingenieur, 2009
8. J. Emeterio Navarro, Adaptive investment strategies for different scenarios, Humboldt Universität Berlin Informatik, 2008
9. David Charypar, Efficient algorithms for the travel behavior microsimulation of very large scenarios, ETH Zürich Technische Wissenschaften, 2008
10. Daniel Hinkeldein, Verkehrsmanagement 2020: Wie verändern sich die Anforderungen an die Verkehrsoperatoren?, TU Berlin Verkehrswesen, 2008
11. Duncan Cavens, Agent-based framework for modelling the impact of landscape change on tourist behaviour, ETH Zürich Technische Wissenschaften, 2008
12. Manfred Rabe, Vergleichbarkeit von ÖPNV- und MIV-Tagesganglinien der realisierten Verkehrsnachfrage, TU Berlin Verkehrswesen, 2008
13. Luc Bläser, A component language for pointer-free concurrent programming and its application to simulation, ETH Zürich Informatik, 2007
14. Michael Balmer, Travel demand modeling for multi-agent transport simulations: Algorithms and systems, ETH Zürich Bauingenieurwesen, 2007
15. Valery Naumov, Routing in large vehicular ad-hoc networks, ETH Zürich Informatik, 2006
16. Heiko Schilling, Route assignment problems in large networks, TU Berlin Mathematik, 2006

17. Roland Chrobok, Theory and application of advanced traffic forecast methods, University of Duisburg Physik, 2005
18. Frank Crittin, New algorithmic methods for real-time transportation problems, EPF Lausanne Operations Research, 2003
19. Thomas R. Lincke, Exploring the computational limits of large exhaustive search problems, ETH Zürich Informatik, 2002

Drittmittel

| year | amount (Eu) | funding body | partners | topic |
|------|-------------|-------------------------------|---|--|
| 2016 | 197 354 | DFG | ./. | "Untersuchung der Nutzung simulierter dynamischer Preise zur Optimierung von Verkehrssystemen" (NA 682/14-1) |
| 2015 | 25 000 | Audi Electronics Venture GmbH | ./. | "Simulation zur Validierung einer autonomen Stadtflotte" |
| 2015 | 60 000 | VW AG | ./. | "Aufbau eines MATSim Simulationsmodells der Region Wolfsburg zur Bewertung von Lösungsansätzen zur Verbesserung urbaner Mobilität" |
| 2014 | 44 000 | BVG | ./. | "Machbarkeitsstudie Teilszenarien und Standardbusse " |
| 2014 | 403 330 | DFG | ./. | "Ein agenten-basierter evolutionärer Ansatz für die nutzerorientierte Optimierung von komplexen öffentlichen Verkehrssystemen" (NA 682/11-1) |
| 2014 | 99 104 | ERAfrica | ETH Zürich, U Pretoria, U Nairobi | "Measuring accessibility in policy evaluation" |
| 2014 | 43 166 | BMVI | WIP (TU Berlin) PLANCO Intraplan | "Grundsätzliche Überprüfung und Weiterentwicklung der Kosten-Nutzen-Analyse im Bewertungsverfahren der Bundesverkehrswegeplanung" Aufstockung |
| 2013 | ca. 240 000 | DFG | TU Cottbus | "Optimization and network wide analysis of traffic signal control" (NA 682/7-1) |
| 2013 | ca. 240 000 | Einstein Foundation Berlin | DLR Adlershof | "eCab: Simulationsbasiertes System für ein nachhaltiges Management von elektrisch angetriebenen Taxiflotten" |
| 2013 | ca. 20 000 | BVG | ./. | "Nachfragesensitive Angebotsplanung" |
| 2011 | ca. 20 000 | VW AG | ./. | "Simulationsgestützte Bewertung von Mehrwertdiensten" |
| 2011 | 25 000 | BMVBS (via Infratest) | TNS Infratest ETH Zürich | "Ermittlung von Bewertungsansätzen für Reisezeiten und Zuverlässigkeit auf der Basis eines Modells für modale Verlagerungen im nichtgewerblichen und gewerblichen Personenverkehr für die Bundesverkehrswegeplanung" |
| 2011 | 70 167 | BMVBS | WIP (TU Berlin) PLANCO Intraplan | "Grundsätzliche Überprüfung und Weiterentwicklung der Kosten-Nutzen-Analyse im Bewertungsverfahren der Bundesverkehrswegeplanung" |
| 2011 | 185 680 | BMBF | Traffgo HT GmbH U Heidelberg | "GIS-basiertes Risikoanalyse-, Informations- und Planungssystem für die Evakuierung von Gebieten (GRIPS)" |
| 2010 | ca. 200 000 | DFG | KIT Karlsruhe | "Beiträge des Verkehrs zur Verwirklichung einer 2000W City" (NA 682/6-1) |
| 2010 | 20 000 | BVG via PTV | PTV AG Karlsruhe, senozon AG (CH) | "Verkehrsmodellierung des ÖPNV im Großraum Berlin" |
| 2010 | 199 457 | EU | ETH Zurich, others | "Micro-simulation for the prospective of sustainable cities in Europe – SustainCity" |
| 2009 | 10 000 | Satellitic | FH Ulm | "Adaptions and Applications of MATSim for vehicle trajectory generation" |
| 2009 | 19 800 | BVG | ./. | "Fahrgast-Wirkung Verknüpfung M44 und 344" |
| 2009 | 9 900 | BVG | ./. | "Evaluation Linie 156" |
| 2009 | ca. 160 000 | DFG | Math (TU Berlin) | "Methods for modeling and large-scale simulation of multi-destination pedestrian crowds" (NA 682/5-1) |
| 2009 | 16 660 | BMVBS | WIP (TU Berlin) | "Analyse der verkehrspolitischen Instrumente der Bundesverkehrswegeplanung" |
| 2008 | ca. 266 400 | DFG | TU Munich | "Detaillierte Evaluation verkehrlicher Maßnahmen mit Hilfe von Mikrosimulation" (NA 682/3-1) |
| 2007 | 198 510 | BMBF | Math (TU Berlin) TU Braunsch. TU Cottbus | "Adaptive Verkehrssteuerung" |
| 2007 | ca. 420 000 | DFG | ./. | "State estimation for traffic simulations as coarse grained systems" (NA 682/1-1) |
| 2007 | 249 144 | BMBF | U Hannover, UNU Bonn, TU Munich, DLR Oberpfaff. | "Numerisches last-mile Tsunami Frühwarn- und Evakuierungsinformationssystem" |
| 2007 | 225 000 | VW-Found. | ETHZ | "Travel impacts of social networks and networking tools" |

| | | | | |
|------|-------------|---------------------------------|--|--|
| 2006 | 72 000 | EU | FAV Berlin many others | “Co-operative networks for intelligent road safety – COOPERS” |
| 2006 | 50 000 | BMBF via DLR | DLR | “Systematische Analyse und Prognose des durch die Fußballweltmeisterschaft induzierten Individualverkehrs unter Berücksichtigung der besonderen Gegebenheiten verschiedener Austragungsorte – SOC-CER” |
| 2005 | 25 000 | Landkreis Uckermark | FG Schienen- fahrwege und Bahnbetrieb (TU Berlin) | “Integriertes Verkehrskonzept Uckermark” |
| 2005 | 71 000 | VOLVO Research Foundation | WIP (TU Berlin) | “Modelling and simulation approaches for livable cities” |
| 2002 | ca. 89 000 | ETHZ | CAAD (ETHZ) | “A unified approach for agent-based learning with application in architecture and in transportation planning” |
| 2002 | ca. 133 500 | SNF | ORL (ETHZ) | “Planning with Virtual Alpine Landscapes and Autonomous Agents” |
| 2001 | ca. 100 000 | ETHZ | IVT (ETHZ) | “Large scale multi-agent simulation of travel behavior and traffic flow” |

Satellitic: Satellic Traffic Management GmbH
 DFG: Deutsche Forschungsgemeinschaft
 SNF: Schweizer Nationalfonds
 ETHZ: ETH Zürich interne Forschungsförderung
 (begutachtet)

BVG: Berliner Verkehrsbetriebe
 EU: Europäische Union
 VW AG: Volkswagen AG

Vollständiges Schriftenverzeichnis (zum Lebenslauf)

Die meisten Publikationen, insbesondere noch nicht veröffentlichte, sind elektronisch verfügbar via <http://www.vsp.tu-berlin.de/publications>.

Books

1. Horni, A., K. Nagel, and K. W. Axhausen, eds. *The Multi-Agent Transport Simulation MAT-Sim*. Ubiquity Press, in preparation. See <http://ci.matsim.org:8080/view/All/job/MATSim-Book/ws/main.pdf>.
2. Walz, A., C. Gloor, P. Bebi, A. Fischlin, E. Lange, K. Nagel, and B. Allgöwer. *Virtual Worlds – Real Decisions? The Alps in a Modeller's Nutshell. Thematic Synthesis Report and Outlook, Research Focus V "Virtual representation"*. Swiss National Science Foundation SNSF. vdf Hochschulverlag AG, 2008. ISBN 978-3-7281-3202-1.
3. Walz, A., C. Gloor, P. Bebi, A. Fischlin, E. Lange, K. Nagel, and B. Allgöwer. *Virtuelle Welten – reale Entscheide? Die Alpen im Modellbaukasten. Thematische Synthese zum Forschungsschwerpunkt V "Virtuelle Repräsentation"*. Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen Forschung SNF. vdf Hochschulverlag AG, 2008. ISBN 978-3-7281-3202-4.

Refereed, in journals

4. Ziemke, D., K. Nagel, and C. Bhat. Integrating CEMDAP and MATSim to increase the transferability of transport demand models. *Transportation Research Record*, 2493, 117, 2015. doi:10.3141/2493-13.
5. Zilske, M. and K. Nagel. A simulation-based approach for constructing all-day travel chains from mobile phone data. *Procedia Computer Science*, 52, 468, 2015. ISSN 1877-0509. doi:10.1016/j.procs.2015.05.017.
6. Agarwal, A., M. Zilske, K. Rao, and K. Nagel. An elegant and computationally efficient approach for heterogeneous traffic modelling using agent based simulation. *Procedia Computer Science*, 52(C), 962, 2015. ISSN 1877-0509. doi:10.1016/j.procs.2015.05.173.
7. Röder, D. and K. Nagel. Integrated analysis of commuters' energy consumption. *Procedia Computer Science*, 32, 699, 2014. ISSN 1877-0509. doi:10.1016/j.procs.2014.05.479.
8. Nagel, K., B. Kickhöfer, and J. W. Joubert. Heterogeneous tolls and values of time in multi-agent transport simulation. *Procedia Computer Science*, 32, 762, 2014. ISSN 1877-0509. doi:10.1016/j.procs.2014.05.488.
9. Fourie, P., J. Illenberger, and K. Nagel. Increased convergence rates in multi-agent transport simulations with pseudo-simulation. *Transportation Research Record*, 2343, 68, 2013. doi:10.3141/2343-09.
10. Kickhöfer, B. and K. Nagel. Towards high-resolution first-best air pollution tolls. *Networks and Spatial Economics*, pp. 1–24, 2013. doi:10.1007/s11067-013-9204-8.
11. Grether, D., S. Fürbas, and K. Nagel. Agent-based modelling and simulation of air transport technology. *Procedia Computer Science*, 19, 821, 2013. ISSN 1877-0509. doi:10.1016/j.procs.2013.06.109.
12. Grether, D. and K. Nagel. Extensible software design of a multi-agent transport simulation. *Procedia Computer Science*, 19, 380, 2013. ISSN 1877-0509. doi:10.1016/j.procs.2013.06.052.
13. Neumann, A. and K. Nagel. Passenger agent and paratransit operator reaction to changes of service frequency of a fixed train line. *Procedia Computer Science*, 19, 803, 2013. ISSN 1877-0509. doi:10.1016/j.procs.2013.06.106.
14. Grether, D., A. Neumann, and K. Nagel. Simulation of urban traffic control: A queue model approach. *Procedia Computer Science*, 10, 808, 2012. ISSN 1877-0509. doi:10.1016/j.procs.2012.06.104.

15. Taubenböck, H., N. Goseberg, G. Lämmel, N. Setiadi, T. Schlurmann, K. Nagel, F. Siegert, J. Birkmann, K.-P. Traub, S. Dech, V. Keuck, F. Lehmann, G. Strunz, and H. Klüpfel. Risk reduction at the “Last-Mile”: an attempt to turn science into action by the example of Padang, Indonesia. *Natural Hazards*, 65(1), 915, 2013. doi:10.1007/s11069-012-0377-0.
16. Maciejewski, M. and K. Nagel. Towards multi-agent simulation of the dynamic vehicle routing problem in MATSim. In R. Wyrzykowski et al, ed., *Parallel Processing and Applied Mathematics (PPAM), Revised Selected Papers, Part II*, Lecture Notes in Computer Science. Springer, 2012. doi:10.1007/978-3-642-31500-8_57.
17. Illenberger, J., K. Nagel, and G. Flötteröd. The role of spatial interaction in social networks. *Networks and Spatial Economics*, 2011. doi:10.1007/s11067-012-9180-4. Doi: 10.1007/s11067-012-9180-4.
18. Flötteröd, G., M. Bierlaire, and K. Nagel. Bayesian demand calibration for dynamic traffic simulations. *Transportation Science*, 45(4), 541, 2011. doi:10.1287/trsc.1100.0367.
19. Schröder, S., M. Zilske, G. Liedtke, and K. Nagel. Towards a multi-agent logistics and commercial transport model: The transport service provider’s view. *Procedia Social and Behavioral Sciences*, 39, 649, 2012. doi:10.1016/j.sbspro.2012.03.137.
20. Illenberger, J., G. Flötteröd, and K. Nagel. A model of risk-sensitive route-choice behaviour and the potential benefit of route guidance. *IEEE Transactions on Intelligent Transportation Systems*, 12(2), 384, 2011. ISSN 1524-9050. doi:10.1109/TITS.2011.2105266.
21. Illenberger, J., M. Kowald, K. W. Axhausen, and K. Nagel. Insights into a spatially embedded social network from a large-scale snowball-sample. *European Physical Journal B*, 84(4), 549, 2011. doi:10.1140/epjb/e2011-10872-0.
22. Kickhöfer, B., D. Grether, and K. Nagel. Income-contingent user preferences in policy evaluation: application and discussion based on multi-agent transport simulations. *Transportation*, 38(6), 849, 2011. ISSN 0049-4488. doi:10.1007/s11116-011-9357-6.
23. Dressler, D., G. Flötteröd, G. Lämmel, K. Nagel, and M. Skutella. Optimal evacuation solutions for large-scale scenarios. In B. Hu, K. Morasch, S. Pickl, and M. Siegle, eds., *Operations Research Proceedings 2010*, pp. 239–244. Springer Berlin Heidelberg, 2011. ISBN 978-3-642-20009-0. doi:10.1007/978-3-642-20009-0_38.
24. Grether, D., B. Kickhöfer, and K. Nagel. Policy evaluation in multi-agent transport simulations. *Transportation Research Record*, 2175, 10, 2010. ISSN 0361-1981. doi:10.3141/2175-02.
25. Lämmel, G., D. Grether, and K. Nagel. The representation and implementation of time-dependent inundation in large-scale microscopic evacuation simulations. *Transportation Research Part C: Emerging Technologies*, 18(1), 84, 2010. ISSN 0968-090X. doi:10.1016/j.trc.2009.04.020.
26. Taubenböck, H., N. Goseberg, N. Setiadi, G. Lämmel, F. Moder, M. Oczipka, H. Klüpfel, R. Wahl, T. Schlurmann, G. Strunz, J. Birkmann, K. Nagel, F. Siegert, F. Lehmann, S. Dech, A. Gress, and R. Klein. “Last-Mile” preparation for a potential disaster – Interdisciplinary approach towards tsunami early warning and an evacuation information system for the coastal city of Padang, Indonesia. *Natural Hazards and Earth System Science*, 9(4), 1509, 2009. ISSN 1561-8633. doi:10.5194/nhess-9-1509-2009.
27. Rieser, M., D. Grether, and K. Nagel. Adding mode choice to a multi-agent transport simulation. *Transportation Research Record*, 2132, 50, 2009. doi:10.3141/2132-06.
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