

Lebenslauf Kai Nagel

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

Adresse: TU Berlin Sek. SG 12, Salzufer 17–19, D-10587 Berlin

Tel.: +49-30-314-21382 (direkt), -23308 (Sek.)

Fax: +49-30-314-26269

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 Taxifloten"
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”

Satellit: Satellit 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 MATSim*. 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.
28. Nagel, K., D. Grether, U. Beuck, Y. Chen, M. Rieser, and K. Axhausen. Multi-agent transport simulations and economic evaluation. *Journal of Economics and Statistics (Jahrbücher für Nationalökonomie und Statistik)*, 228(2+3), 173, 2008. See http://www.digizeitschriften.de/dms/resolveppn/?PID=PPN345616359_0228%7CLOG_0020.
29. Rieser, M. and K. Nagel. Network breakdown “at the edge of chaos” in multi-agent traffic simulations. *European Journal of Physics*, 63(3), 321, 2008. doi:10.1140/epjb/e2008-00153-6.
30. Wagner, P. and K. Nagel. Comparing traffic flow models with different number of “phases”. *European Physical Journal B*, 63(3), 315, 2008. doi:10.1140/epjb/e2008-00078-0.

31. Walz, A., C. Gloor, P. Bebi, A. Fischlin, E. Lange, K. Nagel, and B. Allgöwer. Virtual worlds – real decisions: Recent research in landscape modelling and visualisation and the potential of computer-based tools for planning. *Mountain Research and Development*, 28(2), 122, 2008. doi:10.1659/mrd.0965.
32. Beuck, U., K. Nagel, M. Rieser, D. Strippgen, and M. Balmer. Preliminary results of a multi-agent traffic simulation for Berlin. *Advances in Complex Systems (ACS)*, 10(2 supp), 289, 2007. doi:10.1142/S0219525907001367.
33. Rieser, M., K. Nagel, U. Beuck, M. Balmer, and J. Rügenapp. Truly agent-oriented coupling of an activity-based demand generation with a multi-agent traffic simulation. *Transportation Research Record*, 2021, 10, 2007. doi:10.3141/2021-02.
34. Charypar, D., K. Axhausen, and K. Nagel. Event-driven queue-based traffic flow microsimulation. *Transportation Research Record*, 2003, 35, 2007. doi:10.3141/2003-05.
35. Balmer, M., K. Axhausen, and K. Nagel. A demand generation framework for large scale micro simulations. *Transportation Research Record*, 1985, 125, 2006. doi:10.3141/1985-14.
36. Charypar, D. and K. Nagel. Q-learning for flexible learning of daily activity plans. *Transportation Research Record*, 1935, 163, 2006. ISSN 0361-1981. doi:10.3141/1935-19.
37. Marchal, F. and K. Nagel. Modeling location choice of secondary activities with a social network of cooperative agents. *Transportation Research Record*, 1935, 141, 2005. doi:10.3141/1935-16.
38. Ferrari, P. and K. Nagel. Robustness of efficient passenger boarding in airplanes. *Transportation Research Record*, 1915, 44, 2005. doi:10.3141/1915-06.
39. Charypar, D. and K. Nagel. Generating complete all-day activity plans with genetic algorithms. *Transportation*, 32(4), 369, 2005. ISSN 0049-4488. doi:10.1007/s11116-004-8287-y.
40. Nagel, K., M. Strauss, and M. Shubik. The importance of timescales: Simple models for economic markets. *Physica A*, 340(4), 668, 2004. doi:10.1016/j.physa.2004.05.025.
41. Raney, B. and K. Nagel. Iterative route planning for large-scale modular transportation simulations. *Future Generation Computer Systems*, 20(7), 1101, 2004. ISSN 0167-739X. doi:10.1016/j.future.2003.11.001.
42. Helbing, D. and K. Nagel. The physics of traffic and regional development. *Contemporary Physics*, 45(5), 405, 2004.
43. Balmer, M., K. Nagel, and B. Raney. Large scale multi-agent simulations for transportation applications. *J. of Intelligent Transport Systems*, 8, 205, 2004.
44. Jost, D. and K. Nagel. Probabilistic traffic flow breakdown in stochastic car following models. *Transportation Research Record*, 1852, 152, 2003.
45. Nagel, K., P. Wagner, and R. Woesler. Still flowing: Approaches to traffic flow and traffic jam modeling. *Operations Research*, 51(5), 681, 2003.
46. Nagel, K. and M. Rickert. Parallel implementation of the TRANSIMS micro-simulation. *Parallel Computing*, 27(12), 1611, 2001.
47. Chowdhury, D., J. Kertész, K. Nagel, L. Santen, and M. Schadschneider. Comment on: “Critical behavior of a traffic flow model”. *Physical Review E*, 61(3), 3270, 2000.
48. Nagel, K., M. Shubik, M. Paczuski, and P. Bak. Spatial competition and price formation. *Physica A*, 287, 546, 2000.
49. Jacob, R. R., M. V. Marathe, and K. Nagel. A computational study of routing algorithms for realistic transportation networks. *ACM Journal of Experimental Algorithms*, 4(1999es, Article No. 6), 1999. doi:10.1145/347792.347814.
50. Simon, P., J. Esser, and K. Nagel. Simple queueing model applied to the city of Portland. *International Journal of Modern Physics*, 10(5), 941, 1999. doi:10.1142/S0129183199000747.
51. Nagel, K. From particle hopping models to traffic flow theory. *Transportation Research Record*, 1644, 1, 1999.
52. Nagel, K., D. Wolf, P. Wagner, and P. M. Simon. Two-lane traffic rules for cellular automata: A systematic approach. *Physical Review E*, 58(2), 1425, 1998.

53. Simon, P. M. and K. Nagel. A simplified cellular automaton model for city traffic. *Physical Review E*, 58(2), 1286, 1998.
54. Kelly, T. and K. Nagel. Relaxation criteria for iterated traffic simulations. *International Journal of Modern Physics C*, 9(1), 113, 1998.
55. Nagel, K. and C. Barrett. Using microsimulation feedback for trip adaptation for realistic traffic in Dallas. *International Journal of Modern Physics C*, 8(3), 505, 1997.
56. Rickert, M. and K. Nagel. Experiences with a simplified microsimulation for the Dallas/Fort Worth area. *International Journal of Modern Physics C*, 8(3), 483, 1997. doi:10.1142/S0129183197000400.
57. Wagner, P., K. Nagel, and D. Wolf. Realistic multi-lane traffic rules for cellular automata. *Physica A*, 234, 687, 1997.
58. Nagel, K. Individual adaptation in a path-based simulation of the freeway network of Northrhine-Westfalia. *International Journal of Modern Physics C*, 7(6), 883, 1996.
59. Rickert, M., K. Nagel, M. Schreckenberg, and A. Latour. Two lane traffic simulations using cellular automata. *Physica A*, 231, 534, 1996.
60. Nagel, K. Particle hopping models and traffic flow theory. *Physical Review E*, 53(5), 4655, 1996.
61. Schreckenberg, M., A. Schadschneider, K. Nagel, and N. Ito. Discrete stochastic models for traffic flow. *Physical Review E*, 51, 2939, 1995.
62. Nagel, K. and M. Paczuski. Emergent traffic jams. *Physical Review E*, 51, 2909, 1995.
63. Nagel, K. and S. Rasmussen. Traffic at the edge of chaos. In R. A. Brooks and P. Maes, eds., *Artificial Life IV: Fourth International Workshop on the Synthesis and Simulation of Living Systems*, pp. 222–235. MIT Press, Cambridge, MA, 1994.
64. Nagel, K. Life-times of simulated traffic jams. *International Journal of Modern Physics C*, 5(3), 567, 1994.
65. Nagel, K. and A. Schleicher. Microscopic traffic modeling on parallel high performance computers. *Parallel Computing*, 20, 125, 1994. doi:10.1016/0167-8191(94)90117-1.
66. Nagel, K. and H. J. Herrmann. Deterministic models for traffic jams. *Physica A*, 199, 254, 1993.
67. Nagel, K. and M. Schreckenberg. A cellular automaton model for freeway traffic. *Journal de Physique I France*, 2, 2221, 1992.
68. Nagel, K. and E. Raschke. Self-organized criticality in cloud formation? *Physica A*, 182, 519, 1992.

Refereed, in books, proceedings, etc.

69. Zöllig Renner, C., T. W. Nicolai, and K. Nagel. General description of the state of the art of integrated transport land use modeling. In M. Bierlaire, A. de Palma, R. Hurtubia, and P. Waddell, eds., *Integrated Transport and Land Use Modeling for Sustainable Cities*, chap. 2, pp. 17–40. EPFL press, 2015. ISBN 978-2-940222-72-8.
70. Nicolai, T. W. and K. Nagel. Integration of agent-based transport and land use models. In M. Bierlaire, A. de Palma, R. Hurtubia, and P. Waddell, eds., *Integrated Transport and Land Use Modeling for Sustainable Cities*, chap. 17, pp. 333–354. EPFL press, 2015. ISBN 978-2-940222-72-8.
71. Cabrita, I., S. Gayda, R. Hurtubia, D. Efthymiou, I. Thomas, D. Peeters, J. Jones, C. Cotteels, K. Nagel, T. Nicolai, and D. Röder. Integrated land use and transport microsimulation for Brussels. In M. Bierlaire, A. de Palma, R. Hurtubia, and P. Waddell, eds., *Integrated Transport and Land Use Modeling for Sustainable Cities*, chap. 19, pp. 373–412. EPFL press, 2015. ISBN 978-2-940222-72-8.
72. Nicolai, T. W. and K. Nagel. High resolution accessibility computations. In A. Condeço, A. Reggiani, and J. Gutiérrez, eds., *Accessibility and spatial interaction*, pp. 62–91. Edward Elgar, 2014.
73. Padgham, L., K. Nagel, D. Singh, and Q. Chen. Integrating BDI agents into a MATSim simulation. In *21st European Conference on Artificial Intelligence*. 2014. doi:10.3233/978-1-61499-419-0-681.

74. Fischer, J., J.-P. Redlich, B. Scheuermann, J. Schiller, M. Günes, K. Nagel, P. Wagner, M. Scheidgen, A. Zubow, I. Eveslage, R. Sombrutzki, and F. Juraschek. From earthquake detection to traffic surveillance – About information and communication infrastructures for smart cities. In *System Analysis and Modeling: Theory and Practice*, vol. 7744 of *Lecture Notes in Computer Science*, pp. 121–141. Springer Berlin Heidelberg, 2013. ISBN 978-3-642-36756-4. doi:10.1007/978-3-642-36757-1_8.
75. Kickhöfer, B., F. Hülsmann, R. Gerike, and K. Nagel. Rising car user costs: comparing aggregated and geo-spatial impacts on travel demand and air pollutant emissions. In T. Vanoutrive and A. Verhetsel, eds., *Smart Transport Networks: Decision Making, Sustainability and Market structure*, NECTAR Series on Transportation and Communications Networks Research, pp. 180–207. Edward Elgar Publishing Ltd, 2013. ISBN 978-1-78254-832-4.
76. Maciejewski, M. and K. Nagel. A microscopic simulation approach for optimization of taxi services. In T. Albrecht, B. Jaekel, and M. Lehnert, eds., *3rd International Conference on Models and Technologies for Intelligent Transportation Systems 2013*, pp. 1–10. TUDpress, 2013. ISBN 978-3-944331-34-8.
77. Hülsmann, F., R. Gerike, B. Kickhöfer, K. Nagel, and R. Luz. Towards a multi-agent based modeling approach for air pollutants in urban regions. In *Conference on "Luftqualität an Straßen"*, pp. 144–166. Bundesanstalt für Straßenwesen, FGSV Verlag GmbH, 2011. ISBN 978-3-941790-77-3.
78. Lämmel, G., H. Klüpfel, and K. Nagel. Risk minimizing evacuation strategies under uncertainty. In R. Peacock, E. Kuligowski, and J. Averill, eds., *Pedestrian and Evacuation Dynamics*, pp. 287–296. Springer, Berlin, 2011. doi:10.1007/978-1-4419-9725-8_26.
79. Schröder, S., M. Zilske, G. Liedtke, and K. Nagel. Der Transportlogistikdienstleister in einem Multiagentenmodell des Güterverkehrs. In U. Clausen, ed., *Wirtschaftsverkehr 2011: Modelle – Strategien – Nachhaltigkeit*, pp. 77–95. Verlag Praxiswissen, 2011. ISBN 978-3869750415.
80. Lämmel, G., M. Rieser, and Nagel. Large scale microscopic evacuation simulation. In W. Klingsch, C. Rogsch, A. Schadschneider, and M. Schreckenberg, eds., *Pedestrian and Evacuation Dynamics*, pp. 503–508. Springer, Berlin Heidelberg, 2010.
81. Lämmel, G., M. Rieser, K. Nagel, H. Taubenböck, G. Strunz, N. Goseberg, T. Schlurmann, H. Klüpfel, N. Setiadi, and J. Birkmann. Emergency preparedness in the case of a tsunami – evacuation analysis and traffic optimization for the Indonesian city of Padang. In W. Klingsch, C. Rogsch, A. Schadschneider, and M. Schreckenberg, eds., *Pedestrian and Evacuation Dynamics*, pp. 171–182. Springer, Berlin Heidelberg, 2010. doi:10.1007/978-3-642-04504-2_13.
82. Grether, D., Y. Chen, M. Rieser, and K. Nagel. Effects of a simple mode choice model in a large-scale agent-based transport simulation. In A. Reggiani and P. Nijkamp, eds., *Complexity and Spatial Networks. In Search of Simplicity*, Advances in Spatial Science, chap. 13, pp. 167–186. Springer, 2009. doi:10.1007/978-3-642-01554-0.
83. Balmer, M., M. Rieser, K. Meister, D. Charypar, N. Lefebvre, K. Nagel, and K. Axhausen. MATSim-T: Architecture and simulation times. In A. Bazzan and F. Klügl, eds., *Multi-Agent Systems for Traffic and Transportation*, pp. 57–78. IGI Global, 2009.
84. Bazzan, A., K. Nagel, and F. Klügl. Integrating MATSim and ITSUMO for Daily Replanning Under Congestion. In *35th Latin-American Informatics Conference (CLEI)*. Pelotas, Brazil, 2009.
85. Bazzan, A., D. de Oliveira, F. Klügl, and K. Nagel. Adapt or not adapt – consequences of adapting driver and traffic light agents. In K. Tuyls, A. Nowe, Z. Guessoum, and D. Kudenko, eds., *Adaptive Agents and Multi-Agent Systems III. Adaptation and Multi-Agent Learning*, vol. 4865 of *Lecture Notes in Computer Science*, pp. 1–14. Springer, Berlin/Heidelberg, 2008. ISBN 978-3-540-77947-6. doi:10.1007/978-3-540-77949-0_1.
86. 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.
87. Illenberger, J., G. Flötteröd, and K. Nagel. Enhancing MATSim with capabilities of within-day replanning. In *Proceedings of the 2007 IEEE Intelligent Transportation Systems Conference*, pp. 94–99. Seattle, WA, 2007. ISBN 1-4244-1396-6.

88. Raney, B. and K. Nagel. An improved framework for large-scale multi-agent simulations of travel behaviour. In P. Rietveld, B. Jourquin, and K. Westin, eds., *Towards better performing European Transportation Systems*, pp. 305–347. Routledge, London, 2006.
89. Balmer, M. and K. Nagel. Shape morphing of intersection layouts using curb side oriented driver simulation. In J. van Leeuwen and H. Timmermans, eds., *Innovations in Design & Decision Support Systems in Architecture and Urban Planning*, pp. 167–183. Springer, Heidelberg/Berlin, 2006.
90. 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.
91. Nagel, K. and P. Nelson. A critical comparison of the kinematic-wave model with observational data. In H. Mahmassani, ed., *Transportation and Traffic Theory – Flow, Dynamics, and Human Interaction (Proc. 16th ISTTT)*, pp. 145–164. Elsevier, 2005.
92. Gloor, C. and K. Nagel. A message-based framework for real-world mobility simulations. In F. Klügl, A. Bazzan, and S. Ossowski, eds., *Applications of Agent Technology in Traffic and Transportation*, Whitestein Series in Software Agent Technologies and Autonomic Computing, pp. 193–209. Birkhäuser, 2005. ISBN 3-7643-7258-3. doi:10.1007/3-7643-7363-6_13.
93. Marchal, F. and K. Nagel. Computation of location choice of secondary activities in transportation models with cooperative agents. In F. Klügl, A. Bazzan, and S. Ossowski, eds., *Applications of Agent Technology in Traffic and Transportation*, Whitestein Series in Software Agent Technologies and Autonomic Computing, pp. 153–164. Birkhäuser, 2005. ISBN 3-7643-7258-3. doi:10.1007/3-7643-7363-6_10.
94. Gloor, C., P. Stucki, and K. Nagel. Hybrid techniques for pedestrian simulations. In P. Sloot, B. Chopard, and A. Hoekstra, eds., *Cellular automata, Proceedings*, no. 3305 in Lecture Notes in Computer Science, pp. 581–590. Springer, 2004.
95. Gloor, C., L. Mauron, and K. Nagel. A pedestrian simulation for hiking in the Alps. In E. R. Galea, ed., *Pedestrian and Evacuation Dynamics*, Proceedings of the 2nd international conference, London, 2003, p. 406. CMS Press, University of Greenwich, UK, 2003.
96. Raney, B., A. Voellmy, N. Cetin, M. Vrtic, and K. Nagel. Towards a microscopic traffic simulation of all of Switzerland. In P. Sloot, C. Tan, J. Dongarra, and A. Hoekstra, eds., *Computational Science – ICCS 2002, Part I*, no. 2329 in Lecture Notes in Computer Science, pp. 371–380. Springer, Heidelberg, Amsterdam, 2002.
97. Cetin, N., K. Nagel, B. Raney, and A. Voellmy. Large scale multi-agent transportation simulations. *Computer Physics Communications*, 147(1–2), 559, 2002. (Europhysics Conference of Computational Physics (CCP 2001), edited by N. Attig, R. Esser, and M. Kremer).
98. Nagel, K. and K. Axhausen. Microsimulation. In D. Hensher and J. King, eds., *The Leading Edge of Travel Behavior Research*, pp. 209–216. Pergamon, Oxford, 2001.
99. Esser, J. and K. Nagel. Iterative demand generation for transportation simulations. In D. Hensher and J. King, eds., *The Leading Edge of Travel Behavior Research*, pp. 689–709. Pergamon, Oxford, 2001.
100. Nagel, K., R. Beckman, and C. Barrett. TRANSIMS for transportation planning. *InterJournal Complex Systems*, 244, 1998. See <http://interjournal.org>.
101. Nagel, K., M. Rickert, R. Frye, P. Stretz, P. M. Simon, R. Jacob, and C. L. Barrett. Regional transportation simulations. In *Advanced Simulation Technologies Conference*. The Society for Computer Simulation International, Boston, MA, U.S.A., 1998.
102. Nagel, K., S. Rasmussen, and C. L. Barrett. Network traffic as a self-organized critical phenomenon. In F. Schweitzer, ed., *Self-organization of complex structures: From individual to collective dynamics*, pp. 579–592. Gordon and Breach, London, 1997.
103. Herrmann, H. J., E. Flekkoy, K. Nagel, G. Peng, and G. Ristow. Density waves in granular flow. In K. K. Bardhan, B. K. Chakrabarti, and A. Hansen, eds., *Non-linearity and breakdown in soft condensed matter*, Lecture notes in Physics 437. Springer, 1994.
104. Nagel, K. Fast low fidelity microsimulation of vehicle traffic on supercomputers. Annual Meeting Preprint 94-0901, Transportation Research Board, Washington D.C., 1994.

105. Bachem, A., T. Meis, K. Nagel, M. Riemeyer, and M. Wottawa. Programming, porting, and performance tests on a 1024-processor transputercluster. In R. Grebe, J. Hektor, S. C. Hilton, M. R. Jane, and P. H. Welche, eds., *Transputer applications and systems '93*, p. 1068. IOS Press, 1993.
106. Bachem, A., K. Nagel, and M. Rickert. Ultraschnelle mikroskopische Verkehrs-Simulationen. In R. Flieger and R. Grebe, eds., *Parallele Datenverarbeitung Aktuell TAT*. 1994.
107. Nagel, K. Freeway traffic, cellular automata, and some (self-organizing) criticality. In R. de Groot and J. Nadrchal, eds., *Physics Computing '92*, p. 419. World Scientific, 1992.

Refereed, electronic (often on CD-ROMs or USB sticks)

108. Zilske, M. and K. Nagel. Building a minimal traffic model from mobile phone data. In *NetMob 2013, 3rd International Conference on the Analysis of Mobile Phone Datasets, Special session on the D4D challenge*. MIT (Cambridge, MA), 2013. See <http://perso.uclouvain.be/vincent.blondel/netmob/2013/NetMob2013-program-v1.pdf>.
109. Zilske, M. and K. Nagel. Towards volunteered digital travel demand data. In *7th International Conference on Geographic Information Science, Extended Abstracts*. 2012.
110. Horni, A., K. Nagel, and K. W. Axhausen. High-resolution destination choice in agent-based models. Annual Meeting Preprint 12-1988, Transportation Research Board, Washington, D.C., 2012.
111. Neumann, A. and K. Nagel. A paratransit-inspired evolutionary process for public transit network design. Annual Meeting Preprint 12-0716, Transportation Research Board, Washington D.C., 2012.
112. Schröder, S., M. Zilske, G. Liedtke, and K. Nagel. A computational framework for a multi-agent simulation of freight transport activities. Annual Meeting Preprint 12-4152, Transportation Research Board, Washington D.C., 2012.
113. Moyo Oliveros, M. and K. Nagel. Automatic calibration of microscopic, activity-based demand for a public transit line. Annual Meeting Preprint 12-3279, Transportation Research Board, Washington D.C., 2012.
114. Grether, D., J. Bischoff, and K. Nagel. Traffic-actuated signal control: Simulation of the user benefits in a big event real-world scenario. In *2nd International Conference on Models and Technologies for ITS, Leuven, Belgium*. 2011.
115. Zilske, M., A. Neumann, and K. Nagel. OpenStreetMap for traffic simulation. In M. Schmidt and G. Gartner, eds., *1st European State of the Map – OpenStreetMap conference*, 11-10, pp. 126–134. Vienna, 2011. http://2011.sotm-eu.org/userfiles/proceedings_sotmEU2011.pdf.
116. Flötteröd, G., Y. Chen, and K. Nagel. Behavioral calibration of a large-scale travel behavior micro-simulation. Annual Meeting Preprint 11-2890, Transportation Research Board, Washington D.C., 2011.
117. Strippgen, D. and K. Nagel. Using common graphics hardware for multi-agent traffic simulation with CUDA. In *2nd International Conference on Simulation Tools and Techniques*. Rome, Italy, 2009. ISBN 978-963-9799-45-5. doi:10.4108/ICST.SIMUTOOLS2009.5666.
118. Strippgen, D. and K. Nagel. Multi-agent traffic simulation with CUDA. In *High Performance Computing & Simulation (HPCS)*. Leipzig, Germany, 2009. ISBN 978-1-4244-4906-4. doi:10.1109/HPCSIM.2009.5192895.
119. Lämmel, G. and K. Nagel. Multi agent based large-scale evacuation simulation. Annual Meeting Preprint 09-2135, Transportation Research Board, Washington D.C., 2009.
120. Grether, D., Y. Chen, M. Rieser, U. Beuck, and K. Nagel. Emergent effects in multi-agent simulations of road pricing. In *Annual Meeting of the European Regional Science Association (ERSA)*. 2008.
121. Flötteröd, G. and K. Nagel. Online traffic state estimation with multi-agent simulations. In *4th International Symposium Networks for Mobility*. Stuttgart, Germany, 2008.
122. Lämmel, G., H. Klüpfel, and K. Nagel. Preliminary results of a large scale microscopic evacuation simulation for the city of Padang in the case of a tsunami. In *International conference on tsunami warning (ICTW) '08*. Bali, Indonesia, 2008.

123. Birkmann, J., Dech, N. Goseberg, H. Klüpfel, G. Lämmel, Moder, K. Nagel, Oczipka, T. Schlurmann, N. Setiadi, Siegert, Strunz, and Taubenböck. Numerical last-mile tsunami early warning and evacuation information system (“last-mile – evacuation”). In *International conference on tsunami warning (ICTW) '08*. Bali, Indonesia, 2008.
124. Lämmel, G., M. Rieser, and K. Nagel. Bottlenecks and congestion in evacuation scenarios: A microscopic evacuation simulation for large-scale disasters. In *5th Workshop on Agents in Traffic and Transportation (ATT) @ Autonomous Agents and Multiagent Systems (AAMAS) '08*. Estoril, Portugal, 2008.
125. Flötteröd, G. and K. Nagel. State estimation for multi-agent simulations of traffic. In *World Conference on Transport Research (WCTR'07)*. Berkeley, CA, 2007.
126. Charypar, D., K. Axhausen, and K. Nagel. An event-driven parallel queue-based microsimulation for large scale traffic scenarios. In *World Conference on Transport Research (WCTR'07)*. Berkeley, CA, 2007.
127. Beuck, U., K. Nagel, and A. Justen. Application of the VISEVA demand generation software to Berlin using publicly available behavioral data. Annual Meeting Preprint 07-2807, Transportation Research Board, Washington D.C., 2007.
128. Flötteröd, G. and K. Nagel. Some practical extensions to the cell transmission model. In *Proceedings of the 8th International IEEE Conference on Intelligent Transportation Systems*, pp. 172–177. Vienna, Austria, 2005. ISBN 0-7803-9216-7.
129. Raney, B., N. Cetin, A. Völlmy, and K. Nagel. Large scale multi-agent transportation simulations. In *Annual congress of the European Regional Science Association (ERSA)*. Dortmund, Germany, 2002. See <http://www.ersa.org>.
130. Krauß, S., K. Nagel, and P. Wagner. The mechanism of flow breakdown in traffic flow models. In *International Symposium on Traffic and Transportation Theory (ISTTT) '99*. Jerusalem, 1999.
131. Rickert, M. and K. Nagel. Issues of simulation-based route assignment. In *International Symposium on Traffic and Transportation Theory (ISTTT) '99*. Jerusalem, 1999.
132. Wagner, P. and K. Nagel. Microscopic modeling of travel demand: Approaching the home-to-work problem. Annual Meeting Preprint 99-0919, Transportation Research Board, Washington D.C., 1999.
133. Simon, P. and K. Nagel. Simple queueing model applied to the city of Portland. Annual Meeting Preprint 99-0861, Transportation Research Board, Washington D.C., 1999.

In journals, non-refereed (usually invited)

134. Nagel, K. and P. Ferrari. The secrets to faster boarding. *International Airport Review*, 9(3), 41, 2005.
135. Helbing, D. and K. Nagel. Verkehrsdynamik und Urbane Systeme. *Physik Journal*, 2(5), 35, 2003.
136. Gloor, C., D. Cavens, E. Lange, K. Nagel, and W. Schmid. A pedestrian simulation for very large scale applications. In A. Koch and P. Mandl, eds., *Multi-Agenten-Systeme in der Geographie*, no. 23 in Klagenfurter Geographische Schriften, pp. 167–188. Institut für Geographie und Regionalforschung der Universität Klagenfurt, 2003.
137. Raney, B., N. Cetin, A. Völlmy, M. Vrtic, K. Axhausen, and K. Nagel. An agent-based microsimulation model of Swiss travel: First results. *Networks and Spatial Economics*, 3(1), 23, 2003.
138. Rickert, M. and K. Nagel. Dynamic traffic assignment on parallel computers in TRANSIMS. *Future Generation Computer Systems*, 17(5), 637, 2001.
139. Schreckenberg, M., A. Schadschneider, and K. Nagel. Zellularautomaten simulieren Straßenverkehr. *Physikalische Blätter*, 52(5), 460, 1996.

In books, proceedings, etc., non-refereed (usually invited)

140. Nagel, K. Analyse der Wirkungen von Straßenbenützungsgebühren mittels agentenbasierter Modellierung. In *Fachtagung Pkw-Straßenbenützungsgebühren – Lösung oder Hemmschuh für eine nachhaltige Mobilität?*, 35. Institut für Verkehrswesen, Universität für Bodenkultur Wien, 2015. doi:10.14279/depositonce-4790.
141. Nagel, K. and G. Flötteröd. Agent-based traffic assignment: Going from trips to behavioural travellers. 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.
142. Lämmel, G., H. Klüpfel, and K. Nagel. The MATSim network flow model for traffic simulation adapted to large-scale emergency egress and an application to the evacuation of the Indonesian city of Padang in case of a tsunami warning. In H. Timmermans, ed., *Pedestrian Behavior*, chap. 11, pp. 245–265. Emerald Group Publishing Limited, 2009.
143. Birkmann, J., S. Dech, N. Goseberg, H. Klüpfel, G. Lämmel, F. Moder, K. Nagel, M. Oczipka, T. Schlurmann, N. Setiadi, F. Siegert, G. Strunz, and H. Taubenböck. Numerical last-mile tsunami early warning and evacuation information system (“Last-Mile – Evacuation”). In *GEOTECHNOLOGIEN Science Report No. 10: “Early Warning Systems in Earth Management”*, pp. 73–83. Osnabrück, 2008.
144. Balmer, M., M. Rieser, A. Vogel, K. Axhausen, and K. Nagel. Generating day plans using hourly origin-destination matrices. In T. Bieger, C. Laesser, and R. Maggi, eds., *Jahrbuch 2004/05 Schweizerische Verkehrswirtschaft*, pp. 5–36. Schweizer Verkehrswissenschaftliche Gesellschaft, 2005.
145. Jost, D. and K. Nagel. Probabilistic traffic flow breakdown in stochastic car following models. In P. Bovy, ed., *Traffic and Granular Flow*. Springer, 2003.
146. Nagel, K. and B. Raney. Multi-agent simulations for traffic in regional planning. In L. Diappi, ed., *Evolving cities: Geocomputation in territorial planning*. Ashgate, Aldershot, UK, 2004.
147. Nagel, K. Potentials of microscopic traffic simulations for telematics services. In C. Müller-Bagehl, ed., *Infotainment/Telematik im Fahrzeug*, vol. 38 of *Haus der Technik Fachbuch*. Expert verlag, Renningen, 2004.
148. Nagel, K. and B. Raney. Complex systems applications for transportation planning. In M. Koll-Schretzenmayr, M. Keiner, and G. Nussbaumer, eds., *The Real and Virtual Worlds of Spatial Planning*, chap. 16. Springer-Verlag, Berlin, 2004.
149. Nagel, K. and A. Reggiani. Multi-agent simulation approach to multi-functional land use. In R. V. P. Nijkamp, C.A. Rodenburg, ed., *The Economics of Multifunctional Land Use*, pp. 141–146. Shaker, Maastricht, NL, 2003.
150. Nagel, K. Traffic networks. In S. Bornholdt and H. Schuster, eds., *Handbook of Graphs and Networks*, pp. 248–272. Wiley-VCH, 2002.
151. Nagel, K. Cellular automata models for transportation applications. In S. Bandini, B. Chopard, and M. Tomassini, eds., *Cellular automata – 5th International Conference on Cellular Automata for Research and Industry*, no. 2493 in *Lecture Notes in Computer Science*, pp. 20–31. Springer, 2002.
152. Nagel, K. Multi-modal traffic in TRANSIMS. In M. Schreckenberg and S. D. Sharma, eds., *Pedestrian and Evacuation Dynamics*, Proceedings of the 1st international conference, Duisburg, 2001, pp. 161–172. Springer, 2001.
153. Nagel, K., J. Esser, and M. Rickert. Large-scale traffic simulation for transportation planning. In D. Stauffer, ed., *Annual Reviews of Computational Physics*, pp. 151–202. World Scientific, 2000.
154. Nagel, K. Hell on wheels. *The Sciences*, pp. 26–32, 1999.
155. Esser, J. and K. Nagel. Census-based travel demand generation for transportation simulations. In W. Brilon, F. Huber, M. Schreckenberg, and H. Wallentowitz, eds., *Traffic and Mobility: Simulation – Economics – Environment*, pp. 135–148. Springer, Berlin, 1998.

156. Nagel, K., P. Simon, M. Rickert, and J. Esser. Iterated transportation simulations for Dallas and Portland. In *Traffic and mobility*, vol. 66 of *Stadt Region Land*, pp. 95–100. Institut für Stadtbauwesen, University of Aachen, Germany, 1998.
157. Nagel, K., M. Rickert, and C. Barrett. Large-scale traffic simulations. In J. M. L. M. Palma and J. Dongarra, eds., *Vector and Parallel Processing – VECPAR'96*, vol. 1215 of *Lecture Notes in Computer Science*, pp. 380–402. Springer, 1997. doi:10.1007/3-540-62828-2_131.
158. Nagel, K. and M. Schreckenberg. Traffic jam dynamics in stochastic cellular automata. In J. Soliman and D. Roller, eds., *28th International Symposium on Automotive Technology and Automation (ISATA)*, p. 531. Automotive Automation Ltd, Croydon, England, 1995.
159. Schreckenberg, M. and K. Nagel. Physical modelling of traffic with stochastic cellular automata. In J. Soliman and D. Roller, eds., *28th International Symposium on Automotive Technology and Automation (ISATA)*, p. 531. Automotive Automation Ltd, Croydon, England, 1995.
160. Smith, L., R. Beckman, D. Anson, K. Nagel, and M. Williams. TRANSIMS: TRansportation ANalysis and SIMulation System. In *Proc. 5th Nat. Transportation Planning Methods Applications Conference*. Seattle, WA, 1995.
161. Feldman, B. and K. Nagel. Lattice games with strategic takeover. In D. Stein and L. Nadel, eds., *1992 Lectures in Complex Systems*, Santa Fe Institute Studies in the Sciences of Complexity Lect. Vol. V, pp. 603–614. Addison-Wesley, Reading, MA, 1993.

Electronic, non-refereed (often on CD-ROMs or USB sticks)

162. Agarwal, A., B. Kickhöfer, and K. Nagel. The internalization of congestion and air pollution externalities: Evaluating behavioral impacts. In *14th Conference on Travel Behaviour Research (IATBR)*. Windsor, England, 2015.
163. Kickhöfer, B. and K. Nagel. Using high-resolution first-best tolls as a benchmark for policy evaluation: The case of air pollution costs. In *Kuhmo Nectar Conference on Transportation Economics*. 2012.
164. Nagel, K., B. Kickhöfer, and M. Winter. Reverse-engineering of the rule-of-half in order to retrofit an assessment procedure based on resource consumption. In *Kuhmo Nectar Conference on Transportation Economics*. 2012.
165. Nicolai, T. W. and K. Nagel. Investigating accessibility indicators for feedback from a travel to a land use model. In *European Regional Science Association Conference*. Barcelona, Spain, 2011.
166. Kickhöfer, B. and K. Nagel. Mapping emissions to individuals – new insights with multi-agent transport simulations. In *12th Conference on Computers in Urban Planning and Urban Management (CUPUM)*. Lake Louise, Canada, 2011.
167. Lämmel, G., N. Goseberg, V. Heinzl, W. Kongo, N. Setiadi, H. Taubenböck, T. Schlurmann, M. Oczipka, H. Klüpfel, G. Strunz, J. Birkmann, K. Nagel, F. Siegert, F. Lehmann, S. Dech, A. Gress, R. Wahl, and R. Klein. Last-Mile – numerical last-mile Tsunami early warning and evacuation information system. In *GEOTECHNOLOGIEN Science Report No. 13: "Early Warning Systems in Earth Management"*. 2010. <http://www.vsp.tu-berlin.de>.
168. Kickhöfer, B., M. Zilske, and K. Nagel. Income dependent economic evaluation and public acceptance of road user pricing. In *Kuhmo Nectar Conference on Transportation Economics*. 2010.
169. Flötteröd, G., Y. Chen, M. Rieser, and K. Nagel. Behavioral calibration of a large-scale travel behavior microsimulation. In *12th Conference of the International Association for Travel Behaviour Research (IATBR)*. Jaipur, India, 2009.
170. Grether, D., B. Kickhöfer, and K. Nagel. Policy evaluation in multi-agent transport simulations considering income-dependent user preferences. In *12th Conference of the International Association for Travel Behaviour Research (IATBR)*. Jaipur, India, 2009.
171. Illenberger, J., G. Flötteröd, M. Kowald, and K. Nagel. A model for spatially embedded social networks. In *12th Conference of the International Association for Travel Behaviour Research (IATBR)*. Jaipur, India, 2009.

172. Rieser, M. and K. Nagel. Combined agent-based simulation of private car traffic and transit. In *12th Conference of the International Association for Travel Behaviour Research (IATBR)*. Jaipur, India, 2009.
173. Balmer, M., K. Meister, M. Rieser, K. Nagel, and K. Axhausen. Agent-based simulation of travel demand: Structure and computational performance of MATSim-T. In *Innovations in Travel Modeling (ITM) '08*. Portland, Oregon, 2008.
174. Rieser, M., U. Beuck, M. Balmer, and K. Nagel. Modelling and simulation of a morning reaction to an evening toll. In *Innovations in Travel Modeling (ITM) '08*. Portland, Oregon, 2008.
175. Rieser, M., U. Beuck, and K. Nagel. Researching the influence of time-dependent tolls with a multi-agent traffic simulation. In *European Transport Conference (ETC)*. Leiden, NL, 2007.
176. Meister, K., M. Balmer, K. Axhausen, and K. Nagel. planomat: A comprehensive scheduler for a large-scale multi-agent transportation simulation. In *11th Conference on Travel Behavior Research (IATBR)*. Kyoto, Japan, 2006.
177. Waddell, P., H. Ševčíková, D. Socha, E. Miller, and K. Nagel. OPUS: An open platform for urban simulation. In *9th Conference on Computers in Urban planning and urban management (CUPUM)*, 428. University College London, UK, 2005. See <http://128.40.111.250/cupum/searchpapers/detail.asp?pID=428>.
178. Vogel, A. and K. Nagel. Multi-agent based simulation of individual traffic in Berlin. In *9th Conference on Computers in Urban planning and urban management (CUPUM)*, 179. University College London, UK, 2005. See <http://128.40.111.250/cupum/searchpapers/detail.asp?pID=179>.
179. Gloor, C., P. Stucki, and K. Nagel. Hybrid techniques for pedestrian simulations. In *Swiss Transport Research Conference (STRC)*. Monte Verita, Switzerland, 2004. See <http://www.strc.ch>.
180. Cetin, N. and K. Nagel. Large scale transportation simulations on Beowulf clusters. In *Swiss Transport Research Conference (STRC)*. Monte Verita, Switzerland, 2001. See <http://www.strc.ch>.

Other

181. Planco, ITP, and TUBS. Grundsätzliche Überprüfung und Weiterentwicklung der Nutzen-Kosten-Analyse im Bewertungsverfahren der Bundesverkehrswegeplanung. Endbericht FE Projekt Nr. 960974/2011, Planco GmbH, Intraplan Consult GmbH, TU Berlin Service GmbH, 2015. Im Auftrag des BMVI. Auch VSP WP 14-12, see.
182. TNS Infratest and IVT ETH Zürich. Ermittlung von Bewertungsansätzen für Reisezeiten und Zuverlässigkeit auf der Basis eines Modells für modale Verlagerungen im nicht-gewerblichen und gewerblichen Personenverkehr für die Bundesverkehrswegeplanung. Endbericht für Forschungsprojekt FE-Nr. 96.996/2011, BMVI, 2014. TNS Infratest GmbH München, Institut für Verkehrsplanung und Transportsysteme IVT ETH Zürich. Auch VSP WP 14-25, siehe.
183. Röder, D., I. Cabrita, and K. Nagel. Simulation-based sketch planning, part III: Calibration of a MATSim-model for the greater Brussels area and investigation of a cordon pricing for the highway ring. VSP working paper 13-16, TU Berlin, Berlin, Germany, 2013. See.
184. Nagel, K. Towards simulation-based sketch planning, part II: Some results concerning a freeway extension in Berlin. VSP Working Paper 11-18, TU Berlin, Transport Systems Planning and Transport Telematics, 2011. See.
185. Nagel, K., M. Winter, T. Beckers, W. Röhling, G. Liedtke, and A. Scholz. Analyse der verkehrsprognostischen Instrumente der Bundesverkehrswegeplanung. Final report for research project FE-Nr. 96.029-2009, BMVBS, 2010.
186. Neumann, A. and K. Nagel. Avoiding bus bunching phenomena from spreading: A dynamic approach using a multi-agent simulation framework. VSP Working Paper 10-08, TU Berlin, Transport Systems Planning and Transport Telematics, 2010. See.
187. Nagel, K. Towards simulation-based sketch planning: Some results concerning the Alaskan Way viaduct in Seattle WA. VSP Working Paper 08-22, TU Berlin, Transport Systems Planning and Transport Telematics, 2008. See.

188. Chen, Y., M. Rieser, D. Grether, and K. Nagel. Improving a large-scale agent-based simulation scenario. VSP Working Paper 08-15, TU Berlin, Transport Systems Planning and Transport Telematics, 2008. See.
189. Beuck, U., M. Rieser, and K. Nagel. Multi-agent simulation used in a real world scenario on environmentally-oriented road pricing schemes. In *53rd Annual North American Meeting of the Regional Science Association International*. 2006.
190. Nagel, K. *High-speed microsimulations of traffic flow*. Ph.D. thesis, University of Cologne, 1995.
191. Nagel, K. *Computersimulationen mit Zellularautomaten für Wolkenbildung (Computer simulations with cellular automata for cloud formation)*. Master's thesis, University of Cologne, Köln, Germany, 1991.
192. Nagel, K. *Une Paramétrisation du frottement des ondes de gravité dans le modèle de circulation générale du LMD (A parametrization of the gravity wave drag in the general circulation model of the LMD)*. Master's thesis, University Paris 6, Paris, France, 1989.