

## **Associate Professor of Travel Behavior**

Department of Mobility Systems Engineering  
Core member of the Munich Data Science Institute  
Technical University of Munich (TUM)  
Arcisstr. 21, 80333 Munich, Germany

Email: rolf.moeckel@tum.de  
Web: [www.mos.ed.tum.de/en/tb](http://www.mos.ed.tum.de/en/tb)  
Phone: +49 (0)89 289 22699

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## **Academic Experience**

since Sept. 2021

*Associate Professor* (tenured), Professor of Travel Behavior, Technical University of Munich

Sept. 2015 - Aug. 2021

*Rudolf Mößbauer Assistant Professorship* (Tenure Track), Institute of Advanced Study, Technical University of Munich

Aug. 2013 - Aug. 2015

*Post-Doctoral Researcher*, National Center for Smart Growth, University of Maryland, USA

July 2002 - Sept. 2006

*Doctorate (Dr.-Ing.)*, Institute of Spatial Planning, University of Dortmund, Germany, awarded with the 2007 University Dissertation Prize

Oct. 1996 - Aug. 2000 and Aug. 2001 - June 2002

*Diploma (Dipl.-Ing.)*, Department of Spatial Planning, University of Dortmund, Germany, Grade: 1.1 (1.0 = very good, 5.0 = failed)

Sept. 2000 - July 2001

*Fulbright Scholar* (Visiting Graduate Student), University of Washington, Seattle, USA, Cum. GPA 3.79 out of 4.00

## Doctorate

Time	July 2002 – Sept. 2006
Defense	6 Sept. 2006
Institution	University of Dortmund, Institute of Spatial Planning
Thesis title	Business Location Decisions and Urban Sprawl. A Microsimulation of Business Relocation and Firmography
Advisers	Dr. Michael Wegener, Univ. of Dortmund Dr. Paul Waddell, Univ. of Washington (now Univ. of California at Berkeley)
Award	2007 University Dissertation Prize

## Professional Experience

Aug. 2013 - Aug. 2015

*Faculty Research Associate*, National Center for Smart Growth Research & Education, University of Maryland, USA

Feb. 2007 - July 2013

*Principal Professional Associate*, Parsons Brinckerhoff, New York & Albuquerque, USA

June 2002 - Dec. 2004

*Research Associate*, University of Dortmund, Institute of Spatial Planning

Sept. 2000 - July 2001

*Student Research Assistant* (Fulbright Scholarship), University of Washington, Seattle, Urban Ecology Lab

## Scholarships and Awards

Best Research Presentation Award: Gold Prize by the 7th International Conference on Integrated Land use and Transport Modeling for the paper “Integrated land use/transport modeling to explore the impact of more radical policy scenarios on transport-related greenhouse gas emissions” by Rolf Moeckel, Carlos Llorca, Catherine Silva, Ana Moreno and Masanobu Kii

Honorable mention for student led paper at WSTLUR 2021 for the paper “Traffic Noise Feedback in Agent-Based Integrated Land-Use/Transport Models” by Nico Kuehnel, Dominik Ziemke, Rolf Moeckel

Harter Rupert Best Paper Award 2021 by the TRB Committee AEP80 for the paper “Agent-Based Simulation of City-Wide Autonomous Ride-Pooling and the Impact on Traffic Noise”, published in Transportation Research Part D

Teaching Award “Doce et Delecta 2019” of the student council of the Department of Civil, Geo and Environmental Engineering at the Technical University of Munich: 1st Prize for the class Research Design: How to tackle a Master’s Thesis

Teaching Award “Doce et Delecta 2019” of the student council of the Department of Civil, Geo and Environmental Engineering at the Technical University of Munich: 3rd Prize for the class Spatial Modeling: Tools to evaluate planning strategies

Scholarship to participate at the Chan Wui & Yunyin Rising Star Workshop, taking place on the Queen Mary 2 on a transatlantic crossing, July 6-13, 2016

Doctoral dissertation prize of the University of Dortmund, 2007, top thesis in Spatial Planning

WCTRS Certificate of Honorable Mention 2007: 2nd best paper of young authors under 35 at the 11th World Conference on Transport Research in Berkeley, CA, June 24 - 28, 2007

CUPUM '05 Prize Paper, Best Paper Award at the 9th International Conference on Computers in Urban Planning and Urban Management in London, June 29 - July 1, 2005

Scholarship of the Westphalia Foundation (Germany) for participation at a Ph.D. Summer School in Aalborg, Denmark, August 21 - 28, 2004

Fulbright Fellowship for study at the University of Washington, Seattle, Sept. 2000 - July 2001

## Publications

The following list provides references of 49 peer-reviewed journal articles, 17 peer-reviewed articles in Research Procedia journals, 1 book review article, 2 books, 4 book chapters, 3 peer-reviewed reports and 59 conference papers that were co-authored by Rolf Moeckel.

### Peer-reviewed journal articles

1. Kuehnel, Nico; Zhang, Qin; Staves, Corin; Moeckel, Rolf (2023) The perfect match? Assessment of excess commute and transport externalities using an agent-based transport model. *International Journal of Sustainable Transportation*. <https://doi.org/10.1080/15568318.2023.2181116>
2. Zhang, Qin; Moeckel, Rolf; Clifton, Kelly (2022) Assessing pedestrian impacts of future land use and transportation scenarios. *Journal of Transport and Land Use* 15(1): 547-566. <https://doi.org/10.5198/jtlu.2022.2117>
3. Silva, Cat; Moeckel, Rolf; Clifton, Kelly (2022) Comparative Observational Assessment of Cyclists' Interactions on Urban Streets with On-Street and Sidewalk Bike Lanes. *Transportation Research Record: Journal of the Transportation Research Board*. <https://doi.org/10.1177/03611981221118539>
4. Ziemke, Dominik; Kuehnel, Nico; Llorca, Carlos; Moeckel, Rolf; Nagel, Kai (2022) FABI-LUT: The Flexible Agent-Based Integrated Land Use/Transport Model. *Journal of Transport and Land Use* 15(1): 497-526. <https://doi.org/10.5198/jtlu.2022.2126>
5. Llorca, Carlos; Moreno, Ana; Ammar, Ghassan; Moeckel, Rolf: (2022) Impact of autonomous vehicles on household relocation: An agent-based simulation. *Cities* 126, Article 103692. <https://doi.org/10.1016/j.cities.2022.103692>
6. Pukhova, Alona; Llorca, Carlos; Moreno, Ana; Staves, Corin; Zhang, Qin; Moeckel, Rolf (2021) Flying taxis revived: Can Urban air mobility reduce road congestion? *Journal of Urban Mobility*, 1, Article 100002. <https://doi.org/10.1016/j.urbmob.2021.100002>
7. Mahajan, Vishal; Kuehnel, Nico; Intzevidou, Aikaterini; Cantelmo, Guido; Moeckel, Rolf; Antoniou, Constantinos (2021) Data to the people: a review of public and proprietary data for transport models. *Transport Reviews*. DOI: 10.1080/01441647.2021.1977414
8. Pukhova, Alona; Moreno, Ana Tsui; Llorca, Carlos; Huang, Wei-Chieh; Moeckel, Rolf (2021) Agent-based simulation of long-distance travel: Strategies to reduce CO<sub>2</sub> emis-

- sions from passenger aviation. *Journal of Urban Planning* 6 (2). <https://doi.org/10.17645/up.v6i2.4021>
9. Llorca, Carlos; Moeckel, Rolf (2021) Assessment of the potential of cargo bikes and electrification for last-mile parcel delivery by means of simulation of urban freight flows. *European Transport Research Review* 13, Article number: 33. <https://doi.org/10.1186/s12544-021-00491-5>
  10. Kuehnel, Nico; Moeckel, Rolf (2021) Traffic noise feedback in agent-based Integrated Land-Use/Transport Models. *Journal of Transport and Land Use*. 14(1): 325–344. <https://doi.org/10.5198/jtlu.2021.1852>
  11. Faroqi, Hamed; Moeckel, Rolf; Mesbah, Mahmoud (2021) Temporal Distribution of Sociodemographic Characteristics at Transit Stops. *Transportation Planning and Technology*. <https://doi.org/10.1080/03081060.2020.1868087>
  12. Kii, Masanobu; Goda, Yuki; Vichiensan, Varameth; Miyazaki, Hiroyuki; Moeckel, Rolf (2021) Assessment of Spatiotemporal Peak Shift of Intra-Urban Transportation Taking a Case in Bangkok, Thailand. *Sustainability* 13(12), Article 6777. <https://doi.org/10.3390/su13126777>
  13. Kii, Masanobu; Vichiensan, Varameth; Llorca, Carlos; Moreno, Ana; Moeckel, Rolf; Hayashi, Yoshitsugu (2021) Impact of Decentralization and Rail Network Extension on Future Traffic in the Bangkok Metropolitan Region. *Sustainability* 13(23), Article 13196. <https://doi.org/10.3390/su132313196>
  14. Zwick, Felix; Kuehnel, Nico; Moeckel, Rolf; Axhausen, Kay (2021) Agent-Based Simulation of City-Wide Autonomous Ride-Pooling and the Impact on Traffic Noise. *Transportation Research Part D* 90, 102673. <https://doi.org/10.1016/j.trd.2020.102673>. Original TRB Paper was awarded the **Harter Rupert Award**.
  15. Llorca, Carlos; Silva, Catherine; Kuehnel, Nico; Moreno, Ana; Zhang, Qin; Kii, Masanobu; Moeckel, Rolf (2020) Integration of land use and transport to reach Sustainable Development Goals: Will radical scenarios actually get us there? *Sustainability* 12(23), 9795. <https://doi.org/10.3390/su12239795>.
  16. Kuehnel, Nico; Ziemke, Dominik; Moeckel, Rolf; Nagel, Kai (2020) The End of Travel Time Matrices: Individual Travel Times in Integrated Land Use/Transport Models. *Journal of Transport Geography* 88, 102862. <https://doi.org/10.1016/j.jtrangeo.2020.102862>
  17. Zhang, Shihang; Moeckel, Rolf; Moreno, Ana Tsui; Shuai, Bin; Gao, Jie (2020) A work-life conflict perspective on telework. *Transportation Research Part A* 141: 51-68. <https://doi.org/10.1016/j.tra.2020.09.007>
  18. Usman, Ahmed; Moreno, Ana; Moeckel, Rolf (2020) Microscopic activity chain generation: A Multiple correspondence analysis to explain travel behavior based on socio-demographic person attributes. *Transportation*. <https://doi.org/10.1007/s11116-020-10103-1>
  19. Kuehnel, Nico; Moeckel, Rolf (2020) Impact of simulation-based traffic noise on rent prices. *Transportation Research Part D: Transport and Environment* 78, 102191. <https://doi.org/10.1016/j.trd.2019.11.020>
  20. Ploetner, Kay; Rothfeld, Raoul; Shamiyeh, Michael; Kabel, Stefanie; Frank, F.; Straubinger, Anna; Llorca, Carlos; Fu, Mengying; Moreno, Ana; Pukhova, Alona; Zhang, Qin; Al Haddad, Christelle; Wagner, Harry; Antoniou, Costantinos; Moeckel, Rolf (2020) Long-

- term Application Potential of Urban Air Mobility Complementing Public Transport: An Upper Bavaria Example. *CEAS Aeronautical Journal: An Official Journal of the Council of European Aerospace Societies*. <https://doi.org/10.1007/s13272-020-00468-5>
21. Silva, Catherine; Moeckel, Rolf; Clifton, Kelly (2020) Proof of Concept for a Grounded Theory Approach to Understanding Interactions Occurring on Bicycle Facilities. *Transport Research Record*. <https://doi.org/10.1177/0361198120943588>
  22. Moeckel, Rolf; Kuehnel, Nico; Llorca, Carlos; Moreno, Ana Tsui; Rayaprolu, Hema (2020) Agent-based Simulation to Improve Policy Sensitivity of Trip-Based Models. *Journal of Advanced Transportation*. <https://doi.org/10.1155/2020/1902162>
  23. Knaap, Gerrit; Engelberg, Dan; Avin, Uri; Erdogan, Sevgi; Finio, Nick; Ducca, Fred; Moeckel, Rolf; Clagget, Peter; Shahumyan, Harutyun (2020) Modeling Sustainability Scenarios in the Baltimore – Washington Region: Implications for Methodology and Policy. *Journal of the American Planning Association* 86(2): 250-263. <https://doi.org/10.1080/01944363.2019.1680311>
  24. Zhang, Qin; Clifton, Kelly; Moeckel, Rolf; Orrenge-Oñate, Jaime (2019) Household Trip Generation and the Built Environment: Does More Density Mean More Trips? *Transportation Research Record* 2673(5): 596–606. <https://doi.org/10.1177/0361198119841854>
  25. Creutzig, Felix; Franzen, Martina; Moeckel, Rolf; Heinrichs, Dirk; Nagel, Kai; Nieland, Simon; Weisz, Helga (2019) Leveraging digitalization for sustainability in urban transport. *Global Sustainability* 2: E14. <https://doi.org/10.1017/sus.2019.11>
  26. Kii, Masanobu; Moeckel, Rolf; Thill, Jean-Claude (2019) Land use, transport, and environment interactions: WCTR 2016 contributions and future research directions. *Computers, Environment and Urban Systems* 77: 101335. <https://doi.org/10.1016/j.compenvurbsys.2019.04.002>
  27. Cui, Yuchen; Moeckel, Rolf (2019) Defining the resolution of a network for transportation analyses: A new methodology and algorithm. *Environment & Planning Part B*. First Published Online: March 8, 2019. <https://doi.org/10.1177/2399808319834309>
  28. Moeckel, Rolf; Llorca Garcia, Carlos; Moreno, Ana Tsui; Okrah, Matthew Bediako (2018) Trends in integrated land use/transport modeling: An evaluation of the state of the art. *The Journal of Transport and Land Use* 11(1): 463–476. <http://dx.doi.org/10.5198/jtlu.2018.1205>
  29. Rayaprolu, Hema; Llorca Garcia, Carlos; Moeckel, Rolf (2018) Impact of bicycle highways on commuter mode choice: A scenario analysis. *Environment & Planning B* 47(4): 662-677. <https://doi.org/10.1177/2399808318797334>
  30. Llorca Garcia, Carlos; Molloy, Joseph; Ji, Joanna; Moeckel, Rolf (2018) Estimation of a Long-Distance Travel Demand Model using Trip Surveys, Location-Based Big Data, and Trip Planning Services. *Transportation Research Record* 2672(47): 103-113. <https://doi.org/10.1177/0361198118777064>
  31. Llorca, Carlos; Ji, Joanna; Molloy, Joseph; Moeckel, Rolf (2018) The usage of location based big data and trip planning services for the estimation of a long-distance travel demand model. Predicting the impacts of a new high speed rail corridor. *Research in Transportation Economics* 72: 27-36. <https://doi.org/10.1016/j.retrec.2018.06.004>
  32. Moreno, Ana; Moeckel, Rolf (2018) Population Synthesis Handling Three Geographical

- Resolutions. *International Journal of Geo-Information* 7(5): 174. <https://doi.org/10.3390/ijgi7050174>
33. Moreno, Ana; Michalski, Andrzej; Llorca, Carlos; Moeckel, Rolf (2018) Shared Autonomous Vehicles Effect on Vehicle-Km Traveled and Average Trip Duration. *Journal of Advanced Transportation* 2018: 8969353. <https://doi.org/10.1155/2018/8969353>
  34. Molloy, Joseph; Moeckel, Rolf (2017) Improving Destination Choice Modeling Using Location-Based Big Data. *International Journal of Geo-Information* 6(9): 291. <https://doi.org/10.3390/ijgi6090291>
  35. Molloy, Joe; Moeckel, Rolf (2017) Automated Design of Gradual Zone Systems. An iterative algorithm to design optimally sized spatial zones suitable for spatial modeling, while respecting municipal boundaries. *Open Geospatial Data, Software and Standards* 2:19. <https://doi.org/10.1186/s40965-017-0032-5>
  36. Shahumyan, Harutyun; Moeckel, Rolf (2017) Integration of land use, land cover, transportation, and environmental impact models: Expanding scenario analysis with multiple modules. *Environment and Planning B: Urban Analytics and City Science*. 44(3): 531-552. <https://doi.org/10.1177/0265813516647062>
  37. Moeckel, Rolf; Lewis, Rebecca (2017) Two decades of smart growth in Maryland (U.S.A): impact assessment and future directions of a national leader. *Urban, Planning and Transport Research* 5(1): 22-37. 10.1080/21650020.2017.1304240
  38. Moeckel, Rolf (2017) Modeling the Impact of Communications Technologies on Travel Behavior and Land Use. *Transportation Research Record* 2658(1): 8-16. <https://doi.org/10.3141/2658-02>
  39. Moeckel, Rolf; Huntsinger, Leta; Donnelly, Rick (2017) From Macro to Microscopic Trip Generation: Representing Heterogeneous Travel Behavior. *The Open Transportation Journal* 11: 31-43. <http://dx.doi.org/10.2174/1874447801711010031>
  40. Moeckel, Rolf (2016) Constraints in household relocation: Modeling land-use/transport interactions that respect time and monetary budgets. *The Journal of Transport and Land Use* 10(2): 1-18. <https://doi.org/10.5198/jtlu.2015.810>
  41. Moeckel, Rolf; Donnelly, Rick (2016) A model for national freight flows, distribution centers, empty trucks and urban truck movements. *Transportation Planning and Technology* 39(7): 693-711. <https://doi.org/10.1080/03081060.2016.1204091>
  42. Moeckel, Rolf; Yang, Di (2016) Car ownership and the impact of built environment, demographics and transport systems. *Journal of Civil Engineering and Architecture* 10(5): 587-595. DOI 10.17265/1934-7359/2016.05.008
  43. Dawkins, Casey; Moeckel, Rolf (2016) Transit-Induced Gentrification: Who Will Stay, and Who Will Go? *Housing Policy Debate* 26(4-5): 801-818. <https://doi.org/10.1080/10511482.2016.1138986>
  44. Moeckel, Rolf; Donnelly, Rick (2015) Gradual rasterization: redefining spatial resolution in transport modeling. *Environment and Planning B: Planning and Design* 42(5): 888-903. <https://doi.org/10.1068/b130199p>
  45. Moeckel, Rolf; Mishra, Sabyasachee; Ducca, Fred; Weidner, Tara (2015) Modeling complex Megaregion systems: Horizontal and Vertical Integration for a Megaregion Model. *International Journal of Transportation* 3(1): 69-90. <http://dx.doi.org/10.1080/1080/10511482.2016.1138986>

14257/ijt.2015.3.1.06

46. Moeckel, Rolf; Fussel, Rhett; Donnelly, Rick (2015) Mode choice modeling for long-distance travel. *Transportation Letters. The International Journal of Transportation Research* 7(1): 35-46. <https://doi.org/10.1179/1942787514Y.0000000031>
47. Mishra, Sabyasachee; Iseki, Hiroyuki; Moeckel, Rolf (2014) Multi entity perspective freight demand modeling technique: Varying objectives and outcomes. *Transport Policy* 35: 176-185. <https://doi.org/10.1016/j.tranpol.2014.05.002>
48. Moeckel, Rolf (2009) Simulation of firms as a planning support system to limit urban sprawl of jobs. *Environment and Planning B: Planning and Design* 36(5): 883-905. <https://doi.org/10.1068/b34110>
49. Moeckel, Rolf; Schürmann, Carsten; Spiekermann, Klaus; Wegener, Michael (2003) Microsimulation of Land Use. *International Journal of Urban Sciences, Journal on Asian-Pacific Urban Studies and Affairs* 7(1): 14-31. <https://doi.org/10.1080/12265934.2003.9693520>

### Peer-reviewed Research Procedia articles

1. Zwick, Felix; Kuehnel, Nico; Moeckel, Rolf, Axhausen. Kay W. (2021) Ride-Pooling Efficiency in Large, Medium-Sized and Small Towns -Simulation Assessment in the Munich Metropolitan Region. *Computer Research Procedia* 184: 662-667. <https://doi.org/10.1016/j.procs.2021.03.083>
2. Kuehnel, Nico; Huang, Wei-Chieh; Moeckel, Rolf (2021) Environmental Equity Analysis in Agent-Based Transport Simulations: A Study on Causation and Exposure. *Computer Research Procedia* 184: 650-655. <https://doi.org/10.1016/j.procs.2021.03.081>
3. Bhaduri, Eeshan; Goswami, Arkopal; Moeckel, Rolf (2020) How sustainable is the growth of mass transit system in developing countries – an Indian perspective. *Transport Research Procedia* 48: 2706-2724. <https://doi.org/10.1016/j.trpro.2020.08.244>
4. Moeckel, Rolf; Heilig, Michael; Hilgert, Tim; Kagerbauer, Martin (2020) Benefits of Integrating Microscopic Land Use and Travel Demand Models: Location Choice, Time Use & Stability of Travel Behavior. *Transport Research Procedia* 48: 1956-1967. <https://doi.org/10.1016/j.trpro.2020.08.226>
5. Llorca, Carlos; Kuehnel, Nico; Moeckel, Rolf (2020) Agent-based integrated land use/transport models: a study on scale factors and transport model simulation intervals. *Procedia Computer Science* 170: 733-738. <https://doi.org/10.1016/j.procs.2020.03.163>
6. Silva, Catherine; Clifton, Kelly; Moeckel, Rolf (2019) Observational method and coding framework for analyzing the functionality of unprotected bicycle lanes. *Transport Research Procedia* 41: 559-571. <https://doi.org/10.1016/j.trpro.2019.09.100>
7. Seyedabrishami, Seyedehsan; Izadi, Arash Rasa; Rayaprolu, Hema Sharanya; Moeckel, Rolf (2019) Car ownership: A joint model for number of cars and fuel types. *Transportation Research Procedia* 41: 572-576. <https://doi.org/10.1016/j.trpro.2019.09.101>

8. Zhang, Qin; Clifton, Kelly; Moeckel, Rolf (2019) Investigate an Appropriate Spatial Resolution for Large-scaled Pedestrian Travel Demand Model. *Transportation Research Procedia* 41: 324-327. <https://doi.org/10.1016/j.trpro.2019.09.053>
9. Fadhil, Dimas Numan; Moeckel, Rolf; Rothfeld, Raoul (2019) GIS-based Infrastructure Requirement Analysis for an Electric Vertical Take-off and Landing Vehicle-based Transportation System. *Transportation Research Procedia* 41: 101-103. <https://doi.org/10.1016/j.trpro.2019.09.020>
10. Llorca, Carlos; Moeckel, Rolf (2019) Effects of scaling down the population for agent-based traffic simulations. *Procedia Computer Science* 151: 782-787. <https://doi.org/10.1016/j.procs.2019.04.106>
11. Llorca, Carlos; Moreno, Ana Tsui; Moeckel, Rolf (2019) A tool for long-term predictions of road safety based on travel demand modeling and network characteristics. *Transportation Research Procedia* 41: 414-425. <https://doi.org/10.1016/j.trpro.2019.09.069>
12. Llorca, Carlos; Winkler, Christian; Mocanu, Tudor; Moeckel, Rolf (2019) Long-distance and daily travel demand: integration of various travel markets and modelling approaches. *Procedia Computer Science* 151: 788-793. <https://doi.org/10.1016/j.procs.2019.04.107>
13. Kuehnel, Nico; Kaddoura, Ihab; Moeckel, Rolf (2019) Noise Shielding in an Agent-Based Transport Model Using Volunteered Geographic Data. *Procedia Computer Science* 151: 808-813. <https://doi.org/10.1016/j.procs.2019.04.110>
14. Llorca, Carlos; Amini, Sasan; Moreno, Ana Tsui; Moeckel, Rolf (2019) Validation of an agent-based travel demand model with floating car data. *Transport Research Procedia* 37: 242-249. <https://doi.org/10.1016/j.trpro.2018.12.189>
15. Moeckel, Rolf (2017) Working from Home: Modeling the Impact of Telework on Transportation and Land Use. *Transportation Research Procedia* 26: 207-214. <https://doi.org/10.1016/j.trpro.2017.07.021>
16. Moeckel, Rolf; Nagel, Kai (2016) Maintaining Mobility in Substantial Urban Growth Futures. *Transportation Research Procedia* 19: 70-80. <https://doi.org/10.1016/j.trpro.2016.12.069>
17. Ziemke, Dominik; Nagel, Kai; Moeckel, Rolf (2016) Towards an Agent-based, Integrated Land-use Transport Modeling System. *Procedia Computer Science* 83: 958-963. <https://doi.org/10.1016/j.procs.2016.04.192>

### **Book review articles**

1. Moeckel, Rolf (2005): Book review of "Terra Incognita. Vacant Land and Urban Strategies. By Ann O'M. Bowman and Michael A. Pagano. Washington, D.C.: Georgetown University Press, 2004." Published in *Regional & Federal Studies* 15(3): 410-411. <https://doi.org/10.1080/13597560500233338>

### **Book publications**

1. Moeckel, Rolf (2007) Business Location Decisions and Urban Sprawl. A Microsimulation of Business Relocation and Firmography. Blue Series Volume 126. Dortmund:



Institut für Raumplanung. ISBN 978-3-88211-160-6

2. Moeckel, Rolf; Osterhage, Frank (2003) Stadt-Umland-Wanderung und Finanzkrise der Städte. Ein Modell zur Simulation der Wohnstandortwahl und der fiskalischen Auswirkungen. Blue Series Volume 115. Dortmund: Institut für Raumplanung. ISBN 3-88211-144-5

### **Peer-reviewed book chapters**

1. Moeckel, Rolf (2013) Firm location choice vs. employment location choice in microscopic simulation models. In: Pagliara, Francesca; de Bok, Michiel; Simmonds, David; Wilson, Alan (Eds.): Employment location in cities and regions: models and applications. Advances in Spatial Science Series. Springer. ISBN 978-3-642-31779-8. Pages 223-242.
2. Moeckel, Rolf; Osterhage, Frank (2007) Stadt-Umland-Wanderung und Finanzkrise der Städte: Haushaltssanierung durch Einwohnerwettbewerb? In: Dieterich, Hartmut; Löhr, Dirk; Tomerius, Stephan (Eds.): Jahrbuch für Bodenpolitik 2006/2007. Flächenneuinanspruchnahme, demographische Entwicklung und kommunale Finanzen: Auswege aus der Leerkostenfalle? Berlin: Verlag für Wissenschaft und Forschung. ISBN 978-3-89700-445-0. Pages 79-98.
3. Strauch, Dirk; Moeckel, Rolf; Wegener, Michael; Gräfe, Jürgen; Mühlhans, Heike; Rindsfuser, Guido; Beckmann, Klaus (2005) Linking Transport and Land Use Planning: The Microscopic Dynamic Simulation Model ILUMASS. In: Atkinson, Peter; Foody, Giles M.; Darby, Steven E.; Wu, Fulong (Eds.) GeoDynamics. Boca Raton: CRC Press. ISBN 0-8493-2837-3. Pages 295-311.
4. Moeckel, Rolf; Schwarze, Björn; Spiekermann, Klaus; Wegener, Michael (2004) GIS und Stadtsimulationsmodelle. Vorbereitung, Modellierung und Nachbereitung von räumlichen Daten in der Stadtsimulation. In: Strobel, Josef; Blaschke, Thomas; Griesebner, Gerald (Eds.): Angewandte Geoinformatik 2004. Beiträge zum 16. AGIT-Symposium Salzburg. Heidelberg: H. Wichmann Verlag. ISBN: 3-87907-406-2. Pages 462-467.

### **Peer-reviewed reports**

1. Moeckel, Rolf (2018) Integrated Transportation and Land Use Models. National Cooperative Highway Research Program Synthesis Synthesis Report 520. Washington: Transportation Research Board. <https://doi.org/10.17226/25194>
2. Donnelly, Rick; Moeckel, Rolf (2017) Statewide and Megaregional Travel Forecasting Models: Freight and Passenger. National Cooperative Highway Research Program Synthesis Synthesis 514. Washington: Transportation Research Board. <https://doi.org/10.17226/24927>
3. Donnelly, Rick; Erhardt, Greg; Moeckel, Rolf; Davidson, William (2010) Advanced Practices in Travel Forecasting. National Cooperative Highway Research Program Synthesis 406. Washington: Transportation Research Board. <https://doi.org/10.17226/22950>

## Other publications

1. Zwick, Felix; Kuehnel, Nico; Moeckel, Rolf; Axhausen, Kay (2021) Agent-Based Simulation of City-Wide Autonomous Ride-Pooling and the Impact on Traffic Noise. 100<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C. Paper was awarded the **Harter Rupert Award by the TRB Committee AEP80**.
2. Kuehnel, Nico; Ziemke, Dominik; Moeckel, Rolf; Nagel, Kai (2020) The End of Travel Time Matrices? Or: Why We Should Use Individual Travel Times. 99<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
3. Llorca, Carlos; Moeckel, Rolf (2020) Cargo bikes for last-mile delivery services: impacts on traffic congestion and emissions. 99<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
4. Kuehnel, Nico; Moeckel, Rolf (2019) Environmental aspects in integrated land use/transportation models: the impact of traffic noise on rent prices. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
5. Moeckel, Rolf; Donnelly, Rick (2019) Statewide Transportation Models in the US: A Review of the State of Practice. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
6. Llorca, Carlos; Moreno, Ana Tsui; Moeckel, Rolf (2019) Synthetizing Visitors for Activity-Based Models. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
7. Zhang, Shihang; Moreno, Ana Tsui; Gao, Jie; Moeckel, Rolf; Shuai, Bin (2019) Temporal Dynamics of Telework Option and Choice: A Longitudinal Study. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
8. Zhang, Qin; Clifton, Kelly; Moeckel, Rolf (2019) Incorporate Pedestrian Modeling with a Microscopic Integrated Land Use and Transport Model for an Urban Region. mobil.TUM - International Scientific Conference on Mobility and Transport. Munich, Germany.
9. Moeckel, Rolf; Kuehnel, Nico; Llorca, Carlos; Moreno, Ana Tsui; Rayaprolu, Hema (2019) Microscopic Travel Demand Modeling: Using the Agility of Agent-Based Modeling Without the Complexity of Activity-Based Models. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
10. Moeckel, Rolf; Donnelly, Rick; Ji, Joanna (2019) Statewide Transportation Models in the U.S.: A Review of the State of Practice. 98<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
11. Pukhova, Alona; Llorca, Carlos; Moreno, Ana Tsui; Zhang, Qin; Moeckel, Rolf (2019) Urban air mobility: another disruptive technology or just an insignificant addition? European Transport Conference. Dublin, Ireland.
12. Moreno, Ana Tsui; Llorca, Carlos; Moeckel, Rolf; Antoniou, Constantinos (2019) Modeling Induced Demand by Urban Air Mobility. mobil.Tum - International Scientific Conference on Mobility and Transport. Munich, Germany.
13. Llorca, Carlos; Amini, Sasan; Moreno, Ana Tsui; Moeckel, Rolf (2018) Validation of an agent-based travel demand model with floating car data. Paper presented at 21<sup>st</sup> EURO Working Group on Transportation Meeting, EWGT. Braunschweig, Germany.

14. Llorca, Carlos; Moreno, Ana Tsui; Moeckel, Rolf (2018) Big data para modelos integrados de usos del suelo y transporte. Congreso de Ingeniería del Transporte. Gijón, Spain.
15. Moeckel, Rolf; Moreno, Ana (2018) Integrated Land Use/Transport Models: The Use of Microsimulation to Better Account for Low-Income Households and People with Disabilities. 7<sup>th</sup> Innovations in Travel Modeling Conference. Atlanta, GA.
16. Moreno, Ana T.; Michalski, Andrzej; Llorca, Carlos; Moeckel, Rolf (2018) Autonomous Taxis Effect on Vehicle-Km Traveled and Average Trip Duration in the Greater Munich Metropolitan Area. Paper presented at the 97<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
17. Okrah, Matthew B.; Moreno, Ana T.; Llorca, Carlos; Moeckel, Rolf (2018) Modeling Household Car Ownership Level Changes in an Integrated Land-Use/Transport Model. 97<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
18. Shahumyan, Harutyun; Williams, Brendan; Knaap, Gerrit; Ustaoglu, Eda; Moeckel, Rolf (2017) Coupling Distinct Models to Inform Integrated Urban Development Policy Decisions: International Applications. 13<sup>th</sup> Annual Conference of the European Social Simulation Association. Dublin, Ireland.
19. Llorca, Carlos; Moreno, Ana; Moeckel, Rolf (2017) Effects of Shared Autonomous Vehicles on the Level of Service in the Greater Munich Metropolitan Area. mobil.Tum - International Scientific Conference on Mobility and Transport. Munich, Germany.
20. Moreno, Ana; Moeckel, Rolf (2017) Travel Time Budgets as Constraints for Microscopic Destination Choice Modeling. 96<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, D.C.
21. Molloy, Joe; Moeckel, Rolf (2016) Automated Gradual Zone System. An iterative algorithm to design optimally sized spatial zones suitable for spatial modeling, while respecting municipal boundaries. ESRI Development SUMMIT. Berlin, Germany.
22. Rolf Moeckel (2016) Working from home: Modeling the impact of telework on transportation and land use. European Transport Conference. Barcelona, Spain.
23. Shahumyan, Harutyun; Moeckel, Rolf; Claggett, Peter; Ducca Frederick (2016) Integration of Land Use and Land Cover Models: Linking Two Siblings to Improve Simulation of Location Choice. Sauvage, Sabine; Sánchez-Pérez, José-Miguel; Rizzoli, Andrea (Eds.) 8<sup>th</sup> International Congress on Environmental Modelling and Software. Toulouse, France.
24. Okrah, Matthew Bediako; Wulfhorst, Gebhard; Moeckel, Rolf (2016) Finding the optimal level of spatial resolution for handling non-motorized travel in macroscopic travel demand models. 14<sup>th</sup> World Conference on Transport Research, Shanghai, China.
25. Moreno, Ana Tsui; Moeckel, Rolf (2016) Microscopic Destination Choice: Incorporating Travel Time Budgets as Constraints. 14<sup>th</sup> World Conference on Transport Research, Shanghai, China.
26. Yang, Di; Xiong, Chenfeng; Moeckel, Rolf; Zhang, Lei (2016) Car Ownership Analysis in Maryland: A Latent Class Model Approach. 95<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington D.C.
27. Moeckel, Rolf; Huntsinger, Leta; Donnelly, Rick (2015) Microscopic trip generation: Ad-

- ding fidelity to trip-based travel demand models. 14<sup>th</sup> Conference on Computers in Urban Planning and Urban Management. Cambridge, MA.
28. Shahumyan, Harutyun; Moeckel, Rolf (2015) Integrating Models for Complex Planning Policy Analysis: Challenges and a Solution in Coupling Dissimilar Models. 14<sup>th</sup> Conference on Computers in Urban Planning and Urban Management. Cambridge, MA.
  29. Moeckel, Rolf (2015) Modeling constraints versus modeling utility maximization: Improving policy sensitivity for integrated land-use/transportation models. 94<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington D.C.
  30. Ma, Ting; Ducca, Frederick; Welch, Timothy F; Yoder, Supin L; Moeckel, Rolf (2014) Megaregions – the Economic Ties: A Case Study of the Chesapeake Megaregion. 93<sup>rd</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  31. Moeckel, Rolf; Donnelly, Rick (2014) Gradual Rasterization: Redefining the spatial resolution in transport modeling. 93<sup>rd</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  32. Moeckel, Rolf; Avin, Uri; Welch, Timothy (2014) Even Smarter Growth? Land Use, Transportation and Greenhouse Gas in Maryland. 54<sup>th</sup> Annual Conference of the Association of Collegiate Schools of Planning. Philadelphia, PA.
  33. Moeckel, Rolf; Fussell, Rhett; Donnelly, Rick (2013) Mode Choice Modeling for Long-Distance Travel. 92<sup>nd</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  34. Ducca, Frederick; Weidner, Tara; Moeckel, Rolf; Mishra, Sabyasachee (2013) Exercising Mega-Region Analysis Framework in Chesapeake Bay Area. 92<sup>nd</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  35. Mishra, Sabyasachee; Welch, Timothy; Moeckel, Rolf; Mahapatra, Subrat; Tadayon, Morteza (2013) Development of Maryland Statewide Transportation Model and Its Application in Scenario Planning. 92<sup>nd</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  36. Mishra, Sabyasachee; Iseki, Hiroyuki; Moeckel, Rolf (2013) Multientity Perspective Freight Demand Modeling Technique: Varying Objectives and Outcomes. 92<sup>st</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  37. Mishra, Sabyasachee; Wang, Yanli; Zhu, Xiaoyu; Moeckel, Rolf; Mahapatra, Subrat (2013) Comparison Between Gravity and Destination Choice Models for Trip Distribution in Maryland. 92<sup>nd</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  38. Ducca, Frederick; Moeckel, Rolf; Mishra, Sabyasachee; Weidner, Tara (2012) A Megaregion Approach to Analyzing a High Energy Price Future. 91<sup>st</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
  39. Moeckel, Rolf; Donnelly, Rick (2011) Nationwide estimate of long-distance travel (NELDT). Generating external trips for local travel demand models. Annual Meeting of the Transportation Research Forum. Long Beach, California.
  40. Mishra, Sabyasachee; Iseki, Hiroyuki; Moeckel, Rolf (2011) Multilevel Demand Modeling Techniques for Analyzing Freight Movements in Stochastic Networks and Uncertain Market Conditions. 4<sup>th</sup> National Urban Freight Conference. Long Beach, California.

41. Moeckel, Rolf (2011) Simulating household budgets for housing and transport. 12<sup>th</sup> International Conference on Computers in Urban Planning and Urban Management. Lake Louise, Alberta, Canada.
42. Weidner, Tara; Ducca, Frederick; Moeckel, Rolf; Yoder, Supin (2011) A Framework for Mega-regional Analysis. 12<sup>th</sup> International Conference on Computers in Urban Planning and Urban Management. Lake Louise, Alberta, Canada.
43. Erhardt, Greg; Moeckel, Rolf; Williams, Jon (2010) Moving travel models to the next level. 3<sup>rd</sup> International Conference on Innovations in Travel Modeling of the Transportation Research Board. Tempe, Arizona.
44. Moeckel, Rolf; Wardell, Erin; Weidner, Tara (2010) Creating a Statewide Commodity Flow Forecast from National FAF2 Data. 51<sup>st</sup> Annual Meeting of the Transportation Research Forum. Arlington, Virginia.
45. Moeckel, Rolf; Donnelly, Rick (2009) Simulation of intrazonal traffic flows: The end of lost trips. 11<sup>th</sup> Conference on Computers in Urban Planning and Urban Management. Hong Kong.
46. Bettinardi, Alex; Moeckel, Rolf; Wardell, Erin (2009) Visualization for travel demand model output. 50<sup>th</sup> Annual Transportation Research Forum. Portland, Oregon.
47. Curry, Rick; Moeckel, Rolf (2009) San Diego Regional Truck Model. TRB Workshop on Data and Tools for Linking Goods Movement, Air Quality, and Transportation Infrastructure Decisions. Irvine, California.
48. Moeckel, Rolf; Costinett, Patrick; Weidner, Tara (2008) Interaction of Transportation and Land Use: A Simple Model for Land Use Allocation and Transportation Demand. 87<sup>th</sup> Annual Meeting of the Transportation Research Board. Washington, D.C.
49. Moeckel, Rolf (2007) Simulation of firms to discover planning policies reducing urban sprawl of jobs. 10<sup>th</sup> Conference on Computers in Urban Planning and Urban Management. Foz do Iguacu, Brazil.
50. Moeckel, Rolf; Schwarze, Björn; Spiekermann, Klaus; Wegener, Michael (2007) Microsimulation for integrated urban modelling. 10<sup>th</sup> Conference on Computers in Urban Planning and Urban Management. Foz do Iguacu, Brazil.
51. Moeckel, Rolf; Schwarze, Björn; Spiekermann, Klaus; Wegener, Michael (2007) Simulating interactions between land use, transport and environment. 11<sup>th</sup> World Conference on Transport Research. Berkeley, CA. **(WCTRS Certificate of Honorable Mention 2007).**
52. Moeckel, Rolf; Schwarze, Björn; Wegener, Michael (2006) Das Projekt ILUMASS - Mikrosimulation der räumlichen, demografischen und wirtschaftlichen Entwicklung. Stadt Region Land 81. 53-61.
53. Moeckel, Rolf (2005) Microsimulation of firm location decisions. 9<sup>th</sup> International Conference on Computers in Urban Planning and Urban Management. London, England. **(CUPUM '05 Prize Paper).**
54. Moeckel, Rolf; Wegener, Michael; Schwarze, Björn (2005) Simulating land use change by modeling persons, households and dwellings. 9<sup>th</sup> International Conference on Computers in Urban Planning and Urban Management. London, England.
55. Hill, Alexandra; Moeckel, Rolf (2004) Neues aus dem IRPUD. *Raumplanung* 113: 99.

56. Moeckel, Rolf; Schwarze, Björn; Spiekermann, Klaus; Wegener, Michael (2004) Mikrosimulation verkehrsarmer Siedlungsstrukturen. 5<sup>th</sup> Aachen Colloquium "Mobilität und Stadt". Aachen, Germany.
57. Moeckel, Rolf; Spiekermann, Klaus; Wegener, Michael (2003) Creating a Synthetic Population. 8<sup>th</sup> International Conference on Computers in Urban Planning and Urban Management. Sendai, Japan.
58. Salomon, Ilan; Feitelson, Eran; Cohen, Galit; Moeckel, Rolf; Spiekermann, Klaus; Wegener, Michael (2002) Sustainable Mobility in Cities: Qualitative and Quantitative Analysis. Berichte aus dem Institut für Raumplanung, Volume 56. Dortmund: Institut für Raumplanung.
59. Moeckel, Rolf; Schürmann, Carsten; Wegener, Michael (2002) Microsimulation of Urban Land Use. 42<sup>nd</sup> European Congress of the Regional Science Association. Dortmund, Germany.

## Doctoral Candidates

### Principal Adviser

This table lists doctoral candidates that are or were primarily advised by Rolf Moeckel.

<b>Institution</b>	<b>Candidate</b>	<b>Topic</b>	<b>Supervisor</b>	<b>Graduation</b>
TUM	Mr. Yangqian Cui	TBD	R. Moeckel	ongoing
TUM	Ms Joanna Ji	Representation of social networks in agent-based models	R. Moeckel	ongoing
TUM	Mr. Jared Best	Agent-based traffic microsimulation with learning agents	R. Moeckel	ongoing
TUM	Ms Mengying Fu	Analyzing visions towards sustainable aviation - demand analysis of electric/hybrid regional air transport	R. Moeckel, M. Hornung	ongoing
TUM	Mr. Wei-Chieh Huang	Social Equity in Transportation Planning Evaluated with Modeling	R. Moeckel	ongoing
TUM	Ms Qin Zhang	Incorporate Pedestrian Modelling with a Microscopic Integrated Land Use and Transport Model to Assess Health Benefit	R. Moeckel, K. Clifton	ongoing

<b>Institution</b>	<b>Candidate</b>	<b>Topic</b>	<b>Supervisor</b>	<b>Graduation</b>
TUM	Ms Catherine Silva	Understanding Interactions in the Bicycle Lane: A Grounded Theory-Driven Observational Method for Documenting Behavior and Analyzing Infrastructure Functionality	R. Moeckel, K. Clifton	ongoing
TUM	Dr. Nico Kühnel	Urban Noise Modeling in the context of transport and land use  Graduated with Distinction (“Mit Auszeichnung”)  First employment after graduation: MOIA GmbH	R. Moeckel, K. Axhausen, K. Bogenberger	1 Dec. 2021
Univ. of Maryland	Dr. Yuchen Cui	Defining the Resolution of a Network for Transportation Analyses: a New Method to Improve Transportation Planning Decisions  First employment after graduation: Consulting firm in Chicago	R. Moeckel, M. Howland	18 Feb. 2016

### Other doctoral candidates

This table shows doctoral candidates for whom Rolf Moeckel is or was part of the dissertation committee.

<b>Institution</b>	<b>Candidate</b>	<b>Topic</b>	<b>Primary adviser</b>	<b>Graduation</b>
ETH Zurich	Mr. Lucas Meyer de Freitas	E-bike city	Dr. Kay Axhausen	ongoing
Cambridge Univ.	Mr. Corin Staves	Integrated health and transport modeling	Dr. James Woodcock	ongoing
Karlsruhe Institute of Technology	Mr. Michael Heilig	Automated generation of behavioral models for agent-based travel demand models	Dr. Peter Vortisch	ongoing
EPFL Switzerland	Ms Janody Pougala	An optimization approach for activity-based models	Dr. Michel Bierlaire	ongoing

<b>Institution</b>	<b>Candidate</b>	<b>Topic</b>	<b>Primary adviser</b>	<b>Graduation</b>
TUM	Dr. Michael Wittmann	Predictive allocation strategies for taxi vehicles in Munich (Prädiktiven Flottenstrategien am Beispiel des Münchner Taxigewerbes)	Dr. Markus Lienkamp	23 Sept. 2022
TUM	Dr. Manfred Klöppel	Transport System with Shared Vehicles	Dr. Markus Lienkamp	2 Nov. 2021
Univ. of the Federal Armed Forces	Dr. Dorothee Wittek	Pre-trip Information Systems and Mode Choice Modelling in the Era of On-demand Mobility Services	Dr. Klaus Bogenberger	7 Feb. 2020
TUM	Dr. Johannes Betz	Evaluation of an intelligent fleet disposition for mixed vehicle fleets	Dr. Markus Lienkamp	12 Nov. 2019
Univ. of New South Wales	Dr. Milad Ghasrikhouzani	Disaggregate Behavioural Land Use Modelling: Integration Of Housing Search, Job Search And Households' Dynamics	Dr. Travis Waller	12 Nov. 2019
TUM	Dr. Matthew Okrah	Handling Non-Motorized Trips in Macroscopic Travel Demand Models. Calculating Intrazonal Impedances and Identifying an Appropriate Level of Spatial Resolution	Dr. Gebhard Wulfhorst	27 Jan. 2016

Furthermore, Rolf Moeckel chaired the defense committees (in German: Prüfungsvorsitzender) for the following doctoral candidates:

1. 22 Dec. 2022, Dr. Christelle Al Haddad
2. 16 Dec. 2022, Dr. Elias Pajades
3. 28 Nov. 2022, Dr. Syrus Borja Gomari
4. 18 Jan. 2022, Dr. Junyang Zhang
5. 3 Dec. 2021, Dr. Lisa Kessler
6. 27 Sept. 2021, Dr. David Duran
7. 22 Sept. 2020, Dr. Julia Kinigadner
8. 19 Dec. 2019, Dr. Martin Eger
9. 25 Oct. 2017, Dr. Lena Sterzer
10. 26 Oct. 2017, Dr. Maximilian Steger



11. 29 Nov. 2016, Dr. Benjamin Büttner
12. 27 Sept. 2016, Dr. Franz Xaver Haban
13. 19 Oct. 2016, Dr. Nen Nguyen Dingh
14. 25 Oct. 2016, Dr. Konstantin Geisler

## Post-Doctoral Researchers

The following table shows a list of post-doctoral researchers who worked with Rolf Moeckel at TUM.

Name	Time at TUM	Next position
Dr. Ana Tsui Moreno Chou	since 03/2016	Ongoing
Dr. Carlos Llorca Garcia	11/2016 to 09/2022	Lead modeler at the city of Munich
Dr. Matthew Bediako Okrah	10/2016 to 09/2018	Lead Analyst at TelefonicaNext exploring travel patterns in mobile phone data

## Membership in Academic Societies

- **Since Apr. 2020** Member of the Standing Committee on Transportation Demand Forecasting of the US Transportation Research Board (AEP50)
- **Since Apr. 2020** Member of the Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices of the US Transportation Research Board (AEP35)
- **Since 2015**: Chair of the Special Interest Group SIG F1: "Transport and Spatial Development" of the World Conference in Transport Research Society
- **Apr. 2013 - Apr. 2020**: Special Committee for Travel Forecasting Resources (ADB45) of the US Transportation Research Board (Member Aug. 2013 - Apr. 2016, Co-Chair Apr. 2016 - Apr. 2019, Chair Apr. 2019 - Apr. 2020)

## Third-Party Funding

This table shows research grants that were raised by Rolf Moeckel's research group. The column "Amount" in this table only includes the portion of the budget for this research group, not the budget of possible cooperation partners.

Year	Funding organization	Cooperation	Title	Amount	Duration
2023	TUM Global Funds	Dr. Sivakumar (Imperial College) & Dr. Erhardt (Univ. of Kentucky)	Manifesto for Activity-Based Modelling of Carbon-Neutral Transport and Energy Systems	€ 4,465	5 months
2023	City of Munich	MOIA and dmo	On-demand ride-pooling	€ 49,816	9 months
2022	Munich Data Science Institute	Dr. Maximilian Schiffer (TUM)	Explainable AI to understand the impact of life events on travel behavior change (XAITraB)	€ 23,811	6 months
2022	TUM Institute of Advanced Studies	Dr. Greg Erhardt (Univ. of Kentucky)	Hans Fischer Fellowship	€ 294,002	3 years
2022	TUM Global Incentive Fund	Dr. Greg Erhardt (Univ. of Kentucky)	Activity-based modeling for the Munich Metropolitan Area	€ 9,840	1 year
2021	Federal Ministry of Education and Research		m-Cube Datahub and simulation model	€ 262,847	3 years
2021	Federal Ministry of Education and Research		m-Cube Integrated logistics concepts for sustainable and flexible urban logistics networks	€ 111,589	3 years
2021	MOIA GmbH		Ridepooling demand estimations	€ 16,779	2 months

Year	Funding organization	Cooperation	Title	Amount	Duration
2021	German Research Foundation (DFG)	Dr. C. Kuehn, Dr. M. Schiffer (TUM)	Transport and Epidemic Networks: Graphs, Optimization and Simulation (TEN-GOS)	€ 275,050	3 years
2020	German Research Foundation (DFG)	Dr. Kai Nagel (TU Berlin)	FABILUT: Flexible Agent-Based Integrated Land-Use Transport model	€ 306,761	3 years
2020	MOIA GmbH		Development and application of MATSim ridepooling applications	€ 13,920	2 months
2020	US National Academies of Sciences	University of Florida, among others	Evaluation methods for rural highways, NCHRP 08-135	US\$33,992.58 ≈€ 29,802	2.5 years
2020	Chubu University Educational Corporation, Japan		Support for the implementation of a land use/transport project in Bangkok, Thailand	€ 15,000	1 year
2019	Federal Highway Research Institute (BASt)	Dr. Klaus Bogenberger, Chair of Traffic Engineering and Control (TUM)	Congestion relief of the federal highway system through multimodal passenger transport services	€ 115,465	2 years
2019	TUM International Graduate School of Science and Engineering (IGSSE)	Dr. Hanna Hottenrott, Professorship Economics of Innovation (TUM)	Congestion-Impacted Accessibilities and Economic Performance Evaluation	1 doctoral candidate + € 20,000 direct expenses	3 years
2019	Airbus Defense and Space GmbH		Traffic Simulation of Access Gates for an Industrial Site	€ 12,000	6 weeks

Year	Funding organization	Cooperation	Title	Amount	Duration
2019	German Research Foundation (DFG)	Dr. Constantinos Antoniou, Chair of Transport Engineering (TUM)	Transportation Modeling Using Publicly Available Data: An Evolution for Model Input Data	€ 284,925	3 years
2019	Kagawa University	Dr. Masanobu Kii, Kagawa University, Japan	Implementation of SILO for the Kagawa Region, Japan	¥ 339,150 ≈€ 2,594	1 month
2019	European Research Commission (Consolidator Grant)	Dr. James Woodcock, University of Cambridge	Global and Local Health Impact Assessment of Transport Methods for Prioritizing Model Development	€127,588	3 years
2019	Bavarian Ministry of Economic Affairs, Regional Development and Energy (StMWi)	Bauhaus Luftfahrt e.V. and others	Long-term traffic impacts of Urban Air Mobility as a complement to transit for Upper Bavaria (OBUAM)	€ 84,060	1 year
2018	Federal Ministry of Transport and Digital Infrastructure (BMVI)	Dr. Stefan Minner, Chair of Logistics and Supply Chain Management (TUM)	Potentials of cargo bikes in city logistics (RadLast)	€ 128,670	2 years
2018	TUM Global Incentive Fund	Univ. of New South Wales, Georgia Institute of Technology	Machine Learning for calibrating land use and transport models	€ 7,084	1 year
2018	German Academic Exchange Service (DAAD)	Kwame Nkrumah Univ. of Science & Technology	Sustainable Transport Partnership Programme	€ 19,088	6 months
2018	Austrian Research Promotion Agency (FFG)	Verkehrsverbund Ost-Region (VOR) GmbH, among others	Freight Model for Eastern Austria	€ 24,902	3 years

Year	Funding organization	Cooperation	Title	Amount	Duration
2018	German Academic Exchange Service (DAAD)	Dr. Masanobu Kii, Kagawa University, Japan	Are sustainable development goals within reach? Development of a microsimulation urban model to test policies for a sustainable future	€ 22,864	2 years
2017	European Metropolitan Area Munich	Dr. Gebhard Wulfhorst, Chair of Urban Structure and Transport Planning (TUM)	Scope preparation for the development of a networking study for a sustainable mobility concept of the Munich metropolitan region	€ 1,800	1 month
2017	Alexander von Humboldt Foundation	Dr. Seyedehsan Seyedabrishami, Tarbiat Modares University, Iran	Hans Georg Förster Scholarship	€ 14,400	18 months
2017	Institute of Advanced Studies	Dr. Kelly Clifton, Portland State University	Hans Fischer Senior Fellowship	1 doctoral candidate (75%)	3 years
2016	US National Academies of Sciences		Integrated Transportation and Land Use Models, NCHRP Project 20-05, Synthesis Topic 48-06	US\$ 45,000 or ≈€ 36,771	1 year
2016	German Research Foundation (DFG)	Dr. Kai Nagel (TU Berlin), Dr. Johan Joubert (University of Pretoria, South Africa)	Implementation and application of a tightly integrated behavioural land use and transport model	€ 299,559	3 years
2015	Ministry of Transportation Ontario	WSP, Inc.	Provincial Multimodal Passenger and Freight Forecasting Model Development for Ontario	€ 55,439	19 months

<b>Year</b>	<b>Funding organization</b>	<b>Cooperation</b>	<b>Title</b>	<b>Amount</b>	<b>Duration</b>
2015	US National Academies of Sciences	WSP, Inc.	Statewide and Mega-Regional Travel Forecasting Models: Freight and Passenger, NCHRP Project 20-05, Synthesis Topic 47-17	US\$ 21,336 ≈€ 19,963	1 year
Grand Total since 2015				€ 2,357,515	

**Tabelle 1** Third-party funding