

Dr. Ana Tsui Moreno Chou

Research Group Leader “Transport Analytics”

Travel Behavior Research Group
Technical University of Munich (TUM)

Address: Arcisstr. 21, 80333 Munich

Phone: +49 157 7088 1973

E-mail: ana.moreno@tum.de

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Education

- 2012 – 2015** **PhD in Transportation Engineering**
 Universitat Politècnica de Valencia (UPV), Spain
 PhD Thesis title: “Operational Analysis of Two-Lane Highways depending on the Distribution and Characteristics of their Passing Zones”
Dissertation with International Mention (document partially in English, oral defense in English)
 Supervisor: Prof. Dr. Alfredo Garcia Garcia
 Examination board: Prof. Dr. Francesc Robuste (Universitat Politecnica de Catalunya, Spain), Prof. Dr. Manuel Romana (Universidad Politecnica de Madrid, Spain), Prof. Dr. Francesco Bella (Universita Roma Tre, Italy)
 Defense date: 17.04.15. Grade: cum laude.
- 2009 - 2011** **MSc in Transportation Engineering and Urban Planning**
 Universitat Politècnica de Valencia (UPV), Spain
 Ms Thesis title: “Road Safety Analysis of Traffic Calmed Cross-town Roads using Speed Profiles”.
 Supervisor: Prof. Dr. Alfredo Garcia Garcia
 Defense date: 29.09.11. Grade: 10.
- 2003 - 2008** **MSc in Civil Engineering**
 Universitat Politècnica de Valencia (UPV), Spain
 Ms Thesis title: “Optimal 3D Coordination to Maximize the Available Stopping Sight Distance in Two-Lane Roads using Numerical Methods. Application to the N-232 at Port de Querol in Morella”.
 Supervisor: Vicente Ferrer Perez
 Defense date: 15.12.08. Grade: 10.

Experience

- Since Sep. 2019** **Research Group Leader “Travel Analytics”**
 Associate Professorship of Travel Behavior (formerly Modeling Spatial Mobility). Technical University of Munich (Germany)
- Jun. 2023** **Visiting Researcher**
 Technical University of Denmark (Denmark)
 Host: Dr. Francisco Camara Pereira
- Feb. 2016 – Aug. 2019** **Senior Research Associate**
 Assistant Professorship of Modeling Spatial Mobility.
 Technical University of Munich (Germany)
- Jan. 2009 – Jan. 2016** **Research Associate**
 Highway Engineering Research Group (HERG)
 Universitat Politècnica de Valencia (Spain)
- Mar. 2015 – Jun. 2015** **Visiting Researcher**
 Referat V1. Bundesanstalt für Straßenwesen (Germany)
 Host: Dr. Kerstin Lemke

- Aug. 2013 – Dec. 2013** **Visiting Scholar**
Institute of Transportation. University of Florida (USA)
Host: Dr. Scott Washburn
- Dec. 2012 – Jun. 2013** **Visiting Scholar**
Bureau of Intelligent Transportation Systems and Freight Security.
University of British Columbia (Canada)
Host: Dr. Tarek Sayed
- Dec. 2007 – Dec. 2008** **Research Assistant**
Highway Engineering Research Group (HERG)
Universitat Politècnica de Valencia (Spain)
- Jul. 2007 – Aug. 2007** **Engineering Intern**
CECI Engineering Consultants, Inc., Taiwan (Taiwan)
- Jul. 2006 – Sep. 2006** **Engineering Intern**
VAERSA, Valencia (Spain)

*Comment on academic career: One child born in 2020 with 11-month parental leave (04.01.2020 – 24.09.2020 and 25.02.2021 – 24.04.2021)

Prizes and awards

- **2025 Best Paper Runner Up** of the Committee on Capacity and Quality of Service **ACP40 of the TRB** for the paper “Analyzing Cycling Behavior and Traffic State Interactions at Unsignalized Intersections using Bird’s-Eye View Video Data” by Takayasu, A.; Malcom, P.; Moreno, A.T.; Bogenberger, K. Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2025.
- **2024 Best Paper Award** of the Committee on Capacity and Quality of Service **ACP40 of the TRB** for the paper “Motivations and Constraints for Rural Cycling Based on User Perception. Recommendations for Bicycle Analysis Procedures” by Moreno, A.T.; Cai, Y.; Linares, S.; Washburn, S.; Al-Kaisy, A.; Barrios, J.; Schroeder, B. Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2024.
- **2024 Top Posters Award** of the Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices **AEP35 of the TRB** for the poster “A New Workplace for a New Change: Understanding How Life Events Affect the Preference of Alternative Work Locations in Singapore” by Mohamed Tahir, M.S.B. and Moreno, A.T. Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2024.
- **1st Prize** VI Edición del Premio Internacional a la Innovación en Carreteras **Juan Antonio Fernandez del Campo** for the work “Diseño de zonas de adelantamiento para la mejora de la seguridad y la funcionalidad de carreteras convencionales” (Design of passing zones to improve road safety and traffic operations on two-lane rural highways), by Moreno, A.T.; Llorca, C.; Garcia, A. 2016.

- **2016 Best Paper Award** of the Roundabout **Committee ANB75 of the TRB** for the paper "Benefit Measurement of Metering Signals at Roundabouts with Unbalanced Flow Patterns in Spain" by Martin-Gasulla, M.; Garcia, A.; Moreno, A.T. Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2016.
- **1st Runner-up** XVI Edición de los Premios a Proyectos Final de Carrera de la **Cátedra ADA**, for the Master Thesis "Road Safety Analysis of Traffic Calmed Cross-town Roads using Speed Profiles", 2011
- **Mention** at the II **Congreso Iberoamericano de Seguridad Vial** for the paper "Desarrollo tecnológico del nuevo moderador del tráfico speed kidney" (Technological development of the new traffic calming measure Speed Kidney) by Garcia, A., Romero, M.A., Moreno, A.T. 2010
- **1st Runner-up** III Edición del Premio Final de Carrera "**Fundación Juan Arizo Serrulla**" for the Master Thesis "Optimal 3D Coordination to Maximize the Available Stopping Sight Distance in Two-Lane Roads using Numerical Methods. Application to the N-232 at Port de Querol in Morella", 2009

Professional society involvement

- **Chair** and **organizer** of one invited podium session (#2123 on "Multimodal methods in the Highway Capacity Manual. Applications and Use Cases of HCM7 to Support Complete Streets Analysis") at the Annual Meeting of the Transportation Research Board, Washington DC (USA), January 2024
- **Member** of the Highway Capacity and Quality of Service Committee (ACP40 – previously AHB40) from the Transportation Research Board (TRB), Since 2018
- **Member** of the Traffic Engineering and ITS committee from the Panamerican Society of Transport Research, Since 2023
- **Chair** of the Uninterrupted Flow Subcommittee from the ACP40 Committee from the TRB, Since August 2024
- **Secretary** of the Uninterrupted Flow Subcommittee from the ACP40 Committee from the TRB, Jan 2023 – August 2024
- **Paper Review Coordinator** of the ACP40 Committee from the TRB, 2020 – 2023
- **Leader** of the Two-lane highways group from the ACP40 Committee from the TRB, Since 2020
- **Secretary** of the Two-lane highways group from the ACP40 Committee from the TRB, 2015 - 2019
- **Scientific Committee Member** of the 6th Road Safety & Simulation International Conference, Delft (The Netherlands), October 2017
- **Chair** of one session (F1b-4C) at the 14th World Conference on Transport Research, Shanghai (China), July 2016
- **Chair** of two sessions (1D and 3B) at the 5th International Symposium on Highway Geometric Design, Vancouver (Canada), June 2015

- **Panel member** for the best paper award of the 5th International Symposium on Highway Geometric Design and the 6th International Symposium on Enhancing Highway Performance, 2015, 2016, for the best paper award of the AHB40 Committee, 2013 – 2016

Research activities

Research foci

Geometric design and road safety:

- Stopping and passing sight distance
- Traffic calming in cross-town roads (GPS trajectory analyses, safety surrogate measures)
- Road safety guidelines
- Human factors (stated preference surveys, direct observation, instrumented vehicles, static and dynamic driving simulator)

Traffic operations:

- Influence of passing zones on rural highways operations
- Bicycle level of service on rural highways
- Reliability methods for rural highways

Travel behavior:

- Accessibility and trip/activity generation
- Diverse travel demand
- Stability of travel behavior
- Spatial impacts of remote work arrangements, impacts on travel behavior

Transport modelling:

- Population synthesis
- Short-distance transport models
- Long-distance transport models
- Activity-based models
- Integrated land use/transport models

Projects coordination

- XAITRAB: Explainable AI to understand the impact of life events on travel behavior change. November 2022 – April 2023, MDSI. Project partners: TUM Associate Professorship of Business Analytics & Intelligent Systems.
- FABILUT: Flexible, Agent-Based Integrated Land-Use/Transport (follow up project). January 2022 – December 2024, German Research Foundation. Project partners: Technical University of Berlin.
- TENGOS. Transport and Epidemic Networks: Graphs, Optimization and Simulation. September 2021 – August 2014, German Research Foundation. Project partners: TUM Associate Professorship of Business Analytics & Intelligent Systems, TUM Associate Professorship of Multiscale and Stochastic Dynamics.

- NCHRP 08-135 Reliability and Quality of Service Evaluation Methods for Rural Highways, December 2020 – May 2023, National Cooperative Highway Research Program. Project partners: University of Florida, Montana State University, Kittelson & Associates.
- Congestion-Impacted Accessibility and Economic Performance Evaluation, November 2019 – April 2022, TUM International Graduate School of Science and Engineering. Project partners: TUM Associate Professorship of Economics of Innovation.
- Reducing Congestion at the Federal Highway Network through Multi-modal Solutions for Passenger Travel (*“Entlastung des Bundesfernstraßennetzes durch multimodale Angebote im Personenverkehr”*), Project FE 18.0026/2017, October 2019 – September 2021, Federal Highway Research Institute (*Bundesanstalt für Straßenwesen*). Project partners: TUM Chair of Traffic Control.
- Developing machine learning methods to calibrate integrated land/use transport models, September 2018 – December 2019, TUM Global Incentive Fund. Project partners: GeorgiaTech, University of New South Wales.
- Study of traffic operations in 2+1 highways (*“Estudio de la funcionalidad del tráfico en carreteras con diseño 2+1”*), January 2018 – December 2018, Fundación Agustín de Betancourt.

Projects participation

- WinWin4WorkLife: Healthy, inclusive and sustainable remote work futures as a Win-Win for employees and employers in urban, rural and cross-border areas, February 2024 – July 2027, European Commission.
- Development of a “Manifesto on Activity-Based Models”, January 2023 – September 2023, Imperial College London – TUM Zero Pollution Seed Fund.
- ERC Synergy Proposal Writing “PERCEE: Person-Centric Environmental Exposures for Better Health Impact Assessment”, January 2023 – October 2023, TUM Seed Fund.
- XAITRAB: Explainable AI to understand the impact of life events on travel behavior change. November 2022 – April 2023, MDSI.
- FABILUT: Flexible, Agent-Based Integrated Land-Use/Transport (follow up project). January 2022 – December 2024, German Research Foundation.
- TENGOS. Transport and Epidemic Networks: Graphs, Optimization and Simulation. September 2021 – August 2014, German Research Foundation.
- NCHRP 08-135 Reliability and Quality of Service Evaluation Methods for Rural Highways, December 2020 – May 2023, National Cooperative Highway Research Program.
- Congestion-Impacted Accessibility and Economic Performance Evaluation, November 2019 – April 2022, TUM International Graduate School of Science and Engineering.
- Reducing Congestion at the Federal Highway Network through Multi-modal Solutions for Passenger Travel (*“Entlastung des Bundesfernstraßennetzes durch multimodale Angebote im Personenverkehr”*), Project FE 18.0026/2017, October 2019 – September 2021, Federal Highway Research Institute (*Bundesanstalt für Straßenwesen*).

- Potential Integration of Urban Air Mobility (UAM) to the Existing Transportation Systems in the Region of Upper Bavaria ("*Erforschung des langfristigen Anwendungspotenzials von Urban Air Mobility als Ergänzung zum öffentlichen Personennahverkehr am Beispiel Oberbayern*"), January 2019 – December 2019, Bavarian Ministry of Economic Affairs, Regional Development and Energy (*Bayerisches Staatsministerium für Wirtschaft, Landesentwicklung und Energie*).
- Developing machine learning methods to calibrate integrated land/use transport models, September 2018 – December 2019, TUM Global Incentive Fund.
- Incorporating Sustainable Development Indicators in integrated land/use transport models, June 2018 – December 2019, German Academic Exchange Service (*Deutscher Akademischer Austauschdienst*).
- Study of traffic operations in 2+1 highways ("*Estudio de la funcionalidad del tráfico en carreteras con diseño 2+1*"), January 2018 – December 2018, Fundación Agustín de Betancourt.
- Integration of land use model SILO with the transport model MATSim, Project MO 1420/2-1, June 2017 – May 2020, German Research Foundation (*Deutsche Forschungsgemeinschaft*).
- Integration of land use model SILO with the transport model MATSim, Since March 2016, Technische Universität München – Institute for Advanced Study.
- Experimental study of operational and safety of two-lane rural roads ("*Estudio experimental de la funcionalidad y seguridad de las carreteras convencionales*"), Project TRA2013-42578-P, January 2014 – January 2016, Ministry of Economy (*Ministerio de Economía y Competitividad*).
- Characterization of passing maneuvers to heavy vehicles ("*Caracterización de las maniobras de adelantamiento a vehículos pesados*"), Project ACOMP2012/071, January 2012 – January 2013, Valencian Region Secretary of Education (*Consellería d'Educació, Formació i Ocupació de la Generalitat Valenciana*).
- Development of passing sight distance models ("*Desarrollo de modelos de distancias de visibilidad de adelantamiento*"), Project TRA2010-21736 July 2011 – January 2014, Spanish Ministry of Economy (*Ministerio de Economía y Competitividad*).
- Evaluation of the new traffic calming device "Speed kidney" ("*Desarrollo experimental del Nuevo moderador de tráfico Speed Kidney*"), Project ACOMP2011/016, January 2010 – January 2011, Valencian Region Secretary of Education (*Consellería d'Educació, Formació i Ocupació de la Generalitat Valenciana*).
- Evaluation of the effect of traffic calming measures on emergency vehicles ("*Evaluación del efecto de los moderadores de tráfico en los vehículos de emergencias*"), Project ACOMP2009/079, January 2009 – January 2010, Valencian Region Secretary of Education, (*Consellería d'Educació, Formació i Ocupació de la Generalitat Valenciana*).
- Methodology to design and implement traffic calming systems ("*Metodología para el diseño e implantación de sistemas de moderación de tráfico*"), Project PT-2007-052-23IAPM, December 2007 – October 2011, Spanish Ministry of Public Works (*Centro de Estudios y Experimentación de Obras Públicas, Ministerio de Fomento*).

- Optimization of highway alignment to maximize available sight distance (“*Optimización de la coordinación planta alzado para maximizer la visibilidad disponible*”), January 2007 – January 2009, Rover-Alcisa, S.A

Summary of publication record

Identifiers (ORCID: 0000-0001-9003-4367):

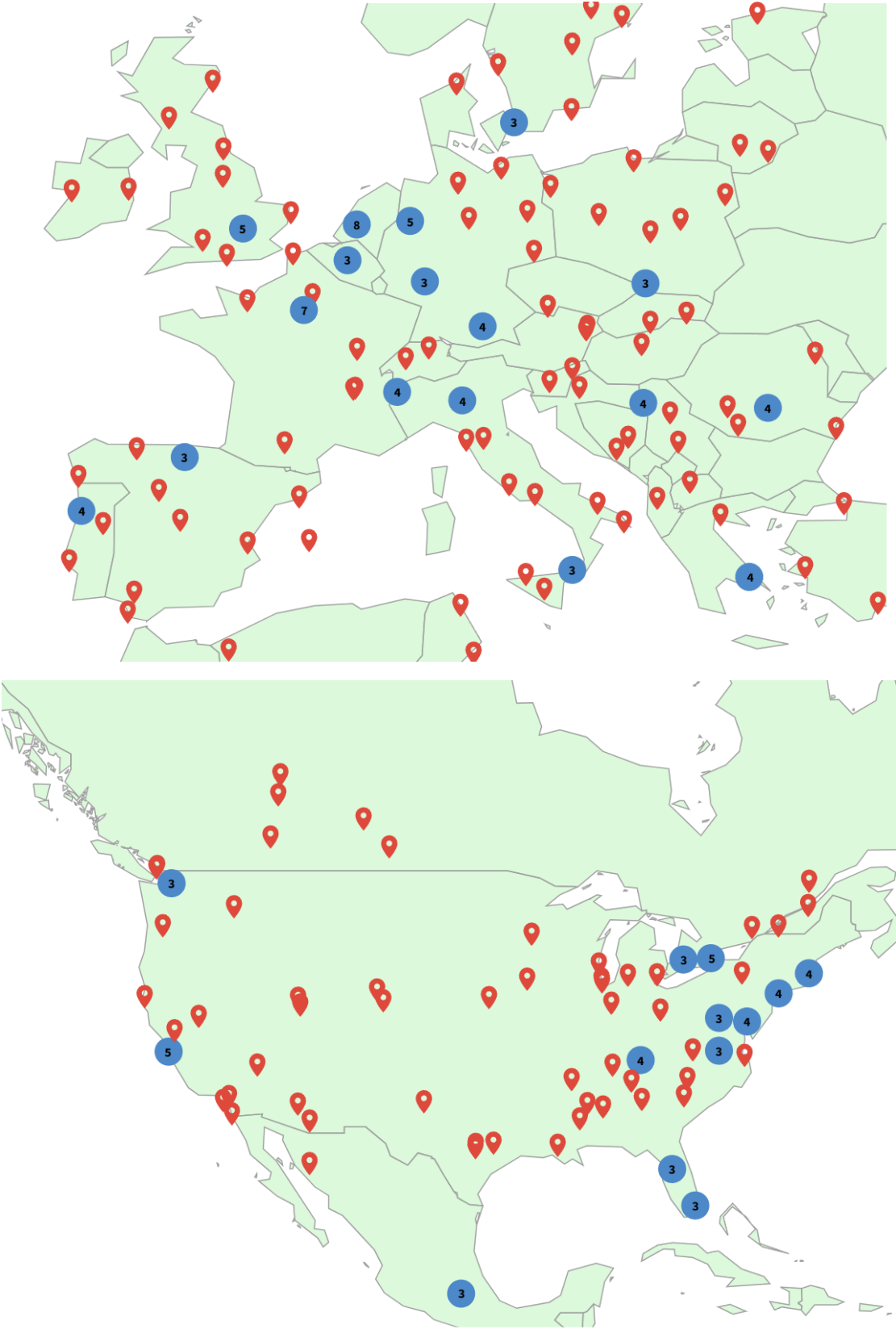
Source	ID or User	Indicator
Web of Science	M-7258-2016	h-index: 14, times cited: 608
Scopus	42462016000	h-index: 17, times cited: 918
Google scholar	GyvHb-YAAAAJ	h-index: 22, i10-index: 39, times cited: 1,860
Research Gate	Ana Tsui Moreno	h-index: 18, RI score: 797.9, times cited: 1,210

Type of publication	Number
Referred journals publication	46
Monographs	8
Conference presentation	81
Invited presentations	12
Other journal publication	8

Web of Science Geographic Citation Map (as February 2024)

The citation map shows the distribution of the researcher's citations globally. For each article in the Web of Science Core Collection that cited the researcher's work, a city with a contributing author's institution represents a data point.





See the complete list of publications in the Appendix.

Professional activities

- Integrated land use/transport modeling in Bangkok, September 2019 - April 2020, Kagawa University. The main goal of the project was to implement the integrated land use model SILO with the transport model MATSim in Bangkok (Thailand) for the years 2015 - 2050.
- Traffic Simulation of Access Gates for an Industrial Site, January 2019 – August 2019, Airbus Defence and Space GmbH. The objective of the project was to apply a microscopic traffic simulation to simulate travel of cars, buses, trucks and passengers entering an industrial site at different gates with several automated personal and vehicular safety surveillance systems.
- Characterization of traffic calming devices in the city of Boadilla del Monte. Proposal of new traffic calming plan ("*Caracterización de los moderadores de tráfico en Boadilla del Monte. Propuesta para la mejora de la seguridad vial y la funcionalidad mediante moderación del tráfico*"), January 2014 – July 2014, Ayuntamiento de Boadilla del Monte.
- Development of Road Safety Guidelines for South America and the Caribbean ("*Desarrollo de la Guía de Seguridad Vial BID para América Latina y el Caribe*"), January 2009 – January 2010, Asociación Española de la Carretera. The objective of this contract was to design and develop the road safety guidelines for the Interamerican Development Bank, which covered from planning, design and operations of urban streets and rural roads (unpaved, paved two-lane highways, freeways) to legal framework, vehicles and human factors.
- Development of contents of the wiki "Wikivia" ("*Desarrollo de contenidos para la plataforma wiki Wikivia*"), December 2008 – December 2009, Asociación Española de la Carretera. The objective of this project was to design and develop the contents of the Spanish wiki on Highway Engineering.

Funding received

- Eurotech Visiting Research programme, Eurotech. **Visiting researcher** at the Technical University of Denmark (Denmark) for 1 week, 2023
- Washburn, S.; Moreno, A.T., Al-Kaisy, A. Schroeder, B. Reliability and Quality of Service Evaluation Methods for Rural Highways, National Cooperative Highway Research Program (NCHRP). **Principal investigator** at TUM, 2020 – 2023.
- Moeckel, R.; Hottenrott, H.; Moreno, A.T., Congestion-Impacted Accessibilities and Economic Performance Evaluation (CAPE), TUM International Graduate School of Science and Engineering (IGSSE), **Project Team Leader**, 2020 – 2023.
- Moreno, A.T. Study of traffic operations in 2+1 highways, Fundación Agustín de Betancourt, **Principal investigator**, 2018.
- TUM University Foundation Fellowship, TUM University Foundation, 1-year **Postdoctoral Fellowship**, 2016 – 2017
- **Postdoc Mobility Travel Grant**, TUM University Foundation. Attendance at the 6th Research Opportunities Week, Munich, 2015
- FPI Research and Teaching Fellowship, Spanish Ministry of Economy, 4-year **Doctoral Fellowship**, 2012 – 2016 (REF. BES-2011-044612)

- FPI 2015 Short Mobility Grant, Spanish Ministry of Economy (REF. EEBB-I-15-09970).
Visiting researcher at the Bundesanstalt für Straßenwesen (Germany) for 3 months, 2015
- FPI 2013 Short Mobility Grant, Spanish Ministry of Economy (REF. EEBB-I-2013-06030).
Visiting scholar at the University of Florida (USA) for 4 months, 2013
- Transatlantic Partnership for Excellence in Engineering (TEE) Grant, European Commission.
Visiting scholar at the University of British Columbia (Canada) for 6 months, 2012
- Final Year Research Scholarship, Spanish Ministry of Education, 9-month **research internship** 2008
- Taiwan Tech Trek (TTT) Scholarship, Taiwanese National Science Council. **Internship** at CECI Engineering Consultants, Inc., Taiwan (Taiwan) for 2 months, 2007

Teaching activities

Pedagogical training

Year	Course title	Description	Hours
2012	DOE – Taller sobre competencias para la carrera profesional como profesor universitario (UPV)	Provide global view of university lecturer, including pedagogical techniques and criteria for publishing in pedagogical conferences	40
2014	Jornadas de innovacion y docencia en red (UPV)	Promote interchange of teaching experiences and teaching innovations	10
2014	Workshop INRED (UPV)	Identify indicators to assess good teaching practices	2
2014	Programa de acogida universitario (UPV)	Pedagogical training program. Acquire basic competence for teaching in university	75
2022	Teaching Foundation Course ProLehre (TUM)	“Certificate for Teaching in Higher Education of the Bavarian Universities” (basic level)	45
2023	ProLehre (TUM)	Coping with challenging students	7
2023	ProLehre (TUM)	Professional Tools for Conversations and Chairing Discussions	12
2024	ProLehre (TUM)	Sustainable Futures in Teaching	14
TOTAL			205 hours

Certifications

- **Certificate for Teaching in Higher Education of the Bavarian Universities, ProLehre**, ongoing
- **Assistant Professor Accreditation (Ref. 2015-7599)**, Spanish National Agency for Quality Assessment and Accreditation, 2015

PhD student coordination

- **Coordinator** of the four PhD students as **Project Team Leader** of CAPE Congestion-Impacted Accessibility and Economic Performance Evaluation, November 2019 – April 2022, TUM International Graduate School of Science and Engineering

Courses (until March 2024)

Year	Course title	Program	Activity	ECTS / hours
2012, 2014	Road safety	MSc. Civil Engineering (UPV)	Lecture	3 hours
2012, 2014	Research design	MSc. Urban Planning and Transport (UPV)	Lecture	3 hours
2012, 2014	Research design	MSc. Urban Planning and Transport (UPV)	Lecture	2 hours
2014, 2015	Road design	BSc. Civil Engineering (UPV)	Exercises	2 hours
2014, 2015	Road design	BSc. Civil Engineering (UPV)	Exercises	11 hours
2014	Road design	BSc. Public Works (UPV)	Lecture	16 hours
2014	Road design	BSc. Public Works (UPV)	Lecture	6 hours
2015	Traffic engineering	MSc. Urban Planning and Transport (UPV)	Lecture	15 hours
2015	Traffic engineering	BSc. Civil Engineering (UPV)	Lecture	15 hours

2015	Simulation on rural highways	Workshop Universidad Politecnica de Madrid	Lecture and hands-on session	7 hours
Since 2016 (7 semesters)	Road safety fundamentals	MSc. Transportation Engineering (TUM)	Co-developer and instructor	1,5 SWS ¹ , 3 ECTS
Since 2016 (6 semesters)	Project seminar	MSc. Transportation Engineering (TUM)	Supervisor	3 SWS, 10 ECTS
2018 – 2021 (3 semesters)	New mobility concepts	MSc. Transportation Engineering (TUM)	Developer and instructor	3 SWS, 3 ECTS
Since 2021 (2 semesters)	Planning and design of cycling facilities	MSc. Transportation Engineering (TUM)	Developer and instructor	2 SWS ² , 6 ECTS
Since 2022 (2 semesters)	Modeling urban development	MSc- Urban Planning (TUM)	Instructor	0,75; 1,5 SWS ³ 6 ECTS
Since 2023	Spatial modeling	MSc. Transportation Engineering (TUM)	Instructor	1 SWS ⁴ 3 ECTS
Since 2023	Scientific methods and presentation skills	MSc. Transportation Engineering (TUM)	Instructor	0,5 SWS ³ 6 ECTS
2021	Demand analysis and forecasting	3 rd SUMRICA Summer school	Lecture and supervisor	7 hours
2022	Road safety fundamentals	TUM-Tsinghua summer school	Lecture	3 hours

TOTAL 730,5 hours

Note. SWS stands for weekly hours of teaching during one semester. Average lecture period per semester is 14 weeks.

¹ Course total load: 3 SWS (WS16 - SS22, two lecturers), 2 SWS (since SS23, one lecturer)

² Course total load: 4 SWS (two lecturers), ³ Course total load: 4 SWS (four lecturers), ⁴ Course total load: 3 SWS (three lecturers)

Master thesis supervision

18. Alam, Md (ongoing). A study on the impacts of walking infrastructures and traffic behavior on the pedestrians' perception of safety in the city of Munich, Master's Program in Transportation Systems, TUM
17. Jayaramu, P.S.K. (ongoing). Light electric vehicle utility model to realize emission reduction potential in Germany, Master's Program in Transportation Systems, TUM
16. Nogueira, P. (2024). Reduction of Parking Space and Energy Consumption Through Optimized Integrated Mobility Schemes, Master's Program in Transportation Systems, TUM
15. Tahir, Sofian. (2023). A New Workplace for A New Change: Understanding How Life Events Affect Preferences of Alternative Work Location. Master's Program in Transportation Systems, TUM
14. Nogueira, P. (2023, not graded). Defining Mobility Packages on a Neighborhood Level Through Optimization Algorithms, Master's Program in Transportation Systems, TUM
13. Nassar, E. (2023). Integrating Carpooling in MATSim and Assessing its Environmental Impact. Master's Program in Transportation Systems, TUM

12. Alameddine, Z. (2023). Identifying Instances of Cyclist Stress with Dynamic Sensors and Wearables, Master's Program in Transportation Systems, TUM
11. Bachmaier, I. (2022). User-centric requirements for integrated mobility concepts and conceptualization of mobility plans, Master's Program in Environmental Engineering, TUM
10. Chou, K.Y. (2021). Impact of introducing shared autonomous vehicles on mode choice and residential location choice behaviors. Case of Taipei metropolitan area, Taiwan, Master's Program in Transportation Systems, TUM
9. Charmeil, J. (2019). The Effects of the Built Environment on Bicycle Route Choice, Master's Program in Transportation Systems, TUM
8. Shoman, M. (2019). The Impact of TNC Services on Urban Mobility, Master's Program in Environmental Engineering, TUM
7. Ahmed, U. (2018). Development of a microscopic activity sequence modeler, Master's Program in Transportation Systems, TUM
6. Best, J. (2018). Modeling and Evaluating a Truck Parking Information Management System Using Microscopic Traffic Simulation: A Case Study of the New York State Thruway, Master's Program in Environmental Engineering, TUM
5. Kim, J.Y. (2017). Northeast Munich: Forecasting the land use and transportation impacts of the proposed urban development, Master's Program in Transportation Systems, TUM
4. Michalski, A. (2017). The Impact of Automated Motorized Vehicles on Urban Mobility in Fürstfeldbruck, Master's Program in Transportation Systems, TUM
3. Gimeno-Gómez, N. (2015). Estudio experimental de la funcionalidad del tráfico en carreteras convencionales en condiciones especiales. Aplicación a la carretera CV-35 (Valencia). Observaciones y análisis en condiciones de lluvia y comparación con condiciones diurnas. M.S. Civil Engineering, UPV
2. Martínez-Talamantes, L. (2015). Estudio experimental de la funcionalidad del tráfico en carreteras convencionales en condiciones especiales. Aplicación a la carretera CV-35 (Valencia). Observaciones y análisis en condiciones diurnas y comparación con el Manual de Capacidad. M.S. Civil Engineering, UPV
1. Asensio-Mateio, B. (2015). Estudio experimental de la funcionalidad del tráfico en carreteras convencionales en condiciones especiales. Aplicación a la carretera CV-35 (Valencia). Observaciones y análisis en condiciones nocturnas y comparación con condiciones diurnas, M.S. Civil Engineering, UPV

University service

- Since 2021** **Member**, Studienkommission Fachschaft BUV
- Since 2020** **Member**, Master Transportation Systems Bewerbungen
- Since 2019** **Mentor**, TUM Mentorship program
- Since 2017** **Mentor**, TUM Graduate School

Appendix. Publication record

Refereed journal publications

- **Moreno, A.T.**; Cai, Y.; Takayasu, A. (-). Accommodating Bicycle Traffic on Rural Two-Lane Highways: An Empirical Approach. Submitted for publication in *Journal of Transportation Engineering, Part A: Systems (under review since November 2024)*.
- Moeckel, R.; Huang, W.C.; Ji, J.; **Moreno, A.T.**; Jin, Z.; Langer, M.; Erhardt, G. (-). From trip-based to activity-based transport models: Impact of model design on scenario results. Submitted for publication in *Transport Policy (under review since June 2024)*.
- **Moreno, A.T.**; Cai, Y. Linares, S.; Washburn, S.; Al-Kaisy, A.; Barrios, J.; Schroeder, B. (-). Evaluating Quality of Service for Bicyclists on Rural Highways: Insights from a Comprehensive User Survey and Mixed-Logit Analysis. Submitted for publication in *Transportation (under review since April 2024)*.
- Mohamed Tahir, M.S.B.; **Moreno, A. T.**: (-). A New Workplace for A New Change: Understanding How Life Events Affect Preferences of Alternative Work Locations in Singapore. Prepared for submission to *Transport Policy*.
- **Moreno, A.T.**; Nouli, G.; Ahmed, U.; Schiffer, M.; Moeckel, R. (-) Understanding the Impact of Life Events on Travel Behavior Change via Machine Learning. Prepared for submission to *Transportation Research Record*.
- **Moreno, A.T.**; Huang, W.C.; Pukhova, A.; Llorca, C.; Moeckel, R. (-). The potential to reduce long-distance travel emissions: A nationwide agent-based transport simulation. Prepared for submission to *Transportation Research Part D*.
- 46. Mölter, J.; Ji, J.; Lienkamp, B.; Zhang, Q.; **Moreno, A.T.**; Schiffer, M.; Moeckel, R.; Kuehn, C. Public transport across models and scales: A case study of the Munich network, *PNAS Nexus*, Volume 3, Issue 11, November 2024, <https://doi.org/10.1093/pnasnexus/pgae489>
- 45. Müller, J.; Nassar, E.; Straub, M.; **Moreno, A.T.** (2024). Exploring the dynamics of dynamic ride-sharing: insights from a sensitivity analysis with an agent-based simulation. *Transportation* <https://doi.org/10.1007/s11116-024-10564-8>
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Monographs

8. Washburn, S.; Al-Kaisy, A.; Raza, S.; **Moreno, A.T.**; Schroeder, B.; Barrios, J. (2024). *Developing a Guide for Rural Highways. Reliability and Quality of Service Evaluation Methods*. NCHRP Web-Only Document 392. National Academies of Sciences, Engineering, and Medicine <https://doi.org/10.17226/27897>
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6. Moeckel, R.; **Moreno, A.T.**; Llorca, C.; Huang, W.C.; Pukhova, A.; Bogenberger, K.; Krause, S.; Zhang, Y.; Dandl, F.(2021). *Entlastung des Bundesfernstraßennetzes durch multimodale Angebote im Personenverkehr (Methoden Bericht)* BASt Projekt FE 18.0026/2017.
5. **Moreno, A.T.**, Llorca, C., Garcia, A. (2016). *Diseño de zonas de adelantamiento para la mejora de la seguridad y la funcionalidad de carreteras convencionales*. Ed. Fundación de la Asociación Española de la Carretera. ISBN: 978-84-89875-93-7. 107 pages.
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Invited presentations

12. **Moreno, A.T.**; Cai, Y., Takayasu, A. (upcoming). *Empirical Development of Bicycle Level of Traffic Stress Criteria for Rural Highways*. PANAMSTR Webinar, March 2025
11. **Moreno, A.T.** (2024). *Updating the Lost Art of Geometric Design*. Colloquium on Highway Engineering and Transport Planning, Technische Universität Graz, Graz, June 2024.
10. **Moreno, A.T.** (2024). *Motivations and Constraints for Rural Cycling Based on User Perception. Recommendations for Bicycle Analysis Procedures*. Annual Meeting of the Transportation Research Board (TRB), Presentation number P24-21607 at the Cross-cutting Issues ACP40 subcommittee meeting, Washington, D.C., January 2024.
9. **Moreno, A.T.**, Mohamed Tahir, M.S.B.; (2024). *A New Workplace for a New Change: Understanding How Life Events Affect the Preference of Alternative Work Locations in Singapore*. Annual Meeting of the Transportation Research Board (TRB), Lighting talk at AEP35 committee meeting, Washington, D.C., January 2024.
8. Sivakumar, A., Moeckel, R., Erhardt, G., **Moreno, A.T.**, Jones, P., Macfarlane, G., Charlton, W. *Updates on an Activity-Based Model Manifesto*. Annual Meeting of the Transportation Research Board (TRB), AEP35 committee meeting, Washington, D.C., January 2024.
7. **Moreno, A.T.** (2023). *Stated cycling comfort by urban bicycle infrastructure: a perspective from rural cyclists in the US*, Workshop “Should we promote a 30 km/h speed limit in cities”, Technical University of Munich, Munich, July 2023.
6. **Moreno, A.T.** (2023). *Drives and constraints for rural bicycling in the US* Identifying research needs to enhance the US bicycle level of service analyses. Open lunch seminar, Technical University of Denmark, Lyngby, June 2023.

5. **Moreno, A.T.** (2023). *Highway Capacity Manual 7th Edition. Multimodal methods and updates: Methods to assess quality of service for pedestrians and bicyclists*. Annual Meeting of the Transportation Research Board (TRB), Presentation number P23-20860 at the lectern session “What is new in HCM7th Edition?”, Washington, D.C., January 2023.
4. **Moreno, A.T.**; Llorca, C.; Silva, C.; Kuehnel, N.; Zhang, Q.; Kii, M.; Moeckel, R. (2021). *Objetivos de desarrollo sostenible (ODG): ¿Podemos alcanzar los umbrales de ODG con políticas de transporte y urbanización? [Integration of Land Use and Transport to Reach Sustainable Development Goals: Will Radical Scenarios Actually Get Us There?]* VII Asamblea de la Red Academica de Movilidad RAM, Plenary session, (online), January 2021:
3. Romana, M; **Moreno, A.T.**; Martin-Gasulla (2017). *Introducing 2+1 roads*. Annual Meeting of the Transportation Research Board (TRB), Two-lane Highways Subcommittee Meeting, Washington, D.C., January 2017.
2. Lenorzer, A.; **Moreno, A.T.** (2016). *Microscopic model for two-lane rural models*. Two-lane highways workshop, International Symposium on Enhancing Highway Performance (ISEHP 2016), Berlin, June 2016.
1. **Moreno, A.T.** (2014). *Field Evaluation of Traffic Performance Measures for Two-Lane Highways in Spain*. Annual Meeting of the Transportation Research Board (TRB), ACP40 Two-lane highways subcommittee meeting, Washington, D.C., January 2016.

Conference presentations

- . **Moreno, A.T.**; Cai, Y.Q.; Takayasu, A. (-). *Empirical Insights into Rural Bicycle Facility Design: A User-Centered Approach to Define Level of Traffic Stress Criteria*. Submitted for presentation at European Association for Research in Transportation (hEART), Munich.
- 81. Washburn, S.; Al-Kaisy, A.; Raza, S.; **Moreno, A.T.**; Schroeder, B.; Barrios, J. (2025).; *New Rural Highway Facility Operations Analysis Methods*. Accepted for presentation at ASCE's 2025 Transportation Conference, Glendale, AR, June 2025.
- 80. Takayasu, A.; Malcom, P.; **Moreno, A.T.**; Bogenberger, K. (2025). *Analyzing Cycling Behavior and Traffic State Interactions at Unsignalized Intersections using Bird’s-Eye View Video Data*. 104 Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2025
- 79. Moeckel, R.; **Moreno, A.T.** (2024).
- 78. Cai, Y.Q.; **Moreno, A.T.**, Paulsen, M. (2024). *Cycling confidence and perceived comfort level: The role of rural leisure and typical cycling habits*. 8th Annual Meeting of the Cycling Research Board, Zurich, September 2024.
- 77. Cai, Y.Q.; **Moreno, A.T.** (2024). *The heterogeneity of preferences of leisure cyclists for rural highway environment: A hybrid-choice latent-class model*. 17th International Conference on Travel Behavior Research, Vienna, July 2024.
- 76. **Moreno, A.T.**; Alvarez-Ossorio, S.; Moeckel, R.; Bogenberger, K. (2024). *Stability of weekly active days using continuous revealed preference data*. European Association for Research in Transportation (hEART), Aalto, June 2024.
- 75. **Moreno, A.T.**; Cai, Y.Q.; Linares-Ramirez, S.; Washburn, S.; Al-Kaisy, A.; Barrios, J.; Schroeder, B. (2024). *Motivations and Constraints for Rural Cycling Based on User*

- Perception. Recommendations for Bicycle Analysis Procedures. 103 Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2024.
74. Ji, J.; Hannon, G.I.; Zhang, Q.; **Moreno, A. T.**; Moeckel, R. (2024). Applying an Agent-Based Social Network in Travel Forecasting with Effects on Disease Spread. 103 Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2024.
 73. Mohamed Tahir, M.S.B.; **Moreno, A. T.**: (2024). A New Workplace for A New Change: Understanding How Life Events Affect Preferences of Alternative Work Locations in Singapore. 103 Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2024.
 72. Müller, J.; Nassar, E.; Straub, M.; Moreno, A.T. (2024). Integrating Dynamic Ride-Sharing into an Agent-Based Traffic Simulation: A Sensitivity Analysis. 103 Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2023.
 71. **Moreno, A.T.**; Langer, M.; Moeckel, R. (2023). How mobile are persons with mobility restrictions? Analysis of number of days with activities using one-week activity schedules in Germany. European Association for Research in Transportation (hEART), September 2023.
 70. Moeckel, R.; Huang, W.C.; Ji, J.; Llorca, C.; **Moreno, A.T.**; Staves, C.; Zhang, Q., Erhardt, G.D (2023) The Activity-based Incremental Model (ABIT): Modeling 24 hours, 7 days per week. Euro Working Group Transportation 2023, Santander, September 2023. Transport Research Procedia.
 69. **Moreno, A.T.**; Nouli, G.; Ahmed, U.; Schiffer, M.; Moeckel, R. (2023) Understanding the Impact of Life Events on Travel Behavior Change via Machine Learning. Euro Working Group Transportation 2023, Santander, September 2023.
 68. **Moreno, A.T.**; Linares, S.; Washburn, S.; Al-Kaisy, A.; Barrios, J.; Schroeder, B. (2023). Identification of Potential Improvements to the Highway Capacity Manual Methodology for Rural Bicyclists and Bicyclist Classification. Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2023.
 67. Raza, S.; Al-Kaisy, A.; Washburn, S.; Barrios, J.; **Moreno, A.T.**; Schroeder, B. (2023). Influence Area at Signalized and Stop-Control Intersections: Operational Analysis. Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2023.
 66. Ji, J.; Zhang, Q.; **Moreno, A.T.**; Pukhova, A.; Moeckel, R. (2022). The impact of social networks on the spread of epidemics using Episim. MATSim user meeting, May 2022.
 65. **Moreno, A.T.**; Huang, W.C.; Pukhova, A.; Llorca, C.; Moeckel, R. (2022). The potential to reduce long-distance travel emissions: A nationwide agent-based transport simulation. European Association for Research in Transportation (hEART), June 2022.
 64. Kuehn, C.; Moller, J.; Schieffer, M.; Lienkamp, B.; Moeckel, R.; **Moreno, A.T.**; Pukhova, A.; Zhang, Q. (2021). TENGOS. Transport and Epidemic Networks: Graphs, Optimization and Simulation. International DFG Conference on Pandemic Research; November 2021.
 63. Llorca, C.; Silva, C.; Kuehnel, N.; **Moreno, A.T.**; Zhang, Q.; Kii, M.; Moeckel, R. (2020). Integration of Land Use and Transport to Reach Sustainable Development Goals: Will Radical Scenarios Actually Get Us There? World Symposium on Transport and Land Use Research 2020, Postponed to August 2021.

62. Pukhova, A.; Llorca, C.; **Moreno, A.T.**; Zhang, Q.; Moeckel, R. (2019). Urban air mobility: another disruptive technology or just an insignificant addition? European Transport Conference, October 2019.
- 61. Moreno, A.T.**; Llorca, C.; Moeckel, R.; Antoniou, C. (2019). Modeling Induced Demand by Urban Air Mobility. mobil.Tum - International Scientific Conference on Mobility and Transport, September 2019.
60. Llorca, C.; Zhang, Q.; **Moreno, A.T.**; Moeckel, R. (2019). Airport access and egress trips in an agent-based travel demand model. 8th Symposium of the European Association for Research in Transportation (hEART 2019), September 2019.
59. Zhang, S.; **Moreno, A.T.**; Gao, J.; Moeckel, R.; Shuai, B. (2019). Temporal dynamics of telework option and choice: a longitudinal study. 98th Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2019.
58. Llorca, C.; **Moreno, A.T.**; Moeckel, R. (2019). Synthetizing visitors for activity-based models. 98th Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2019.
57. Moeckel, R.; Kuehnel, N.; Llorca, C.; **Moreno, A.T.**; Rayaprolu, H.S. (2019). Microscopic Travel Demand Modeling: Using the Agility of Agent-Based Modeling Without the Complexity of Activity-Based Models. 98th Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2019.
56. Romana, M.; Martin-Gasulla, M.; **Moreno, A.T.** (2019). Comparing Alternatives of a 2+1 Highway with Two-lane Highways through Simulation. 98th Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2019.
55. Llorca, C.; Amini, S.; **Moreno, A.T.**; Moeckel, R. (2018). Validation of an agent-based travel demand model with floating car data. 21st EURO Working Group on Transportation Meeting, EWGT 2018, September 2018. Transportation Research Procedia 37, 2019, 242 – 249. <http://doi.org/10.1016/j.trpro.2018.12.189>.
54. Moeckel, R.; **Moreno, A.T.** (2018). Integrated Land Use/Transport Models: The Use of Microsimulation to Better Account for Low-Income Households and People with Disabilities. 7th Innovations in Travel Modeling Conference, Atlanta, June 2018.
53. Llorca, C.; **Moreno, A.T.**; Moeckel, R. (2018). Open data para modelos integrados de usos del suelo y transporte. XIII Congreso de Ingenieria de Transporte, Gijon, June 2018.
52. Okrah, M.; **Moreno, A.T.**; Llorca, C.; Moeckel, R. (2018). Modeling Household Car Ownership Level Changes in an Integrated Land Use/Transport Model. 97th Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2018.
- 51. Moreno, A.T.**; Michalski, A.; Llorca, C.; Moeckel, R. (2018). Autonomous Taxis Effect on Vehicle-km Traveled and Average Trip Duration in the Greater Munich Metropolitan Area. 97th Annual Meeting of the Transportation Research Board (TRB), Washington, D.C., January 2018.
50. Llorca, C.; **Moreno, A.T.**; Moeckel, R. (2017). Effects of Shared Autonomous Vehicles on the Level of Service in the Greater Munich Metropolitan Area. In: Proceedings of mobil.TUM 2017, Munich, July 2017.

49. Llorca, C.; **Moreno, A.T.**; Okrah, M., Moeckel, R. (2017). Traffic assignment for an integrated land use and transportation model in a large metropolitan area: case study of Munich. 6th Symposium of the European Association of Research in Transportation, Haifa, 2017.
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