



tu technische universität  
dortmund

TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

# 4<sup>th</sup> Interdisciplinary Conference on Production, Logistics and Traffic (ICPLT)

March 27<sup>th</sup> & 28<sup>th</sup>, 2019 - Dortmund, Germany

**Commercial Transport –  
Essential Link for Production,  
Logistics and Society**

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TECHNISCHE  
UNIVERSITÄT  
DARMSTADT



LEISTUNGSZENTRUM  
LOGISTIK UND IT

**verkehrs  
RUNDschau**

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## WELCOME TO 4TH ICPLT IN DORTMUND, GERMANY

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The Conference Board is pleased to announce the official conference program for the 4th Interdisciplinary Conference on Production, Logistics and Traffic (ICPLT) jointly hosted by Technische Universität Dortmund and Technische Universität Darmstadt. This time, the conference venue is of 4th ICPLT is Dortmund, Germany.

The conference program will commence at **12.00 a.m. on March 27th**, 2019 and will continue at **16.30 p.m. on March 28th**, 2019.

As did its predecessors, the conference addresses an audience concerned with the disciplines production, logistics and traffic, including spatial and transport planning, which is interested in discussing scientific and application-oriented approaches. **Practitioners, politicians, representatives of public authorities and researchers** from production, logistics and traffic are cordially invited to join and benefit from the conference as a platform for knowledge-exchange and transfer.

Furthermore, there is plenty of opportunity to network and discuss, especially at the **Conference Dinner** which will be hosted on March 27th at the „**Dortmunder U**“, Dortmund's famous landmark in the city center.

During the conference, distinguished speakers will address selected interdisciplinary topics in keynotes. Additionally, designated innovative research and practice approaches will be presented in 30-minute talks in two parallel sessions on each conference day.

**The Conference Board is looking forward to welcoming you in Dortmund!**

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## SESSIONS & TOPICS

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The conference's focus topic is **Commercial Transport – Essential Link for Production, Logistics and Society**. Within this focus topic ICPLT presents a broad spectrum of different scientific and practical solutions for more efficient, environmentally friendly and smarter production, logistics and traffic. Due to the manifold interfaces, ICPLT contains both methodical and content-related focal points.

In particular, the sessions will focus on

- **Simulation and Optimization in Production & Logistics**
- **Autonomous Trucks**
- **Intralogistics & Logistics Facilities**
- **Policy & Human Factors**
- **Freight Transport & Demand Modelling**
- **Production, SCM & Maintenance**
- **Sustainable Logistics & Energy**

Additionally **keynote** speakers will i. a. adress selected topics on **future logistics, trends and visions in transport and smart urban traffic**.



## WHO SHOULD ATTEND?

The conference addresses all representatives of the disciplines production, logistics as well as spatial and transport and traffic planning, who are interested in discussing scientific and practice-oriented approaches.

Practitioners, politicians, public authorities and researchers from production, logistics and transport are invited to use the conference as a platform for knowledge-exchange and transfer.

## CHAIRMEN OF 4TH ICPLT

**Prof. Dr.-Ing. Uwe Clausen (Chair)**  
TU Dortmund University, Institute of Transport Logistics

**Prof. Dr. Ralf Elbert (Co-Chair)**  
TU Darmstadt, Chair of Management and Logistics

**Prof. Dr. Dr. h. c. Michael ten Hompel (Co-Chair)**  
TU Dortmund University, Chair of Materials Handling and Warehousing

**Prof. Dr.-Ing. Manfred Boltze (Co-Chair)**  
TU Darmstadt, Institute of Transport Planning and Traffic Engineering

**Prof. Dr. Michael Henke (Co-Chair)**  
TU Dortmund University, Chair of Enterprise Logistics

## SCIENTIFIC COMMITTEE

*Prof. Dr. Mats Abrahamsson, Linköping University*  
*Prof. Dan Andersson, Chalmers University of Technology*  
*Prof. Dr. Michael Bourlakis, Cranfield University*  
*Prof. Ph.D. Michael Browne, University of Gothenburg*  
*Prof. Dr. Dragan Ciscic, University of Rijeka*  
*Prof. Dr. Laetitia Dabanc, University of Paris-Est*  
*Prof. Dr. René De Koster, Erasmus University Rotterdam*  
*Prof. Dr. Gerard DeLong, University of Leeds*  
*Prof. Dr. Alexander Eisenkopf, Zeppelin University Friedrichshafen*  
*Prof. Dr. Pietro Evangelista, National Research Council Naples*  
*Prof. Dr. Nathalie Fabbe-Costes, Aix-Marseille Université*  
*Prof. Dr.-Ing. Heike Flämig, Hamburg University of Technology*  
*Prof. Dr. Hanno Friedrich, Kühne Logistics University Hamburg*  
*Prof. Dr. George A. Giannopoulos, National Centre for Research & Development*  
*Prof. Dr. Christoph Glock, Technische Universität Darmstadt*  
*Prof. Ph.D. Genevieve Giuliano, University of California*  
*Prof. Dr.-Ing. Carlos Jahn, Fraunhofer-Center for Maritime Logistics & Services*  
*Prof. Dr. Danuta Kisperska-Moran, University of Economics Katowice*  
*Prof. Dr.-Ing. Bernd Kühlenkötter, Ruhr-University Bochum*  
*Prof. Dr. Sebastian Kummer, Wirtschaftsuniversität Wien*  
*Prof. Dr.-Ing. Bert Leerkamp, University of Wuppertal*  
*Prof. Dr. Barbara Lenz, German Aerospace Center*

*Prof. Dr. Tone Lerher, University of Maribor*  
*Prof. Dr. rer. pol. Gernot Liedtke, German Aerospace Center*  
*Prof. Dr. Rosário Macário, Lisbon Technical University*  
*Prof. Dr. Alan McKinnon, Kühne Logistics University*  
*Prof. Dr.-Ing. Joachim Metternich, TU Darmstadt*  
*Prof. Dr. Herbert Meyr, University of Hohenheim*  
*Prof. Dr. Stefan Minner, Technische Universität München*  
*Prof. Dr. Andreas Norman, LUND University*  
*Prof. Dr. Dr. h.c. Hans-Christian Pfohl, TU Darmstadt*  
*Prof. Dr.-Ing. Markus Rabe, TU Dortmund University*  
*Prof. Dr.-Ing. Günther Schuh, RWTH Aachen University*  
*Prof. Dr. Stefan Seuring, University of Kassel*  
*Prof. Dr. Wolfgang Stölzle, University St. Gallen*  
*Prof. Dr. Frank Straube, Technische Universität Berlin*  
*Prof. Dr. Lóránt Tavasszy, Delft University of Technology*  
*Prof. Dr. Eddy van de Voorde, University of Antwerp*  
*Prof. Dr. Boris Varlamov, ITMO University Saint Petersburg*  
*Prof. Dr. Gyula Vastag, Corvinus University of Budapest*  
*Inge Vierth, VTI Stockholm*  
*Prof. Dr. Carl Marcus Wallenburg, WHU Vallendar*  
*Prof. Dr. Jaroslaw Witkowski, Wrocław University of Economics*  
*Prof. Dr. Johan Woxenius, University of Gothenburg*



# CONFERENCE AGENDA

March 27tA2:F41				
Venue: TU Dortmund University - Seminarraumgebäude I (SRG I) - Friedrich-Wöhler-Weg 6, 44227 Dortmund				
Time	Session	Topic	Session	Topic
12:00	Room C	Coffee Reception		
12:30	Room A	<b>Welcome</b> <i>Prof. Dr.- Ing. Uwe Clausen - TU Dortmund University</i>		
13:00	Room A	<b>Keynote: Urban Freight Initiatives: State of the Art and State of the Practice</b> <i>Dr. Sanchez-Diaz - Chalmers University of Technology</i>		
13:40	Room A	Simulation of an Optimized Last Mile Parcel Delivery Network Involving Delivery Robots <i>Prof. Dr.-Ing. Uwe Clausen TU Dortmund University</i>		
14:15	Room C	Coffee Break		
14:45	Session Chair: Room A	Prof. Dr. Herbert Meyr	Session Chair: Room B	Prof. Dr.-Ing. Manfred Boltze
		Acceptance of Technology Implementation in Industrial Intralogistics <i>Martin Eisenmann, M.A. Alfredo Virgillito, M.A. Sozialforschungsstelle Dortmund</i>		Automated Trucks in Road Freight Logistics: The User Perspective <i>Dr.-Ing. Stephan Müller German Aerospace Center (DLR)</i>
15:20	Policy & Human Factors	Premises for Truck Sharing in General Cargo Cooperatives – an Exploratory Case Study Research <i>Victor B. Wildhaber, M.A. University of St. Gallen</i>	Autonomous Trucks	The Impact of Driverless Vehicles on Transportation Costs in Road Haulage: A System Dynamical Approach <i>Sandra Lunkeit, M.Sc. Hamburg University of Technology</i>
16:00	Room C	Coffee Break		
16:20	Session Chair: Room A	Prof. Dr.-Ing Anne Meyer	Session Chair: Room B	Prof. Dr. Tone Lerher
		Stack Shuffling Optimization of Steel Bars by Using Genetic Algorithms <i>Jakob Marolt, M.Sc. University of Maribor</i>		Standard Designs for Multifunctional Small and Medium-sized Transshipment Sites <i>Prof. Dr.-Ing. Dirk Bruckmann Rhine-Waal University of Applied Sciences</i>
16:55	Simulation & Optimization in Production and Logistics	An Approach for Reducing the Search Space for Simheuristics Applications in Logistics Networks in Trading <i>Majsa Ammouriova, M.Sc TU Dortmund University</i>	Intralogistics & Logistics Facilities	A Survey on the Potentials of Indoor Localization Systems in Production <i>Carina Mieth, M.Sc. TRUMPF Werkzeugmaschinen GmbH + Co. KG</i>
17:30	Room B	<b>WCTRS Meeting - all interested conference participants are invited</b> <i>Prof. Dr.-Ing. Ralf Elbert - Chair of WCTRS Special Interest Group B3 "Intermodal Freight Transport"</i>		
19:30	<b>Dinner Reception</b> <i>Venue: "Dortmunder U" - Restaurant VIEW - Leonie-Reygers-Terrasse, 44137 Dortmund</i>			
20:00	<b>Dinner Speech</b> <i>Prof. Dr. Michael Henke - TU Dortmund University</i>			
	<b>Conference Dinner &amp; Dinner Show</b>			

March 28<sup>th</sup>, 2019

Venue: TU Dortmund University - Seminarraumgebäude I (SRGI) - Friedrich-Wöhler-Weg 6, 44227 Dortmund

Time	Session	Topic	Session	Topic
08:30	Room C	Coffee Reception		
09:00	Room A	<b>Keynote: Virtualization and Bio-intelligent Eco-Systems in Logistics</b> Prof. Dr. Dr. h.c. Michael ten Hompel - TU Dortmund University		
09:40	Session Chair: Room A	Prof. Dr. Ralf Elbert	Session Chair: Room B	Prof. Dr.-Ing. Uwe Clausen
10:15	Simulation & Optimization in Production and Logistics	Decoupling the Modeling of Actions in Logistics Networks from the underlying Simulations Data Model <b>Dipl.-Inf. Dominik Schmitt</b> <b>TU Dortmund University</b>	Maritime & Rail Transport	Realization of ETA Predictions for Intermodal Logistics Networks Using Artificial Intelligence <b>Peter Poschmann, M. Sc.</b> <b>Dipl.-Ing. Manuel Weinke</b> <b>Kühne Logistics University – KLU</b>
		Agent-Based Simulation in Logistics and Supply Chain Research: Literature Review and Analysis <b>Marc Kirberg, M.Sc</b> <b>TU Dortmund University</b>		Assessment of the topology and efficiency of a railway network: The case of Deutsche Bahn <b>Arunava Putatunda, M. Sc.</b> <b>Rhine-Waal University of Applied Sciences</b>
10:50	Room C	Coffee Break		
11:15	Session Chair: Room A	Prof. Dr. Barbara Lenz	Session Chair: Room B	Prof. Dr.-Ing. Bert Leerkamp
11:50	Policy & Human Factors	Between Illusion and Reality: The Feasibility of the German Climate Agenda in Freight <b>Prof. Dr. Hanno Friedrich</b> <b>Prof. Dr. Alan McKinnon</b> <b>Kühne Logistics University – KLU</b>	Freight Transport & Demand Modelling	Forecast of Transport Demand Effects of Longer Trucks in Germany <b>Dipl.-Geogr. Robert Burg</b> <b>SSP Consult Beratende Ingenieure GmbH</b>
		Influence of a Reasonable Allocation of Pallets in the Pallet Exchange System <b>Prof. Dr. Ralf Elbert</b> <b>Roland Lehner, M.Sc</b> <b>Technische Universität Darmstadt</b>		Evaluation of the European Road Freight Market for Longer & Heavier Vehicles on the Long Haul and Conclusions to New Vehicle Concepts <b>Jan Blechschmidt, M.Sc.</b> <b>German Aerospace Center (DLR)</b>
12:30	Room C	Lunch Break		
13:30	Session Chair: Room A	Prof. Dr. Michael Henke	Session Chair: Room B	Prof. Dr. Hanno Friedrich
14:05	Production, SCM & Maintenance	Urban Factories – Identification of Measures for Resource-efficient Integration of Production Systems in Cities <b>Dipl.- Ing., M.Arch Michael Bucherer</b> <b>Technische Universität Braunschweig</b>	Freight Transport & Demand Modelling	Strategic Transport Forecast Feedback - Approach between a Macroscopic Extrapolation and a Microscopic Transport Simulation <b>Dr.-Ing. Carina Thaller</b> <b>German Aerospace Center (DLR)</b>
		Implementation of Public Supply Chain Management: A Case Study of the Nelson Mandela Bay Municipality in South Africa <b>Prof. Chengezai Mafini</b> <b>Vaal University of Technology</b>		Delivery and Shipping Behaviour of Commercial Clients of the CEP Service Providers - A Descriptive Analysis <b>Lara Papendorf, M. Sc.</b> <b>German Aerospace Center (DLR)</b>
14:40	Room C	Coffee Break		
15:00	Session Chair: Room A	Dr.-Ing. Christoph Besenfelder	Session Chair: Room B	Prof. Dr.-Ing. Uwe Clausen
15:35	Production, SCM & Maintenance	Complexity-oriented Evaluation of Production Systems for Online-switching of Autonomous Control Methods <b>Daniel Müller, M.Sc.</b> <b>TU Dortmund University</b>	Sustainable Logistics & Energy	Reliable Power Supply for Smart Telematics in Freight Vehicles <b>Anadi Shankar Jha, B. Tech.</b> <b>Delhi Technological University</b>
		Using the Digital Shadow for a Prescriptive Optimization of Maintenance and Operation <b>Prof. Dr. Raphael Pfaff</b> <b>Fachhochschule Aachen</b>		Liquid Petroleum Gas Supply Chain Challenges in Rural Medical Facilities in Zimbabwe <b>Prof. Chengezai Mafini</b> <b>Vaal University of Technology</b>
16:15	Room A	<b>Closing Remarks</b> <i>Prof. Dr.- Ing. Uwe Clausen - TU Dortmund University</i> <i>Prof. Dr. Ralf Elbert - Technische Universität Darmstadt</i>		

## KEYNOTE SPEAKERS



**Dr. Ivan Sanchez-Diaz**

*Chalmers University of Technology – Gothenburg, Sweden*

**„State of the Art and Practice of Urban Freight Management“**

Ivan Sanchez-Diaz is a Senior Lecturer at the Division of Service Management and Logistics. His research focuses on freight demand modeling and the design of urban freight transportation policy. His work involves the development of econometric analysis, behavioral models, and analytical models for freight transportation systems planning.



**Prof. Dr. Dr. h.c. Michael ten Hompel**

*TU Dortmund University – Dortmund, Germany*

**„Virtualization and Bio-intelligent Eco-Systems in Logistics“**

Prof. Dr. Dr. h. c. Michael ten Hompel is a full professor and holds the Chair of Materials Handling and Warehousing at TU Dortmund University. At the same time, he is Managing Director of Fraunhofer Institute for Material Flow and Logistics and Director of Fraunhofer Institute for Software and Systems Engineering, both in Dortmund. He is also board member of BITKOM, member of acatech (National Academy of Science and Engineering), BVL and Logistics Hall of Fame and founding member of WGTL (Scientific Association of Technical Logistics).

## CONFERENCE DINNER & SHOW

Venue of ICPLT's Conference Dinner is Dortmund's famous landmark at city center.

**„Dortmunder U“**

The Dinner will be served in the restaurant VIEW, which is located on roff-top level of the U-Tower building. The Dinner location offers an amazing, panoramic view.

Adress:  
Leonie-Reygers-Terrasse  
44137 Dortmund



The U-Tower building was erected in 1926/27 and served as production facility for beer for 67 years. It embodied the Dortmunder Union's importance as one of the leading breweries in Europe.



## CONFERENCE VENUE

4th ICPLT will take place at TU Dortmund University's

### Seminarraumgebäude I (SRG I)

Address:  
Friedrich-Wöhler-Weg 6  
44227 Dortmund



## REGISTRATION & FEES

Registration is possible via the conference website.

<http://www.itl.tu-dortmund.de/cms/icplt/de/Registration/index.php>

Registration deadline for 4th ICPLT is March 17th, 2019

Conference Fees	
Undergraduate students	150 €
Regular fee	350 €

## MORE INFORMATION & CONTACT

For more information and registration, please visit the conference website

<http://www.itl.tu-dortmund.de/cms/icplt/>

Institute of Transport Logistics (ITL)

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