

## Call for Papers

### 4<sup>th</sup> International Conference on Dynamics in Logistics

Bremen, Germany,  
February 10 – 14, 2014



The 4th International Conference on Dynamics in Logistics (LDIC 2014) will be held in Bremen (Germany) from 10th to 14th of February 2014 together with a Doctoral Workshop. Post-proceedings are planned to be published by Springer.

#### Scope of the Conference

The conference is concerned with the identification, analysis, and description of the dynamics of logistic processes and networks. The spectrum reaches from the modelling and planning of processes over innovative methods like autonomous control and knowledge management to the new technologies provided by radio frequency identification, mobile communication, and networking. The growing dynamic confronts the area of logistics with completely new challenges: it must become possible to rapidly and flexibly adapt logistic processes and networks to continuously changing conditions.

LDIC 2014 provides a forum for the discussion of advances in that matter. The conference is addressed to scientists in logistics, operations research, production engineering, and computer science. It aims at bringing together researchers and practitioners interested in dynamics in logistics. Topics of interest include, but are not limited to: logistic processes, production and transport logistics, maritime logistics, logistic process modelling, supply chain (event) management, logistics security, learning in logistics, retail logistics, big data, Internet of Things and Services, Radio Frequency Identification (RFID), Cyber-Physical-Systems, Industry 4.0, mashed sensor networks in logistics, mobile HCI concepts for production and logistics, mobile communication, robotics in logistics, smart transport technologies, shared resources in logistics, green logistics, mass customization, performance assessment, knowledge management, virtual enterprises and logistic networks, global networks, sustainable collaboration, intermodality, agility, autonomous control, synchronization, transition and transformation, integrated production and distribution planning.

#### Important Dates

Submission of papers: September 30, 2013  
Proposals for workshops and tutorials: November 8, 2013  
Notification of acceptance: November 12, 2013  
Pre-proceedings version due: December 10, 2013  
Main conference: February 11 – 13, 2014  
Conference with Satellite Events: February 10 – 14, 2014  
Post-proceedings contributions due: March 16, 2014

#### Program Chairs

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### Special Honour for LogDynamics Member Hans-Jörg Kreowski

Prof. Dr. Hans-Jörg Kreowski (Faculty of Mathematics and Computer Science) was admitted to the Leibniz-Sozietät der Wissenschaften zu Berlin e.V. The association was founded in 1700 by Gottfried Wilhelm Leibniz as Brandenburgische Sozietät der Wissenschaften. It is thus one of the oldest scholar societies of the world and works nowadays as an interdisciplinary association of excellent scientists, neutral in party politics and of plurality in ideologies, on the advancement of science and its humanitarian application. Two guiding principles of the organization are the joining of efforts between mathematics, natural sciences, social sciences, applied sciences and humanities and connecting theory with practical application. The Leibniz-Sozietät now counts 310 members, 12 of them have been admitted this year.



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#### Internet

[www.logdynamics.com](http://www.logdynamics.com)

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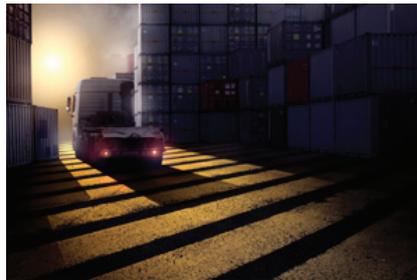
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### Innovative Logistics Project SMART SC Reaches First Milestone

The first milestone meeting of the research project SMART SC was held at the end of April in Bremen. SMART SC is funded by the German Federal Ministry of Economics and Technology and managed by the Institute of Shipping Economics and Logistics (ISL). It focuses on the sustainable improvement of operational communication structures in port-related logistics chains. Against the background of national competitiveness in global freight transportation and the growing transport volumes, information, data and documents accompanying the physical flow of goods must be exchanged efficiently and with minimal error rates between the participating companies in the supply chain. This poses a growing challenge. The aim of the project is to improve the existing logistic processes in the entire container-based value chains of import and export by implementing e-business standards. In order to enhance the efficiency of the processes such as transport, handling or warehousing, the accompanying information, communication and transaction paths will be harmonized.



Until reaching the first milestone in April 2013, an extensive actual state analysis with numerous companies from all involved industries in the supply chain has been held within the past year. The project team investigated which company-wide data communication structures already exist today and how they are designed. In this context, reference models have been created to be reviewed for improvement and thus to serve as a basis for the development of a target system with inclusion of a so-called SMART SC Mediator. Against the background of demonstrators for the locations Bremerhaven and Wilhelmshaven, this Mediator, which is developed by the dbh Logistics IT AG, presents a central data conversion platform. The platform enables the actors involved in the supply chain to continue the work with their existing communication systems, but represents an interface that enables an understanding in the entire transport chain.

The integration of mobile components such as smart phones and tablet PCs allows a comprehensive functional connectivity of data communication between truck drivers and the Mediator. For this, the i2dm consulting & development GmbH and aio IT for Logistics GmbH already specified initial solutions. ISL is also developing a software module for supply chain event management, which enables data synchronization of transport-related target and actual data with the SMART SC platform. Furthermore, the JadeWeserPort Logistics Zone GmbH & Co. KG contributes a parking management system in the context of a traffic control system as well as a location-based web access within the project to be implemented to the Mediator.

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## Automated Tour and Route Scheduling Reduces Cost-Intensive Extra Tours



The TZI and the Bremen office of Hellmann Worldwide Logistics have successfully developed and tested innovative dispatching software for groupage traffic. In the wake of the latest transfer project of the Collaborative Research Center “Autonomous Cooperating Logistic Processes” at the University of Bremen a great interest is shown in its commercial implementation.

One result of the automated dispatching system is the preferred coverage of time-critical premium services, which have to be delivered by the own vehicle fleet not later than 8, 10 or 12 o'clock. “The automated dispatching system reduces the number of cost-intensive external extra tours significantly”, explains Max Gath who carried out the project. The software optimises the dispatching processes, saves time, increases quality standards, and improves the reliability of the customer service.

Therefore, the software covers the standard cases and additional time is won for the handling of special and unexpected situations. It is the human-computer synergy that improves the processes. The results have also convinced Hellmann’s administration and dispatchers. “We are interested in supporting our daily scheduling with the software tool and make use of the added value”, reports branch manager Jens Engelmann. “The collaboration was excellent and cooperative. We already use input drawn from the project for optimising our route planning.”

The TZI and Hellman were supported by the TZI spin-off Aimpulse Intelligent Systems GmbH. “They have put in their technology expertise as consultants and will push forward the operational implementation of the automated scheduling”, says Otthein Herzog, TZI professor and project manager.

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## Artificial Intelligence for Offshore Wind Energy Plants



Artificial intelligence and automatic self-organisation can optimise maintenance and repair procedures at sea. This is the aim of the new project “preInO” for offshore wind energy plants that the Bremen Institute for Production and Logistics (BIBA) has recently started at the University of Bremen. The project is supported by the Federal Ministry for Environment, Nature Conservation and Reactor Safety and is funded with 1,3 million Euros for three years. With the collaboration of the wind turbine manufacturer REpower Systems SE from Hamburg and the software developer SWMS from Oldenburg, the consortium plans to achieve a “pre-acting maintenance” of offshore wind energy plants. So far, maintenance and repair work of the plants at sea was carried out in fixed cycles or in cases of malfunctioning systems. “The increasing number of plants, a varying energy demand and possible standstills call for an optimisation in the deployment of personnel, replacement parts and transportation”, states Stephan Oelker from BIBA.

The coordination of material and deployment is of vital importance in the offshore wind industry. For the planing, several factors must be taken into consideration, such as weather conditions, the technical qualification of the employees, the procurement of spare parts, helicopter operations and mandatory contractual terms. Every delay holds a huge cost potential. With “preInO”, BIBA wants to create a control system that uses all available data to assess the condition of a wind park de-centrally and independently, evaluate the urgency of the tasks, calculate risks, estimate the extent of maintenance, organise work schedules and initiate the necessary logistics. The consortium of BIBA, SWMS and REpower systems SE combines its longstanding expertise and competence to this end.

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## Research Group Theoretical Computer Science Acquires Project Funds by the DFG

The research group Theoretical Computer Science headed by Prof. Dr. Hans-Jörg Kreowski obtained funding of about 190.000 Euro from the German Research Foundation (DFG). The project started on April 1, 2013 and will run for two years.

The project „Specification and Analysis of Model Transformations by Model Transformation Units“ aims to develop, systematically investigate and prototypically implement the recently introduced concept of model transformation units. To that end, the notion of graph transformation units serves as a starting point. Graph transformation units have been developed over the last 15 years in the research group for the rule-based modelling and analysis of computation processes on graphs. The project continues research on autonomous units that has been performed within the Collaborative Research Centre Autonomous Cooperating Logistic Processes -- A Paradigm Shift and its Limitations from 2004 to 2012.

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## **Bremen Contributes Actively to the First International Conference „A European Research Strategy for Intermodal Transport“**



The first international conference on “A European Research Strategy for Intermodal Transport” organized by the InTraRegio project was held in Las Palmas de Gran Canaria on 17th and 18th of April 2013. The objective of the conference was to contribute to the optimization of research and innovation transport policies by defining a targeted research strategy for intermodality to be implemented in the new programming period 2014-2020. The region of Bremen was very active in this discussion, represented by actors from science (University of Bremen with the research cluster LogDynamics and the Institute of Shipping Economics and Logistics (ISL)), from industry (BLG, Bremenports) as well as from the administration (WFB – Economic Development Company Bremen, Senator for Economics Labour and Ports). Through their active contribution the Bremen actors succeeded in strengthening the international visibility of the regional research and economy in the logistics sector. Moreover they highlighted the importance of the region in the area of intermodal transport on the European level.

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## **Dissertation about “Human Resource Management in Logistics“ at the University of Bremen**

Since April 2013, a dissertation project at the chair of Logistics (Prof. Kotzab) addresses human resource management in logistics under special consideration of social mega trends. Especially in Germany, the logistics branch counts as one of the most important ones of the country with a turnover of 3,8 million tons and 223 billion Euros (state of 2011). Like many others the logistics branch will have to face a significant skills shortage in the future and the on-going globalization asks for adequate personnel management. The dissertation project aims at the identification and solution of challenges related to issues of qualification and competences in the processes of recruitment, deployment and development of employees.

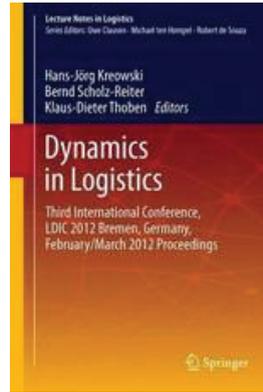
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## Publications

### Dynamics in Logistics 3rd International Conference, LDIC 2012, Bremen, Germany, Proceedings

The Proceedings of the third International Conference on Dynamics in Logistics (LDIC 2012) are now available in the publication series Lecture Notes in Logistics by Springer. The biannual conference is concerned with the identification, analysis, and description of the dynamics of logistic processes and networks and aims at bringing together practitioners and researchers.

LDIC 2012 has been addressing scientists in logistics, operations research, and computer science and provided a forum for a lively discussion of advances in the field. Editors of the proceedings are Prof. Hans-Jörg Kreowski, Prof. Bernd Scholz-Reiter and Prof. Klaus-Dieter Thoben.



The proceedings are available at: [www.springer.com](http://www.springer.com)

## Events

### Open Campus

Date:

**21st of June 2013, 15.00**

Venue: University of Bremen



Research and teaching in the Ivory Tower? Not at the University of Bremen! Following the line "Opening worlds – sharing knowledge", laboratories and workshops are going to spread out on the green of the campus park on Friday the 21st of June, 2013. They will be yielding insights into a diverse and international university life to the broad public. The LogDynamics cluster participates in the event by offering two guided tours through the LogDynamics Lab, led by the central theme - "From the autonomous parcel to the intelligent container". The tours are scheduled at 3.30 and 5.30 p.m.

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## Conference Logistikmanagement 2013 Markets – Products – Stakeholders - Technology



Date: **11th – 13th of September 2013**

Venue: University of Bremen

Logistikmanagement 2013 (LM) is the official conference of the scientific commission for logistics in the association of high school teachers for economics (“Verband der Hochschullehrer für Betriebswirtschaft e.V.” (VHB)), held for the 8th time. On site, 120 presentations from research and best practice in logistics and supply chain management await the conference participants, along with an attractive framework programme. The conference, which is supported by the LogDynamics research cluster, takes place from 11th to 13th of September 2013 at the University of Bremen.

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Details and registration: [www.lm2013.de](http://www.lm2013.de)

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## FID-Kongress von „RFID im Blick“ bringt Anwender auf die Bühne



Date: **10th of September 2013**

Venue: Düsseldorf

For the third time in a row already, the specialized magazine “RFID im Blick” invites users, technology suppliers and all who are interested in changing processes by using RFID to an expert conference. 300 participants are expected for this year’s event at the 10th of September. Themed “Changing the future with RFID”, reports from the industry, logistics sector, trade and medicine are going to make the process optimization of RFID application visible. Each presentation, given by a company which uses RFID, stands for application, authentic integration experiences and facts from actual project implementation. The conference’s goals are: Up-to-date solutions which generate real surplus and optimize processes – in application on improved transparency, higher security and cost optimization.

The LogDynamics cluster and Bremer Institut für Produktion und Logistik (BIBA) assist in the accompanying exposition and present innovative RFID-solutions for logistics.

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