

News March 2015

Prof. Haasis Appointed to the Scientific Advisory Council of BMVI

From the 1st of October 2014 Prof. Dr. Hans-Dietrich Haasis has been appointed to the Scientific Advisory Council of BMVI (Federal Ministry of Transport and Digital Infrastructure) by the federal minister Alexander Dobrindt.



The Scientific Advisory Council is an advisory body of the federal minister and it is set interdisciplinary in its membership structure. Members of the Advisory Council are scientists and distinguished experts with specific experiences in the subjects, which fall within the field of activity of the BMVI. This composition takes account of the variegated economic, technical and sociopolitical aspects of scientific and political transportation work and related cross-cutting themes. The members are appointed for their person in the Scientific Advisory Council and they work unsalaried. Through regular meetings on changing venues the members use the opportunity to stay in permanent scientific exchange of ideas. These meetings concern current problems in transport policy and associated questions. On-going contacts with leading associates of the ministry guarantee the flow of information from transport policy to transport science and vice versa.

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Projects

LaMa – Intelligent Load Carrier Management

Intelligent telematics and sensor solutions allow the monitoring of logistic objects in real time. Especially for perishable and high-quality products the real time control is increasingly relevant. The concept of „adaptable telematics“ can raise the transparency in logistic processes.



In times of global markets and worldwide value chains the logistics industry has a high importance, so that traded goods reach the recipient in time, with the right quality and completely. Yet, particularly with sensitive goods, quality defects often occur after transportation. Sensitive goods are goods, which react to environmental conditions, like variation in temperature, high air humidity, bumps and similar situations. This occurs, for example, in many cases with foods, pharmaceutical products, chemical products or high-value electronic items and partially with components from machine engineering and from the

automobile industry. Nowadays the sender or recipient of sensitive goods manages this with data loggers, which measure and save environmental conditions during the transport. Through this, mistakes of carriers can be proved, but these mistakes are only revealed afterwards. The results are wasted foods and pharmaceutical products and so on, as well as financial disadvantages and time losses. Delays are the consequence and as a result, consumers are dissatisfied. The patent for „adaptable telematics“ originated from BIBA will be developed further to a product In framework of the SIGNO funding.

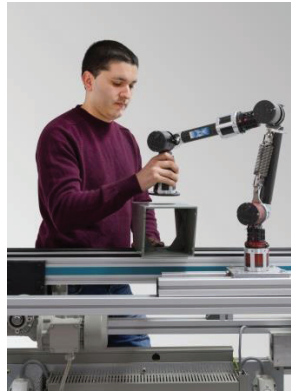
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New Research Project for a Safe Human-Robot Cooperation

Industrial robots have demonstrated their capacity to answer the needs of many industrial applications, offering a high degree of accuracy and efficiency. However, when the application requires the collaboration between the robot and the worker, including workspace sharing, it is not feasible to use standard industrial robots due to safety being compromised. The European joint research project “FourByThree” answers the need of industrial robots, which need not only be able to work precisely and efficiently, but also ensuring safety in the collaborative work with human operators – especially when man and machine share a workplace. The project proposes the development of a new generation of modular industrial robotic solutions that are suitable for efficient task execution in collaboration with humans in a safe way and are easy to use and program by the factory worker.



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The Robotics Innovation Center (RIC) at the German Research Center for Artificial Intelligence (DFKI) will provide the modular actuators and its low-level control which will serve as basis to build the robotic manipulators. These actuators are based on a recent rotary series elastic actuator design developed at DFKI which should allow intrinsically safe robot behavior – this means that due to the special design principles, even in the case of an electrical and/or software failure, no unsafe condition occurs.

The acronym of the project refers to the two main foci of the project: the FOUR main characteristics of FourByThree (Modularity, Safety, Usability, Efficiency) and the THREE main actors (Humans, Robots, Environment) in the manufacturing scenarios. The project, which started in December 2014 with a duration of three years, has a total budget of 6.9 million euros and is partly funded by the European Union within the European Framework Programme for Research and Innovation, Horizon 2020. The project partners are research centers, industrial and technology companies and a university that are based in Germany, Spain, Italy, Finland, the Netherlands, and the United Kingdom. The project is coordinated by the Spanish-based Research Alliance IK4 - TECNIKER.

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Research Project OWiSS for Safety of Offshore Wind Parks Starts in Bremerhaven

In the German offshore wind energy parks along our coasts wind turbines rotate. But that is exactly where dangers lurk as well: Natural disasters, accidents and disturbances can risk a safe energy supply. Within the scope of the new project OWiSS – Offshore Windenergie Schutz und Sicherheit the ISL and various partners from the region now research, how disturbances of offshore wind parks can be prevented or minimized. The three-year joint project OWiSS is supported by the program „Forschung für die zivile Sicherheit“ of the BMBF (Federal Ministry of Education and Research) with 2,5 million Euro until December 2017. Besides the ISL, the Deutsche Offshore Consult GmbH (DOC), the Fraunhofer Institute for Manufacturing Technology and Advanced Materials (Fraunhofer IFAM), the Institute for the Law of the Sea and International Marine Environmental Law (ISRIM) join the consortium. As well as two institutions of the Hochschule Bremerhaven: The Institute for wind energy (fk-wind:) and the Institute for Safety and Security Studies (ISaSS). Minimum targets of the energy concepts from the German government aim at an increase of the share in renewable energies from 35% until 2020 and up to 80% until 2050. The offshore wind energy adds a large share. Considering the growing relevance of energy supply through offshore wind parks and the linked increased performance the OWiSS now pursues an increase of safety in this sector. In the center of the research are investigations, which refer to running offshore wind parks as well as upstream and downstream fields of the life cycle.



The ISL explores logistics and information technology processes of running wind parks and in regard of additional usage of offshore infrastructure. Reasons for possible threats from these processes are considered just as the development of new and improved measurement concepts. Already existing preventive and reactive measures are also included. The effectiveness of the measures is examined by the use of project-specific expanded simulation models.

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Commercialization Challenges of Electric Vehicles in the Urban Freight Transport



Road freight transport as a critical inland freight transport is releasing high greenhouse gases and harmful emissions. Electric vehicles as a solution for reducing emissions and saving fossil energy is attracting increasing global attentions. However, the commercialization of EVs is a challenge.

We would like to invite you to participate in a survey. It intends to find the challenge by evaluating which factor has more influence on the commercialization of electric commercial vehicles in the urban freight transport and which type of electric vehicles in which market of urban freight transport is a potential combination to realize the commercialization. The survey is a part of a doctoral research. It aims to find a solution to support logistics companies to consider using electric vehicles in fleets.

Your answer will help us to understand more about the research problem. If you are interested in the survey results and further research, please fill in the information in the questionnaire and feel free to contact me.

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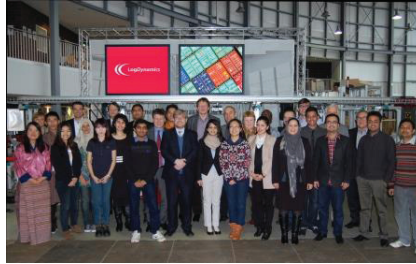
Link to survey: umfrage.ips.biba.uni-bremen.de

Internationalization ▲

To Far East with a Grant

An increasing number of students complete a part of their studies abroad.

Nearly all of them report, that studying abroad has been the nicest experience ever. Now, the ERASMUS MUNDUS project gLINK (Sustainable Green Economies through Learning, Innovation, Networking and Knowledge Exchange) offers the chance to study on the Asian continent. Asia is worth it in many ways: The biggest continent on earth and with 4 billion people the most populous as well. Furthermore, the highest mountains, the deepest lake and the biggest woodland are located in Asia. cLINK scholars will stay in countries like Bhutan, Nepal or India. Interested students and researchers should apply now at www.glink-edu.eu/apply. **Application deadline is the 10th of April 2015.**



The European Union supports international co-operations by mobility programmes that stimulate the interdisciplinary and intercultural exchange. LogDynamics, with its International Graduate School for Dynamics in Logistics (IGS), is partner of three Erasmus Mundus projects: cLINK, FUSION und gLINK. An active exchange takes place with respective Asian partners. Students, doctoral candidates, PostDocs, academic and administrative staff get the chance to study or research at participating universities. Flight and scholarships are financed. On the part of the University of Bremen the four faculties of LogDynamics are involved in the exchange: Physics/Electrical Engineering, Mathematics/Computer science, Industrial engineering and Business studies & Economics. The programme offers a stay at one of the partner universities in the following countries: Afghanistan, Bangladesh, Bhutan, Nepal, Pakistan, China, India and Thailand.

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Events ▲

Day of Logistics: Innovations in Logistics

Date: April 16, 2015

Venue: BIBA, Bremen

On the occasion of the „Day of Logistics“ LogDynamics organizes an event titled „Innovations in Logistics“ on 16th of April 2015. The co-organizers are: the BIBA institute, Chamber of Commerce Bremen, VIA BREMEN and WFB – Bremen Economic Development Agency.

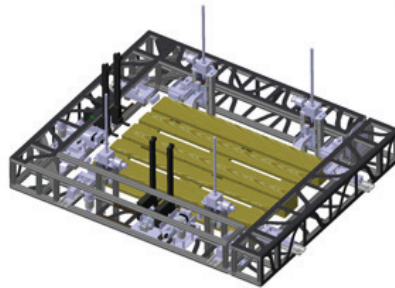


The event focuses on cooperation between science and economy as well as the transfer of research results in practice. The aim is to show the numerous innovation potentials for the logistics sector with exemplary applications and successful cooperation. A diversified program is offered with short lectures and demonstrations of new research results, which you can get in touch with. Additionally, the event keeps an exhibition ready with the involvement of our well-known companies and a concluding Get-together.

Contact: Aleksandra Himstedt him@biba.uni-bremen.de
Details and registration: www.tag-der-logistik.de

Pallet-Tagging-Robot on the Hannover Fair

Date: April 13 – 17, 2015
Venue: Hannover Fair, Hall 2, Booth C28



From April 13th to April 17th BIBA – Bremer Institut für Produktion und Logistik will demonstrate the patented Pallet-Tagging-Robot at Hannover Messe. The robot realized within a SIGNO project funded by the Federal Ministry for Economic Affairs and Energy was chosen by the ministry to illustrate the inventive genius of Germany. On the joint booth of the ministry the lightweight mobile Pallet-Tagging-Robot will demonstrate how RFID transponders can be attached fully automated to EUR-pallets. The invention shows the possibilities, which can be realized by using modern modular lightweight construction principles in combination with automation technology. Due to the innovative construction the Pallet-Tagging-Robot realized in cooperation with the Institut für integrierte Produktentwicklung (BIK) does not need a fixed frame to attach the RFID transponders to the pallets. This means it is mobile and can be used in a flexible way.

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Video of the Pallet-Tagging-Robot: youtu.be/GhCGuP8mQ5w

LogDynamics at the transport logistic 2015



Date: May 5 – 8, 2015
Venue: Messe München, Hall 6, Booth 217/318

For the first time the research cluster LogDynamics presents itself on a joint booth of VIA BREMEN at the fair transport logistic 2015 in Munich. The international leading fair for logistics, mobility, IT and Supply Chain Management presents the whole value chain and the majority of international market leaders from the transport and logistics sector.

The highlight of the LogDynamics presence is the model of the intelligent container. The intelligent container was developed for the automatic control of transports in the sector of perishable and sensitive goods. Different technologies like sensor networks and software agents are connected within the system to guarantee a continuous, product-specific monitoring of transport bundles. Costs for external mobile communication are reduced through local preprocessing of sensory data. An embedded process platform, which is integrated in the container, truck or trailer, calculates a model for prediction of quality changes. If a risk for a product is recognized, the owner or the transport coordinator receives an automatic message.

We look forward to your visit at stand 217/318, hall 6!

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Symposium „Industry 4.0 – Visions and Challenges for Smart Production and Logistics“

Date: May 12 – 13, 2015

Venue: Tallinn, Estonia

The Chair in Maritime Business and Logistics in collaboration with the Tallinn University of Technology (TU Tallinn) organizes the symposium „Industry 4.0 – Visions and Challenges for Smart Production and Logistics“. It will be realized as a section within the international conference „DAAAM-Baltic 2015“ at the TU Tallinn. The symposium allows an insight into the current state of interdisciplinary research concerning the topic Industry 4.0. Furthermore, it serves as a platform for academic discussions, for networking activities and preparatory talks between German, Baltic and other European scientists, companies' employees and decision-makers.

The Tallinn School of Economics and Business Administration (TU Tallinn) has a two-year ERASMUS Institutional Exchange-Agreement with the Chair in Maritime Business and Logistics since 2014.

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Save the Date: LDIC 2016

Date: February 22 - 26, 2016

Venue: Bremen



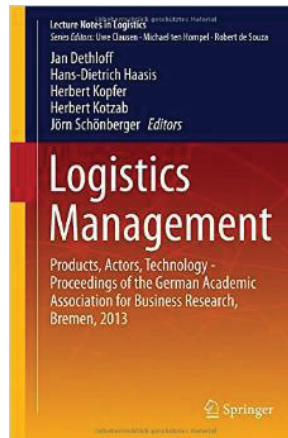
The next International Conference on Dynamics in Logistics (LDIC 2016) has been timed: the fifth event of the *LogDynamics* conference series will be held from 22nd to 26th of February 2016 at the University of Bremen. The conference is concerned with the identification, analysis, and description of 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 new ICT technologies, Internet of Things and Cyber-Physical Systems.

LDIC 2016 will be held in conjunction with the IFAC MCPL 2016 (IFAC Management and Control of Production and Logistics).

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Logistics Management Products, Actors, Technology

The book „Logistics Management Products, Actors, Technology Proceedings of the German Academic Association for Business Research, Bremen, 2013“ gathers papers presented at the Logistik-Management-Konferenz 2013, which was organized by the VHB Wissenschaftliche Kommission Logistik and held in Bremen, Germany. The papers reflect the current state-of-the-art in logistics and supply chain management, focusing on environmental sustainability in logistics and supply chain network dynamics and control. The target audience primarily consists of researchers and practitioners in the field, but the book may also be beneficial for graduate students. Editors are: Jan Dethloff, Hans-Dietrich Haasis, Herbert Kopfer, Herbert Kotzab, Jörn Schönberger.



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Details: www.amazon.de/Logistics-Management-Technology-Proceedings-Association/dp/3319131761/ref=sr_1_6?ie=UTF8&qid=1424278107&sr=8-6&keywords=logistics+management+2013

BIBA Annual Report 2013/14

At the beginning of the year the new annual report of BIBA – Bremer Institut für Produktion und Logistik was released in a new design with many exciting information around BIBA. It reports about the years 2013/14 and can be accessed via the BIBA-web page www.biba.uni-bremen.de/jberichte0.html.

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Special Issue Logistics Research - Call for Papers

For the special issue of the [Logistics Research](#) journal the call for papers “Robust Manufacturing Control: Robustness and Resilience in Global Manufacturing Networks” has been launched. **The submission deadline is May 31, 2015.**



Scope

Today, global production networks (i.e. the nexus of interconnected material and information flows through which products and services are manufactured, assembled, and distributed) are confronted with and expected to adapt to (1) sudden, unexpected, and frequent but irregular large-scale changes of important parameters, (2) event propagation, and (3)

non-equilibrium states. These multi-scale changes deeply influence logistic target achievement and call for robust design, planning, and control strategies. Therefore, understanding the cause and effects of multi-scale changes in production networks is of major interest. New methodological approaches from different science disciplines can contribute to reach a new level of comprehension of network processes. Unconventional methods from biology, ecology, sociology, or auditory display are gaining increasing importance as similar challenges have already been addressed in these disciplines. Advancements from the classical disciplines such as mathematics, physics, and engineering are of continuing importance.

Topics of Interest

We invite all researchers to contribute fundamental and applied research work to this special issue by submitting their reports on approaches coping with the outlined challenges for global production networks. Novel contributions from engineering sciences, business studies, computer sciences, mathematics, biology, and other relevant disciplines are welcome. The following topics (and related) are of special interest:

- Effects of fluctuations on networks
- robust production planning and control
- advanced statistical methods in production networks
- bio-inspired methods in logistics, biomimetics
- local information versus global information in networks
- influence of network architectures on logistics target achievement
- data mining and time series analysis in logistics
- logistics pattern analysis by interdisciplinary approaches
- (e.g. auditory display, perturbation ecology) and advanced classical approaches
- global production in non-equilibrium states

Submission Details

Logistics Research is open access, which means that all articles published are freely available online. Authors can publish in the journal without any additional charges.

Authors are requested to select the special issue “S.I.: Robust Manufacturing Control” when submitting their manuscripts via the journal website (www.springer.com/engineering/production+engineering/journal/12159). Manuscripts will be processed upon submission and published immediately after the completion of the editorial process.

The final submission deadline is May 31, 2015.

Special Issue Editors & Robust Manufacturing Conference Chair

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