

# **IPID4all Senior Research Exchange with Carl von Ossietzky University Oldenburg**

## **Feedback report**

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*08.06.2016 – 10.06.2016*

*University of Oldenburg*  
*Research Group Cascade Use*  
*Ammerländer Heerstr. 114-118,*  
*26129 Oldenburg, Germany*

*Host: Dr.-Ing. Alexandra Pehlken*

*Exchange topic: **Smart Manufacturing and Energy***  
*Usage*

### **Activities / Contacts**

- a) **Presentation** on “SMART MANUFACTURING – THE US INDUSTRIE 4.0? ... AND HOW IS THAT RELATED TO ‘ENERGY’?”

#### **Abstract:**

The talk will discuss current developments in manufacturing, with a focus on the US, and their Smart Manufacturing initiative. It elaborates on the definitions of Smart Manufacturing, put it in relation to the German 'Industrie 4.0' and also briefly illustrate the impact on industry. The strong relation of the program to energy research and resource efficiency was illustrated. A special focus was put on the increasing need and emerging opportunities for collaboration between computer science, data analytics and manufacturing. The increasing data streams (big data) surfacing in smart manufacturing systems due to availability of various new sensor systems (incl. computer vision) need to be analyzed efficiently and the results integrated in the manufacturing work flow. Finally, the talk showed examples of current collaborative projects, look into potential research opportunities in the field and gave an outlook on future directions. Besides the topical presentation, West Virginia University as a whole, some key research centers and key researchers focusing on energy topics were presented to foster potential future collaboration.

#### **Location & Date:**

Friday, June 10th at 16:00 in W32-1-112

- b) Coordination and discussion of joint activities/collaboration opportunities in the cascade use and PLM domain with Dr.-Ing. Alexandra Pehlken and Matthias Kalverkamp.
- c) Discussed additional exchange and collaboration opportunities between the individual research groups and also potential university wide collaboration in energy related fields.

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### **Future collaboration / Outlook**

- a) –
- b) **Lead to final submission of joint journal paper** to the ‘International Journal of Production Economics’ (currently under review) with the title ‘Cascade Use and the Management of Product Lifecycles’.
- c) **Lead subsequently to Matthias Kalverkamp’s visit to Morgantown, WV** in November 2016. Joint **collaborative work on journal publication** was initiated during this visit. Title: ‘Design for Shipping’
- d) Both institutions will evaluate the possibility of further exchange opportunities and monitor the CfPs for possible bilateral funding opportunities for joint project proposals

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