

Overview of the International Activities in 2014

Delegation Visits to Our Partner Universities

Romania



*Left to right: Prof. Niemann, Prof. D. Pisla (Vice Dean, Cluj), Prof. A. Pisla (Cluj), Dr. Katz, Dr. Ebling
In front of the Mechanical Engineering Faculty, Cluj.*

In May, a delegation from our university, **Dr. D. Ebling** (Vice President for Research and Transfer), **Prof. Dr. J. Niemann**, his assistant **Ms. Cl. Fussenecker** and **Dr. M. Katz** (Director of the International Office) visited the **Technical University Cluj, Romania** for a week, to enhance cooperation in teaching and research between the institutions.

A **Memorandum of Understanding** for the establishment of a **Joint Master Degree Program in Industrial Engineering** was undersigned

Türkei

Again in May, another delegation from our university **Prof. Dr. K. Schwister** (Dean of our Department), **Prof. Dr. A. C. Benim**, (Departmental Coordinator International Affairs) and **Dr. M. Katz** (Director of International Office) visited our partner universities in Turkey: **Bahcesehir University (BU)**, **Istanbul University (IU)**, **Istanbul Technical (ITU) Sakarya University (SU)**, **Yildiz Technical University (YTU)**, within a period of one week, to explore potentials for improving cooperation in teaching and research.



*Left to right: Prof. Schwister , Assist. Prof. A. Ergenc (YTU), a Student (YTU), Prof. Benim
In the Laboratory for Automotive Engineering*

Staff Mobility

Prof. Dr. A. Pisla and **Prof. Dr. D. Pisla** (Vice Dean), from **TU Cluj, Romania**, invited by **Prof. Niemann**, visited our university for a week, in December 2014, within the framework of the Erasmus Program.



In 2014 **Britta Zupfer** spent one week at the **Yildiz Technical University** in **Istanbul, Turkey**. Invited by Prof. Dr. Orkun Özener in the framework of the ERASMUS teaching programme she taught German to many students who were interested in starting a new foreign language or who enjoyed practising and improving their German skills. In particular those students who participate in the university's racing team were keen on technical terms that can be useful during their stay at the Hockenheim in 2015. Many Turkish students could also imagine taking part in an ERASMUS exchange with our university. The Yildiz Technical University is definitely an attractive option since many courses are offered in English for exchange students.

Dr. Pawel Oclon from **TU Cracow, Poland** visited **CFD Lab** of **Prof. Benim**, for a week in January 2014. The subject was a research cooperation on the development of an efficient flow solver within the habilitation research of Dr. Oclon.



*Dr. Oclon (Poland) and Dipl.-Ing. A. Nahavandi
In front of the CFD Lab of Prof. Benim*

Prof. Benim visited in October 2014 **Beijing, People's Republic of China**. For exploring potentials for cooperation in teaching and research with Chinese universities and research institutions. He made several presentations at the **University of Chinese Academy of Sciences** and at the **Institute of Crustal Dynamics**. In these talks, he presented our university as an attractive site for study and research. He also made presentations on his research fields.



Prof. Benim presenting at the University of Chinese Academy of Sciences

International Research

Prof. Weber continued his international research in different projects. With his team (Umweltmesstechnik (UMT)) he investigated the Sahara dust cloud on behalf of the „Deutscher Wetterdienst“ (DWD). Here, two planes were used: a single-engined Flight Design CT and a twin-engined Diamond DA 42. He collaborated with NASA and the Univ. of Costa Rica in a research campaign at Volcano Turrialba. He joined the AERO 2014 Exhibition in Friedrichshaven (photo right).



Student Mobility

Incomings



Our university is a member of the Indo German Center for Higher Education (IGCHE). Although different engineering disciplines are covered by IGCHE, our membership holds for Mechanical Engineering, i.e. for our department.



Within this framework, two students of **PSG Institute of Advance Studies, Coimbatore, India, Sanjay** (left) and **Babu** (right) have been spending their final year in Düsseldorf, to acquire B.Eng. in our degree program Product Development and Production. In addition, **9 students** from **Turkey** (from **Bahcesehir Univ.:** **Ahmad,**



Muhammet, Seyfettin, from **Yildiz Technical Univ.:** **Batuhan, Emre, Sabri,** from **Ondokuz Mayıs Univ.:** **Özlem, Göker** (low left) from **Sakarya Univ.:** **Taha** (low right)), **2 students** from **Netherlands** (from **Fontys University of Applied Sciences, Eindhoven:** **Felix, Lucas**), and **1 student** from **Portugal** (**Politécnico de Lisboa:** **Ruben** visited our department.

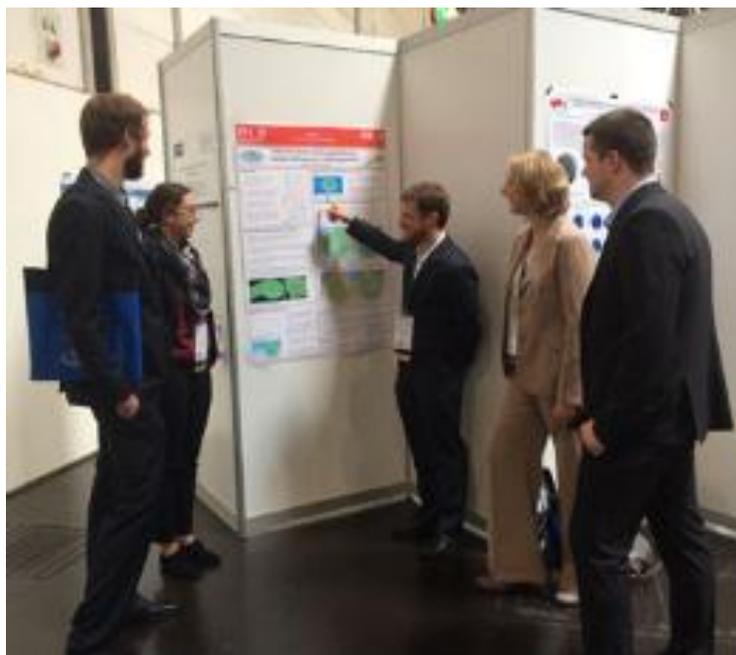


Outgoings

Also in this year, a number of our students visited institutions in foreign countries for their studies. **Nina Maimuna Balde, Kenn David, Dean Jurnicek, Eva Vogel, Kenn David,** visited **Polytechnic University of Valencia (Spain)**. **Saari El-Kurd** and **Timur Ince** visited **Yildiz Technical University, Istanbul (Turkey)**. **Oguz Yavuz** visited **San Diego State University (USA)**.

As reported by **Prof. Kiel** and **Prof. Neef**, two students performed their internship (Praxissemester) in abroad: **Said El-Kurd (UK)** and **Christian Bonk (USA)**.

ASME Turbo Expo 2014



ASME Turbo Expo is worldwide the most important conference series in turbomachinery. During 16-20 June, 2014, the conference took place in Düsseldorf, at the Exhibition Centre. Besides contributing to the technical program with two presentations and three student posters, **Prof. Kameier**, **Prof. Neef** and **Prof. Benim** were involved in the organization. The local organisation committee, assisted by **Ms. Pia Hasselbach** (FHD Master student) was managed by **Prof. Kameier**. For daily assistance, totally 40 students from the NRW-universities were engaged, 12 being from our university. **Prof. Neef** and **Prof. Benim** were additionally involved as reviewers and Session Chairs.

Publications in International Conferences

Assmann, A., Gül F., Benim, A. C., Joos, F., Akhyari, P., Lichtenberg A., "Dispersive aorta cannulas reduce aortic wall shear stress affecting atherosclerotic plaque embolisation", GSTCVS Ann. Meet., 9-12 Feb. (2014) Freiburg, Germany.

Benim, A. C., "Numerical simulation of turbulent swirling flows in industrial gas turbine combustors", International Conference on Fuels & Combustion Engineering, Istanbul Technical University, 20-22 January 2014, Istanbul, Turkey.

Benim, A.C., Iqbal, S., Nahavandi, A., Meier, W., Wiedermann, A., Joos, F., "Analysis of turbulent swirling flows in an isothermal gas turbine combustor model", ASME Turbo Expo 2014, June 16-20 2014, D'dorf, Germany, GT2015-25008.

Biedermann, T. „Is noise protection necessary for wind energy plants ?” Poster at ASME Turbo Expo 2014, Düsseldorf.

Funke, H., Keinz, J., Schlich, K., Pohlmann, T., Heinze, R., Kameier, F. „An optimization of an indoor engine test facility for propeller tests with high flow rates”, ASME Turbo Expo 2014, June 16-20 2014, D'dorf, Germany, GT2014-25192.

Heinze, R., Biedermann, T., Kameier, F., Goldowsky, C., Paschereit, C.O., „Experimental investigation of a cylinder/plate-configuration by applying the statistical DoE-methodology”, EAA Forum Acousticum, Cracow (2014).

Hoffstadt, T., Maas, J. Ostwestfalen, Heinze, R., Wahl, T., Kameier, F., „ DEAP-based energy harvesting using vortex induced vibrations”, Smart Structures/NDL San Diego (2014).

Ille, F., Adam, M., Radosavljevic, R., Wirth, H. P. "Market and simulation analysis of PVT applications for the determination of new PVT test procedures", ISES Int. Solar Energy Society, conf. Proc., EuroSun 2014, Aix-les Bains.

Schönwald, S., Kameier, F., Böhle, M. „Influence of the Casing Width and the Impeller Position on Centrifugal Fan Performance-A CFD-based Study on Cause and Effect”, ASME Turbo Expo 2014, June 16-20 2014, D'dorf, GT2014-25319

Schramm, S., Adam, M., "Storage in solar process heat applications", Proceedings of the 2nd International Conference on Solar Heating and Cooling for Buildings and Industry (SHC 2013, Freiburg), Elsevier's Energy Procedia Volume 48, 2014, pp. 1202-1209 (available online at <http://www.sciencedirect.com/science/article/pii/S1876610214003981>)

Stenzel, N., „Influence of the volute geometry on impeller efficiency in centrifugal fans” Poster, ASME Turbo Expo 2014 D'dorf

Niemann, Jörg; Pisla, Adrian: Lean logistic by application of material flow simulation, in: 2014 International Conference on Production Research – Africa, Europe, Middle East 3rd International Conference on Quality and Innovation in Engineering and Management, July 02-04, Cluj-Napoca, Romania

Niemann, Jörg; Fussenecker, Claudia: Improved service design by using eye tracking technologies in mechanical engineering, in: 2014 International Conference on Production Research – Africa, Europe, Middle East 3rd International Conference on Quality and Innovation in Engineering and Management, July 02-04, Cluj-Napoca, Romania.

With her excellent presentation, Ms. Claudia Fussenecker won the Best Paper Award of the Conference.

EDITORIAL STAFF



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This is an overview, which is not claimed to be exhaustive. Some activities have been omitted due to space limitations. We apologize, in advance, for any activity that might have unintentionally be omitted due to an oversight.



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