activities were performed during the second week. The program allowed participants to attend each session independently and as a single, short course. Although the course was primarily intended for Ph.D. and master's degree students, it was also open to employees of companies interested in the topic.

Week one was devoted to the theoretical aspects of silicon carbide and wide bandgap devices, the design of modern insulated-gate bipolar transistors and power modules, and modern configurations as multilevel and multicell power converters. It also included topics on the control aspects from basic to model-predictive strategies, the use of field-programmable gate arrays (FPGAs), and the application of the discussed topics in specific areas such as more electric aircraft, harsh environments, and industrial motor drives (Figure 1).

Week two was devoted to the new PED-board equipped with the National Instruments sbRIO-9651 and Linux real-time operating systems. Specific power electronics and drives applications, using a laboratory virtual instrument engineering workbench integrated development environment, were proposed for the development of the FPGA main scheduler and pulsewidth modulator for multilevel converter topology. They were also recommended for the development of the field-oriented control for permanent magnetic machines directly on the FPGA target and for the development of control structure for a buck power converter using both real-time and FPGA capabilities.

Attendees and instructors took part in a half-day visit to the Semikron Factory in Pomezia, Italy. Participants were also invited to dine at a traditional restaurant in the Trastevere area. More than 15 students participated in the first week of the program, and seven students participated in the second week. The attendees were mainly Ph.D. students coming from electrical, electronic, and mechanical disciplines but also included three industry participants. The individuals who took part in this summer course gave extremely positive feedback.

FIG 1 Summer course attendees listening to Dr. Gerald Deboy’s tutorial. (Photo courtesy of Alessandro Lidozzi.)

by Andreas Wagener

Joint IEEE IAS/PELS/IES German Chapter Holds Meeting at Airbus and ZF Friedrichshafen AG Facilities

The second Joint IEEE Industry Applications Society (IAS)/Power Electronics Society (PELS)/Industrial Electronics Society (IES) German Chapter meeting of 2017 took place on the coast of Lake Constance at the facilities of Airbus and ZF Friedrichshafen AG. Dornier, a former German aircraft manufacturer and creator of famous airplanes such as the 12-engine flying boat Do-X and VTOL Do31, is now a part of the Airbus network of aircraft. Its product line includes satellites, electronic surveillance for border
control, and mobile platforms, e.g., those used in military hospitals.

Peter Gath, Airbus, project manager Grace Follow-On, gave a presentation about the development and testing of the satellite twins for the Gravity Recovery and Climate Experiment Follow-On mission to begin in early 2018. ZF Friedrichshafen AG, the second company visited, has ties to Zeppelin airships. As a tier-one supplier to the automotive industry, ZF’s business is mostly focused on transportation. The newly built ZF Forum contains a collection of influential products manufactured during the company’s first 100 years, and the lively presentations focused on e-mobility (Figure 1).

Dr. J. Wei, ZF, shared his thoughts on special power electronics developed by ZF, while the audience listened intently to the variety of automotive applications. T. Wehlen, ZF, presented the trends in e-mobility, e.g., the total cost of ownership of an electric car as compared to a conventional car in different countries and the well-to-wheel emission comparison of a compact car using a combustion engine, compared to one using an e-drive. Even for a company such as ZF, with roots in innovative mechanical engineering, power electronics may play a significant role in their future. The Chapter’s next meeting will be 22–23 March 2018 at the Hilti Corporation in Kaufering, Germany.

The IEEE Power Electronics Society (PELS) Karunya University Student Branch Chapter organized a national-level-workshop on Raspberry Pi with Python in engineering applications on 20 September 2017. The workshop was conducted in the presence of Program Coordinator Dr. J. Jayakumar and Dr. K. Vinoth Kumar, IEEE PELS Student Branch counselor, both with the Electrical and Electronics Engineering Department of Electrical Sciences, Karunya Institute of Technology and Sciences, Coimbatore, India.

The first session was led by E. Pradhap, embedded project engineer for Pantech ProEd Pvt Ltd. He delivered the lecture “Raspberry Pi: Introduction, Architecture, and Hardware and OS Installation.” S. Naveen, also an embedded project engineer with Pantech ProEd Pvt Ltd., presented the second lecture, “Raspberry Pi: Internet...