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Press Release Hannover Fair 2017

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Press Release

Hannover Fair 2017

Offenburg University's Robot "Sweaty" Hoping to Present Flower Bouquet to Chancellor Merkel

Humanoid robot and vice robot-soccer champion "Sweaty" will represent Offenburg University at Baden-Württemberg's stand at the 2017 Hannover Fair. Trained by his team of professors, research assistants and students, the wiry fellow is hoped to present a flower bouquet to Chancellor Angela Merkel at the Fair.

Hannover/Offenburg. "Sweaty" originated as a soccer-playing, humanoid robot, first representing Offenburg University's team at the 2014 world championship in Brazil. At the 2016 RoboCup in Leipzig, he already made vice champion. Ready to acquire a further cultural technique to showcase at the 2017 Hannover Fair, Sweaty has been trained to use his hands for playing rock-paper-scissors with visitors at the Baden-Württemberg International stand (BWI).

"The difficulty in further developing Sweaty's hands lies in the interaction of mechanics, motors and software," says Ulrich Hochberg, Professor at Hochschule Offenburg. Another challenge in playing rock-paper-scissors is image recognition: Sweaty has to perceive the signs for rock, paper and scissors from different viewing angles, at irregular intervals and in real time. The researchers involved in Sweaty's development even think he will be capable of 'cheating', recognizing the images faster than his human counterparts due to a complicated training process called "deep learning."

Hochschule Offenburg's project team is confident that Sweaty will be ready to challenge visitors to the BWI stand in Hannover for a game of rock-paper-scissors. But their ambitions go even further: Sweaty is hoped to present German Chancellor Angela Merkel a flower bouquet on her walk around the fairgrounds. "Our marketing team has found out about Ms. Merkel's favorite flowers," Professor Hochberg reveals.

When it comes to waving like a politician, incidentally, the humanoid robot is a pro already. Next on Sweaty's busy schedule is Nagoya/Japan, where this year's RoboCup Soccer championship is held in July. The aim is to conquer the title against other universities from around the world.

Background Info on the "Sweaty" Project:

The Sweaty Team at Hochschule Offenburg currently consists of three professors, three research assistants and 12 students from the Departments of Electrical Engineering and Information Technology, Mechanical and Process Engineering, and Media and Information. Thanks to the collaborative efforts of all departments, a first robot prototype was able to participate in the RoboCup 2014 in Brazil. At the 2016 RoboCup in Leipzig, the Sweaty Team already won the vice-championship.

The Sweaty Project allows students to implement their theoretical knowledge in practice as well as to contribute their own creative ideas. The main research fields involved are kinematics, mechanics and artificial intelligence. The declared aim of the project is to develop robots which by the year 2050 will be capable of competing, and even winning, against the human soccer world champion. The real objective, however, is to develop machines which can autonomously move and perform tasks in human, possibly unknown and potentially dangerous environments. Compared to autonomous vehicles, for example, this area of research is still in its infancy.

Background Info on Hochschule Offenburg:

Founded in 1964 as a "National School of Engineering," and expanded in 1978 with a second campus in Gengenbach, Offenburg University of Applied Sciences established itself as a high-performance educational institution with a practical orientation. Today the University forms a thriving community, with more than 4,500 students – 500 of them international students – pursuing Bachelor's and Master's degrees in four departments: Business and Industrial Engineering, Electrical Engineering and Information Technology, Mechanical and Process Engineering, and Media and Information.

Offenburg University prides itself on the international orientation of its programs. In 1998, it was one of the first institutions of higher education in Germany to introduce international Master's degree programs. Today, we offer six English-taught programs which especially cater to international students, and also maintain active exchange programs with more than 80 partner universities worldwide, giving our students plenty of opportunities to study and pursue internships abroad. Thanks to our proximity with the French border, we can also offer double-degree programs with prestigious French and Dutch universities.

The University maintains close relations with regional and national businesses, and there is a constant exchange of information between faculty members and industry professionals. The Institute for Applied Research (IAF) heads the University's technology and innovation work in the fields of solar energy, medicine, robotics and electric mobility, among others. Application-oriented research and technology transfer, up-to-date laboratories and concentrated, interdisciplinary expertise in different technological fields all provide major draws for prospective students.

"Offenburg University prepares its students in the best way for a career in the national or international labor market, offering state-of-the-art, high-quality degree programs with an emphasis on management and problem solving. With applied research and development projects, the University strengthens the innovation potential of industry, especially in the Southern Upper Rhine region. Offenburg University's geographical location enables it to take a leading role in the internationalization of the region."

Prof. Dr.-Ing. Dr. h. c. Winfried Lieber, Rector Offenburg University

Contact at the 2017 Hannover Fair

Location: Hochschule Offenburg, Hall 2, Stand A18

Coordinator: Sandra Lutz-Vogt, Institute for Applied Research, Hochschule Offenburg

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The complete **press kit** can be downloaded on our website at www.hs-offenburg.de/press.

The photographs included in the press kit can be used free of charge for reporting on the "Sweaty" robot; please credit "Hochschule Offenburg" as image author when using any of the photographs.