

2-20-2012

Joining Forces

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Recommended Citation

"Joining Forces" (2012). *News Releases*. 720.
https://ecommons.udayton.edu/news_rls/720

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University of Dayton, Ohio (url: <http://www.udayton.edu/index.php>)



Joining Forces

02.20.2012 | Research, Engineering, Faculty The University of Dayton is teaming with one of Europe's leading research organizations to help develop advanced transportation systems such as electric cars, high-speed trains and composite airplanes, and help keep production going of critical aerospace parts with the highest levels of safety and reliability.

The University of Dayton School of Engineering will work with the Fraunhofer Institute of Non-Destructive Testing in Dresden, Germany, to research advanced materials, electro-optics and sensors as they relate to fracture, fatigue and failure of materials.

The center solidifies a partnership dating back nearly a decade. The University and the institute have worked together to use acoustic waves, electromagnetic currents and sensors to detect depth of carbon penetration in bearings for Canton, Ohio-based Timken Co., and inspect titanium components for the newest Boeing and Airbus planes. They've also developed two commercially available instruments that detect stress in silicon wafers used in electronics.

The University of Dayton leads the nation in federally funded materials research. The Fraunhofer Institute of Non-Destructive Testing-Dresden is part of an 80-unit research conglomerate with a budget of more than \$2 billion. Together, they will form the University of Dayton and Fraunhofer Institute for Non-Destructive Testing-Dresden Project Center, which will be housed at the University of Dayton.

University of Dayton School of Engineering Dean Tony Saliba hopes the partnership will generate more jobs and products for the Ohio market.

"This relationship with Fraunhofer is another example of what the future holds for this region in economic development and for our city to become more global," he said.

Since 2004, the University of Dayton has offered materials engineering classes in non-destructive testing, structural health monitoring and welding using faculty from Dresden. In turn, University of Dayton faculty have been traveling to Dresden to give seminars on fracture and fatigue, light aerospace materials and failure of aerospace components.

In addition to leading the nation in federally funded materials research, the University ranks second among all colleges and universities in overall materials research. The graduate materials engineering program ranked third in the nation according to the latest Faculty Scholarly Productivity Index. Two years ago, the state of Ohio bestowed two centers of excellence at the University for advanced transportation and aerospace research. The University's centers focus on high-performance materials, optoelectronics and sensors.

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