

PRESS RELEASE

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Contact: Alexander Mamishev
Phone: (206) 221-5729
Fax: (206) 543-3842

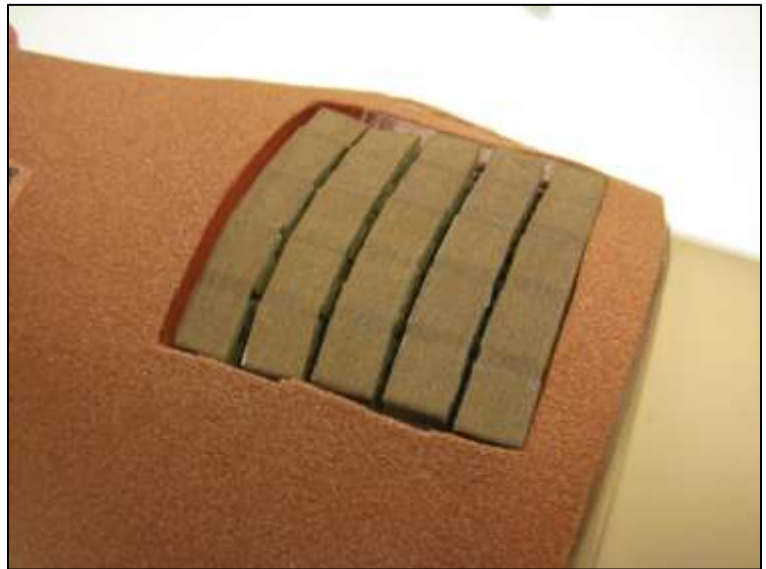
Sensors, Energy, and Automation Laboratory
Department of Electrical Engineering
University of Washington
Box 352500, Seattle, WA 98195-2500
www.ee.washington.edu/research/seal
mamishev@ee.washington.edu



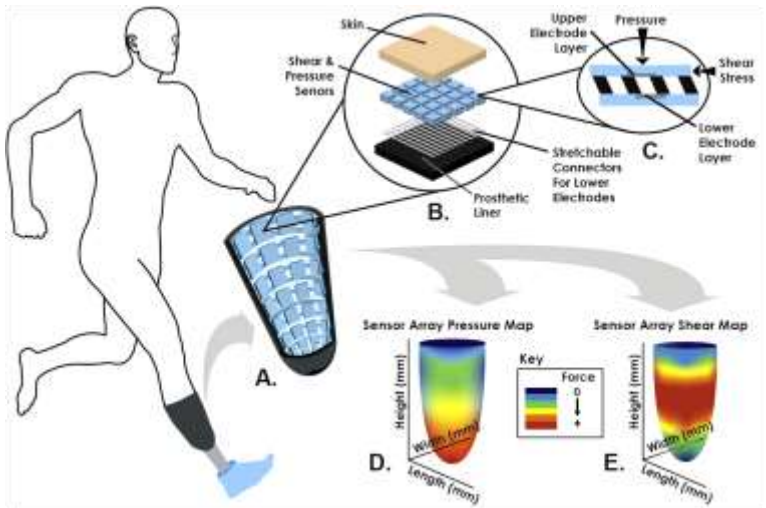
UW Prosthetic Sensing Array Gives “Feeling” to Artificial Limbs

November 25, 2011 – Seattle, WA – The Sensors, Energy, and Automation Laboratory of the University of Washington, in collaboration with the U.S. Department of Veterans Affairs, has completed development of a prototype Fringing Field Sensor Array (FFSA). “An improved version of the previously developed Fringing Field Plantar Array,” Dr. Kishore Sundara-Rajan states, “the Fringing Field Sensor Array is a flexible collection of high-resolution pressure sensors that can be incorporated into the lining of artificial limbs, accurately and noninvasively measuring shear stress, pressure, and other characteristics at the limb-prosthetic interface.”

The sensitivity and sheer range of data that the FFSA can provide will revolutionize the creation and fitting of artificial limbs, as it will allow doctors and researchers to design artificial limbs specifically tailored for individual patients’ residual limb surfaces. In addition, the FFSA can be used in diagnostic devices to measure contact patterns and reveal strain and stress information, enabling the design of prosthetics that are more comfortable and natural than ever before possible. Because the FFSA can measure both pressure and shear stress, it is the ideal tool to lead the future development of more natural prosthesis research. Since its initial announcement, several companies have expressed interest adopting the FFSA for both prosthesis fitting and diagnostic measurements. Mystery Ranch (Bozeman, Montana), a USA-based manufacturer of military-grade backpacks and rucksacks, plans to use this technology for further optimization of their top-of-the-line products to improve both comfort and longevity.



A photograph of the FFSA. The pixels fit seamlessly under the liner of prosthetic limbs, measuring all critical aspects of the prosthetic’s use.



When fitted into prosthetic limbs, the FFSA accurately measures shear stress and pressure, delivering high-resolution data.

For further information, contact Alexander Mamishev at (206) 221-5729.

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Author: Alexander Mamishev, Ph.D
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