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Innovation at Cal Poly Gaining Momentum

SAN LUIS OBISPO – Cal Poly's Research and Graduate Programs Office reported this week that three patents have been issued by the United States Patent and Trademark Office to Cal Poly faculty this academic year. This is a record number of patents issued in a single year to the University and represents innovations in medicine, manufacturing, and computing.

John Sharpe, a professor in the Physics Department at Cal Poly, received patent protection for a "System Method and Apparatus for Optical Directional Determination" (U.S. Patent #7,812,950). This is a novel, low-cost, optical technique - with no moving parts and small power requirements - for measurement of velocity. The technology has industrial applications in the measurement of fluid flow, for example in manufacturing, as well as in personal computer components, such as optical mice, making these processes and devices more cost-effective. The invention was developed as part of a research project funded through a grant from the Office of Naval Research to Cal Poly's California Central Coast Research Partnership (C3RP).

In an entirely different field, a patent was issued for a "Polymeric Splint and Rapid-Setting Polyurethane" (U.S. Patent #7,901,370) to co-inventors Lanny Griffin, Department of Biomedical Engineering, and Dane Jones, Department of Chemistry. Their invention is a completely self-contained, rapid-setting splinting system. The device uses advanced composite materials to create an easily applied splint that provides superior stability and flexibility in field environments, by using a two-part polyurethane combined with a high-performance fiber fabric. The product is an off-shoot of their respective research interests in bone mechanics and polymer chemistry. The new splint provides an alternative for immediate treatment of broken bones in remote areas, for example during military field operations or wilderness backpacking.

The third patent, for a "System Method and Apparatus for a Multi-Phase DC-to-DC Converter" (U.S. Patent #7,782,032) protects a new multi-phase interleaving topology for DC-DC converters that are capable of supplying low-output voltage at high-output current. This new power-converter design addresses a major need of the power-supply industry for a converter that will supply the proper power without sacrificing efficiency and output quality, thus improving microprocessor and computer performance. The inventor, Taufik, is the coordinator of the Power Electronics Lab, Director of the Electric Power Institute, and a professor of Electrical Engineering at Cal Poly.

These patents add to the university's current portfolio of 11 patents and 8 patents pending. Licensing opportunities for patents held in the University's portfolio are available through the office of the California Central Coast Research Partnership (C3RP) (*www.c3rp.org*).

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