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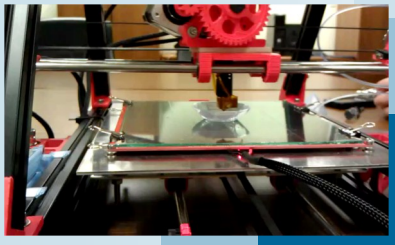

Interdisciplinary collaboration between engineering, mathematics and science

SEMS Research Highlights

Additive Manufacturing Research for Product Design and Development in Fluid Conditioning

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This newsletter presents the research conducted within the School of Engineering, Mathematics and Science (SEMS) at Robert Morris University (RMU), Pittsburgh. It covers various relevant topics including: interdisciplinary efforts, successful research grants, student research, posters and papers, journal publications, presentations at national and international conferences, contribution to professional societies, STEM educational research, industrial consulting collaborations and applied research.

Robert Morris University (RMU) faculty, University Prof. Dr. Arif Sirinterlikci and Assist. Prof. Dr. Tony Kerzmann have received a contract for $112,000 as partners in a state funded research project entitled "Research for Advanced Manufacturing in Pennsylvania (RAMP)". RMU is a founding member of the federal research initiative, ***America Makes***. The RAMP project is led by researchers at Carnegie Mellon and Lehigh Universities and aims to promote innovation and foster a renaissance in Pennsylvania manufacturing. RMU researchers will be working closely with their industrial partners, Schroeder Industries who are leaders of the Fluid Conditioning Technology in both the United States and the world. By incorporating additive manufacturing (AM) technologies in its product development and fabrication tools, Schroeder will be able to reduce the development and prototyping lead times as well as accelerate fabrication of custom components. RMU School of Engineering, Mathematics, and Science (SEMS) with its diverse range of facilities and expertise in the AM field will assist Schroeder in this process. AM technologies will allow Schroeder to increase its responsiveness to the needs of the market, allowing it to gain a larger market share. Incorporating additive manufacturing will also reduce costs greatly due to outsourcing traditional means such as injection molding and die-casting. The project will also focus on investigating rapid manufacturing of components for custom fluid conditioning devices. The technology chosen will address the issues of form, dimensional requirements and fit checking, porosity of the fluid conditioning element, chemical compatibility with hydraulic fluids and temperature constraints along with functionality.

RAMP
Research for Advanced Manufacturing in Pennsylvania

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Advanced Fluid Conditioning Solutions™

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