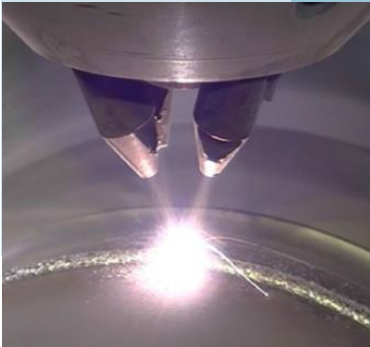


Interdisciplinary collaboration between engineering, mathematics and science

SEMS Research Highlights

Research Status Report 2013-14

Priyadarshan Manohar Ph.D. CPEng



Laser Engineered Net Shape (LENS) AM Technology

This newsletter presents the research conducted within the School of Engineering, Mathematics and Science (SEMS) at Robert Morris University (RMU). 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.

SEMS – ROC completed fourth full year of operation during 2013-2014.

Research Mission: *The research center will work closely with RMU faculty to provide creative, stimulating environment for collaborative research that will lead to the development of successful research grants, research infrastructure and research opportunities for students within SEMS*

Assisted faculty in pursuing various avenues for research funding: Government (NSF, America Makes - NAMII), Foundations (Alcoa, Benedum, Sprout, Hive), and collaborations with other educational institutions (Pitt, CMU, OSU, Lehigh, Harvard, Cleveland Clinic).

Started new research focused meetings – **Research Conversations** – please participate and enjoy the conversations, get to know each other and of course there is great food!

Started publication of '**Research Highlights**' newsletter.

Worked with engineering faculty to develop educational pathways: in collaboration with Energy Innovation Center (EIC) – developed three certificates in additive manufacturing, manufacturing engineering and energy technology.

Worked with faculty and outreach office to build networks: e.g. Leadership Pittsburgh (LP) project – working with local business leaders and school districts.

Summary of Recent Research Grants

Year	# Grant Applications	# Applications Successful	\$ Amount Requested	\$ Amount Received
2013	12	3	\$1,649,000	\$52,000
2014	14 (and counting)	1 (3 pending, 3 under development)	\$1,722,000	\$112,700

Faculty and Staff Involved in Developing Applications: Maria Kalevitch, Arif Sirinterlikci, Priya Manohar, Tony Kerzmann, Won Joo, Tamiko Youngblood, Ben Campbell, Matthew Maurer, Sarah MacDonald, Gavin Buxton, Paul Badger, Melissa Hillwig, Catherine Hanna, Greg Holdan, Dan Short

Future Directions:

Support of faculty in the development of NSF – IUUSE proposal, Benedum and other foundation grants, exploration of other funding sources.

Development of a series of energy and manufacturing-related white papers.

Meeting with individual faculty members to facilitate and support their research plans.



This is a publication of SEMS - Research and Outreach Center (ROC) which was established in 2010 by the SEMS Dean Dr. Maria Kalevitch. SEMS-ROC connects SEMS faculty and students with the region, the nation and the globe, demonstrates diversity and interdisciplinary interests of all three departments in the school. For more information on research at RMU – SEMS please contact:

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