Rapid Prototyping Center/Additive Manufacturing Training Center

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Abstract

The University of Louisville (UofL) has one of the best equipped facilities with world class capabilities for 3D Printing/Additive Manufacturing (AM) of metals, ceramics, and polymers. The industrial/academic consortium known as the Rapid Prototyping Center (RPC) has been performing federally-funded basic and applied research, technology transfer and industry-funded projects in AM since starting with polymer Laser Sintering (LS) in 1993. Today the UofL has over 70 people focused on AM applications and research. The UofL is a Gold Member of AmericaMakes and partner of leading AM users. The AM training center has a fully equipped learning laboratory that boasts the latest in AM technologies, machining, metrology and powder handling systems, additionally professionals will learn the specific safety requirements for utilization of AM systems in industry.

Bio

Tim Gornet is the Manager of Operations at the University of Louisville's Rapid Prototyping Center. He has been active in the additive manufacturing (AM)/3D printing field since 1988 when he ran an SLA 250 at GE Appliances. He is Past President of the Additive Manufacturing User's Group (AMUG), founded the Selective Laser Sintering User's Group and served as president 3 years, has been a board member for the Society of Manufacturing Engineers Rapid Technologies and Additive Manufacturing group and was recognized as one of the "Top 25 Most Influential People in RPD&M" by the TCT Magazine. He is a frequent contributor to the annual Wohlers Report and presents at numerous industry and academic conferences on AM. His research is in the area of polymer sintering and previous work includes pioneering the use of the Melt Index for determining powder quality and developing a multi-zone heating system that has now been commercialized. Recent funded research includes several ONR/AFRL SBIR/STTR projects on unique polymer laser sintering materials and high temperature polymer applications as well as development of new materials and processing parameters for Direct Metal Laser Sintering. In addition, he has led polymer laser sintering research programs with Boeing for novel aerospace application. His research area of interest are in Laser Sintering of Polymers including process control and optimization, mechanical properties, hardware improvements, materials research and development, and high temperature materials. In the area of powder bed metal additive manufacturing technologies his research includes material development, process and mechanical property optimization. He also performs applied research in design for Additive Manufacturing for polymers and metals. He received his Bachelor and Master of Engineering degrees from the University Of Louisville JB Speed School of Engineering and is completing his PhD work at the University of Sheffield (UK)