New UK Additive Manufacturing Centre of Excellence launched by University of Wolverhampton supported by EOS and AMCM

Advanced processes and materials such as beam shaping and copper, will aid knowledge exchange and enable new design and manufacturing innovations across sectors

EOS Logo

WOLVERHAMPTON, UNITED KINGDOM, April 15, 2024 /EINPresswire.com/ -- The University of Wolverhampton (UK) and 3D printing global leaders EOS, and AMCM, have today announced they will join forces to launch a new UK Centre of Excellence for Additive Manufacturing (AM). The partnership will provide access to cutting-edge technology from EOS and AMCM, and specialise in the development of advanced materials and processes for demanding applications within industries such as space, automotive, aerospace, electronics, and quantum computing.

> This new Centre will create and test the processes that enable material benefits to be reliably and consistently realised in real-world manufacturing component manufacturing."
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> *Nathan Rawlings, Sales Manager at EOS UK*

Partially funded by the UK's Regional Innovation Fund (RIF), The centre will be based in the Elite Centre for Manufacturing Skills (ECMS) at the University of Wolverhampton's Springfield Campus. The centre will be a hub for knowledge exchange and research commercialisation activities, catering for local, regional, and global customers in a wide range of sectors.

Addressing industry hunger for AM innovation

The University of Wolverhampton's Additive Manufacturing Research Group and its spin off company, Additive Analytics (https://www.additiveanalytics.co.uk/), will lead material and process development activities.

Industries ranging from automotive and electronics to quantum computing and aerospace are already expressing interest, highlighting the broad applicability of copper AM for thermal management and electrification, due to its exceptional thermal and electrical properties.

Whilst copper has desirable properties, it is challenging to laser process it, hindering its widespread adoption in AM. The work of the consortium aims to address this by leveraging cutting-edge technologies, processes, and expertise to drive efficiency and reduce material waste.

AMCM logo

University of Wolverhampton logo

Decades of AM expertise

Building on the University of Wolverhampton's 20-year relationship with EOS industry leading machines, the new Centre of Excellence will be bolstered by the adoption of an AMCM 290 FLX the next generation laser powder bed fusion system capable of processing challenging materials, such as copper. The AMCM 290 FLX is a customized EOS M 290 machine equipped with state-of-the-art nLIGHT beam shaping laser technology, high temperature processing capabilities and excellent oxygen control. The system offers businesses early and easy access to the latest technology and research findings.

Professor Arun Arjunan, director of the ECMS and Centre for Engineering Innovation and Research at the University of Wolverhampton, said: "The establishment of the UK Centre of Excellence for copper AM marks a significant milestone in additive manufacturing, setting the stage for a new era of innovation, sustainability, and responsible manufacturing. Future projects will investigate the integration of laser process data and machine learning, and artificial intelligence technologies for efficient material and laser process development."

Nathan Rawlings, Sales Manager at EOS UK, said: "The UK manufacturing sector has always pushed forward and embraced innovation. Additive Manufacturing with materials such as copper offers huge benefits for product designers, but they can be demanding for manufacturers to work with. This new Centre of Excellence will create and test the processes that enable material benefits to be reliably and consistently realised in real-world manufacturing component manufacturing."

About EOS

EOS provides responsible manufacturing solutions via industrial 3D printing technologies to organizations around the world. Since 1989, EOS has shaped the future of manufacturing by enabling its customers to innovate and differentiate through expert guidance, technology, and services, leveraging its end-to-end additive manufacturing (AM) industry partnerships. From strategy to education to production, EOS is the leading global partner for both metal and polymer AM solutions, accelerating time-to-market for its customers through high-quality production efficiencies and sustainable solutions. For more information visit eos.info

About AMCM GmbH

AMCM (Additive Manufacturing Customized Machines) offers customized AM solutions based on proven EOS technology and processes that set the benchmark for metal 3D printing. The machines are built with varying degrees of customization, either designed almost from scratch or as modified and enhanced EOS systems. This involves process customization, including the use of new lasers, adapted heating concepts and different spot sizes, as well as modified build volumes. AMCM is an EOS Group company. For more information visit amcm.com

About University of Wolverhampton

The University of Wolverhampton's AM experience and history spans over two decades. The University was the first UK institution to install a laser-based AM machine circa 1999, and since then has been at the forefront of metal AM development. Recently the University's additive manufacturing of functional materials (AMFM) research group has capitalised on this experience and knowhow developing proprietary data driven laser powder bed fusion parameters enabling 3D printable anti-Covid materials, high purity copper and silver and winning the 2022 Emerald Literati Award.

About Additive Analytics

Incorporated in May 2017 Additive Analytics Ltd was established to develop intellectual property (IP) emerging from increased industry interest in the University of Wolverhampton's Additive Manufacturing Research Group. Based at the University's Elite Centre for Manufacturing Skills at the Springfield Campus the spin out will bring together next generation laser optics, digital manufacturing, predictive modelling, and machine learning techniques for enhanced sustainable manufacturing.

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