The University of Nottingham

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PRESS RELEASE

New Micro Waterjet Centre gives University the cutting edge

The University of Nottingham has launched a unique Microwaterjet® machine which enables it to cut almost any material to a micron level of accuracy.

Micro waterjets work by mixing a very fine abrasive with accelerated water at incredibly high speeds. They can cut everything from felt to precious stones and hard alloys at very high speeds and also provide a unique method of fast and flexible prototype production.

At the heart of the new centre at the University is a new state-of-the-art £250k Waterjet machine, the only one of its kind in the UK, which has been donated to the University by the Swiss based company WATERjet AG.

The machine will be an integral part of a major new pan-European industrial and academic training project which The University of Nottingham is co-ordinating, known as STEEP. Funded by the European Union's Seventh Framework Programme (FP7), the STEEP project, which focuses on Energy Beam processing, includes 10 main partners and 18 associate partners from 12 European countries.

Energy Beam processing is emerging as a key set of technologies for the manufacture of high-value components and products for use in industries ranging from aerospace to jewellery and medicine. It involves removing controlled depths of materials via abrasive waterjet, pulsed laser, or focus ion beam.

The University of Nottingham is a world leader in the use of High Energy Fluid Jets and is currently at the demonstration stage of another European project called ConforM^2-Jet which investigates the development of complex parts using the technology.

Speaking about the opening of the new Micro Waterjet Centre, Professor Dragos Axinte, who is the Coordinator of the STEEP and ConforM2-Jet projects, said: “I particularly want to thank WATERjet AG for providing the waterjet machine for us to use; of course, this development would have not happened without the diligent work undertaken through the on-going collaborative work (FP7: ConforM^2-Jet) led by Dr. Amir Rabani. This new Micro Waterjet Centre will be an invaluable part of our research into Energy Beam processing through the STEEP project.”

“The Microwaterjet® machine can cut a wide range of materials, without causing damage or changing the structure of the material and this has an exciting range of potential industrial applications, so we will also be working closely with our business partners to see how Micro Waterjet technology can be applied in different industries”

Mr Walter Maurer, Board Chairman of the WATERjet Group Switzerland, owners of WATERjet AG, said: “It is a great pleasure to be able to provide The University of Nottingham with this Microwaterjet® machine. I am sure that the University will find it invaluable for its research into processing. I also believe it will help us to gain a better understanding of the full potential applications of the Micro Waterjet technology.”

Chris Rudd, Pro Vice-Chancellor for External Engagement at The University of Nottingham, added: “We have a huge wealth of expertise in advanced manufacturing processes at Nottingham. This new Micro Waterjet centre will further add to our knowledge and capability in this area and will enable us to find new solutions to manufacturing issues.”

For more information about the STEEP project, visit www.steep.itn.eu.

To find out about The University of Nottingham’s services for businesses, visit www.nottingham.ac.uk/servicesforbusiness.

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Notes to editors: The University of Nottingham, described by *The Sunday Times University Guide 2011* as 'the embodiment of the modern international university', has 42,000 students at award-winning campuses in the United Kingdom, China and Malaysia. It is also the most popular university in the UK by 2012 application numbers, and 'the world's greenest university'. It is ranked in the UK's Top 10 and the World's Top 75 universities by the Shanghai Jiao Tong (SJTU) and the QS World University Rankings.

More than 90 per cent of research at The University of Nottingham is of international quality, according to the most recent Research Assessment Exercise. The University aims to be recognised around the world for its signature contributions, especially in global food security, energy & sustainability, and health. The University won a Queen's Anniversary Prize for Higher and Further Education in 2011, for its research into global food security.