

A background image showing a close-up of a precision manufacturing process, likely micro/nano manufacturing, with a small cylindrical component being held by a fine needle or probe. The image is overlaid with green and blue diagonal bands.

european society for precision engineering and nanotechnology

Special Interest Group:

Micro/Nano Manufacturing

8th-9th November 2017

University of Strathclyde, UK



Micro- and nano-scale manufacturing has been the subject of research and industrial focus over the past 20 years. Traditional lithography-based technology forms the basis of micro-electro-mechanical systems (MEMS) manufacturing, but also precision manufacturing technologies have been developed to cover micro-scale dimensions and accuracies. These fundamentally different technologies are currently combined in order to exploit strengths of both platforms. One example is the use of lithography-based technologies to establish nanostructures that are subsequently transferred to 3D geometries via injection moulding. Manufacturing processes at the micro-scale are the key-enabling technologies to bridge the gap between the nano- and the macro-worlds to increase the accuracy of micro/nano-precision production technologies, and to integrate different dimensional scales in mass-manufacturing processes. Accordingly, the Special Interest Group Workshop on Micro/Nano Manufacturing will focus on novel methodological developments in micro- and nano-scale manufacturing, i.e., on novel process chains including process optimization, quality assurance approaches and metrology.

This workshop is supported by the EU Horizon2020 Innovative Training Program Network MICROMAN “Process Fingerprint for Zero-defect Net-shape MICROMANufacturing” (<http://www.microman.mek.dtu.dk/>).

The workshop will host a keynote and several presentations and posters covering the newest developments and research on this increasingly important topic. The workshop will also host several training seminars covering aspects of micro/nano manufacturing in practice.

Topics

- Micro & Nano Manufacturing Technologies & Applications
- Micro Replication Techniques
- Machining Technologies for Molds & Microparts
- Assembly & Handling
- Metrology & Quality Control for Microparts

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