

Proceedings of the 10<sup>th</sup> anniversary international  
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**e**ngineering and **n**anotechnology

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# Proceedings of the **euspen** 10<sup>th</sup> anniversary international conference Volume I - Volume II

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## Foreword

Increasing demand for products with enhanced functionality enabled through ultra precision/nanoscale design and manufacturing is today a reality offering a huge potential of applications and economic benefits.

The race for progress in the field serves to drive out enormous technological advance. However, industrial innovation in this area relies on ever increasing collaboration to achieve critical mass. The European Society for Precision Engineering and Nanotechnology (**euspen**) provides a mechanism for leading industrialists and researchers to cooperate, interact and build extended networks in these key technological areas.

With a focus on the development and exploitation of leading edge precision, micro and nanotechnologies including:

- Nano-precision manufacturing;
- Design and build of ultra-precision machine systems;
- Characterisation: metrology systems, instruments and techniques

10 years on from its initial inception, **euspen** today represents a respected body of key industrial and academic experts in the field with representation across 32 countries worldwide.

euspen's annual international conference provides a leading forum in which to communicate latest research, technology and product developments and survey those within the community.

The 10 technical sessions of the Society's 2008 international conference will cover new developments and reflect market forces in process technologies, machine tools/instruments and metrology in the ultra-precision, micro and nano engineering sectors. Outside of these core areas, a focus will be given this year to ultra precision technologies for novel energy applications.

We have received more than 300 abstracts from 27 countries, the conference contributions have been reviewed and selected by an international board and all presented papers have been collated in these proceedings. Further to this over 50 leading companies working in the field will present themselves within the technical exhibition.

We thank our colleagues on the International Scientific Committee, the conference Session Chairmen and the local organising committee for all their help and assistance. We also thank our sponsors Fritz Studer AG, Contamac BV, Optec BV, the City/Kanton of Zurich and PAX Versicherungen for their support for the conference.

On behalf of the Council of euspen, it gives me great pleasure to invite you to this 10<sup>th</sup> Anniversary conference meeting in Zurich. Switzerland is well known for innovation, quality and precision in the world of manufacturing technology. The conference is being coordinated in conjunction with the Swiss Federal Research Institute, ETH Zurich, host to date to 21 Nobel Prize laureates. We look forward to meeting with you, to the sharing of outstanding ideas and achievements, and the formation of important new partnerships and collaborations.

Zurich, Switzerland, May 2008

Prof. Hendrik Van Brussel

**euspen** President

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