

Proceedings of the 9th international conference of the
**European Society for Precision Engineering and
Nanotechnology**

June 2nd – June 5th 2009
San Sebastian, Spain

Volume I

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Proceedings Compilation:

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Proceedings of the **euspen** 9th international conference Volume I - Volume II

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Published by **euspen**
ISBN 13: 978-0-9553082-6-0

Printed in Austria. May 2009
Copy & Druck
Sandleitengasse 9-13

© euspen Headquarters
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Bedford, MK43 0AL
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Foreword

Developments in ultra precision/nanoscale design and manufacturing impact on our lives today through products as diverse as medical devices, sensors for security systems, personal health testing kits to high resolution cinema screens. However much effort is still required to convert scientific and technological excellence into economic returns in the form of novel, enhanced- functionality products, production processes and high technology companies.

Further, to demonstrate that products or manufacturing processes at this leading technology edge meet specified functional demands throws out increasing challenges to the supporting metrology base.

Achieving industrial breakthrough in this area relies more than ever on effective collaboration and knowledge of forefront technologies. The European Society for Precision Engineering and Nanotechnology (**euspen**) has established itself as a globally respected body bringing together leading industrialists and researchers in their field together to cooperate, interact and build extended worldwide networks.

euspen's 9th International Conference will once again provide a leading forum in which to communicate and survey latest research, technology and product developments within the community. This year we meet in the midst of a most challenging economic environment. However, we see from the excellent technical submissions and leading product developments to be presented, that these difficult times have dampened neither your ability for inspiring achievements nor your enthusiasm for the meeting.

The technical sessions of the Society's 2009 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. This year, a special focus will be given to industry driven developments in machine tool accuracy and performance.

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. Many leading companies working in the field will also 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 their help and assistance. We also thank Heidenhain GmbH for their kind provision of student scholarships for the meeting.

On behalf of the Council of **euspen**, it is our great pleasure to invite you to this meeting. As we look to future horizons, both economic and technical, we look forward to meeting with you, to the sharing of latest knowledge and capabilities and the formation of valuable new partnerships and collaborations key to tomorrow's growth and achievements.

San Sebastian, Spain, June 2009

Prof. Hendrik Van Brussel
euspen President

Dr Theresa Burke
euspen Chief Executive

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Proceedings of the 9th international conference of the
**European Society for Precision Engineering and
Nanotechnology**

June 2nd – June 5th 2009
San Sebastian, Spain

Volume II

Editors:

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E. Brinksmeier

H. Spaan

T. Burke

Proceedings Compilation:

D. Nyman



Proceedings of the **euspen** 9th international conference Volume I - Volume II

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Published by **euspen**
ISBN 13: 978-0-9553082-6-0

Printed in Austria. May 2009
Copy & Druck
Sandleitengasse 9-13

© euspen Headquarters
Building 70, Cranfield University,
Bedford, MK43 0AL
Tel: 0044 (0) 1234 754024
Fax: 0044 (0) 1234 754080
Website: www.euspen.eu

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