

Be part of the Pioneering
Advancements in Precision
Engineering and
Nanotechnology



euspen

Have representation across
32 countries worldwide

The Society

The European Society for Precision Engineering and Nanotechnology has a prestigious heritage. It was formed in 1998 when a group of leading industrialists and academics came together with a wish to provide a networking forum for this key community, complimentary to that which existed in both Japan and the US.

With a board of Directors drawn from leading companies and institutes across Europe, **euspen** today is a highly respected body of outstanding industrialists and researchers. Together, they set the standards for innovation in the field of precision, micro and nano engineering.

With representation across 32 countries worldwide, it provides a technical focus on:

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

euspen's aim is to introduce members to the latest research, technical developments, and foremost thinking in the field. It also provides a global network for organisations to work with others active in these areas and to promote their latest technologies, services and products.

In so doing it supports the competitiveness and technical excellence of hundreds of organisations world-wide.

Membership: CTOs; research institute directors; senior decision makers; leading engineers/technologists from industry and academia; technical sales personnel.



Theresa Burke
CEO



Presidents



Paul Shore, UK
2011- 2013
Pioneering researcher in ultra precision technologies



Paul Atherton, UK
2003-2005
Internationally renowned technology entrepreneur.



Henny Spaan, NL
2009-2011
President & CEO of leading Dutch company IBS Precision Engineering.



Kim Carneiro, DK
2001-2003
Founding director of the national metrology institute of Denmark.



Hendrik Van Brussel, BE
2007-2009
Pioneer in robotics and mechatronics research in Europe.



Manfred Weck, DE
2000-2001
Internationally recognized for definitive work on machine tools.



Ekkard Brinskmeier, DE
2005-2007
Distinguished leader in advanced manufacturing processes.



Pat McKeown, UK
1999-2000
Esteemed precision engineering business and technology leader.

Ultra Precision Manufacturing

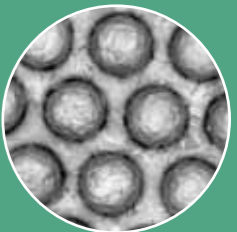
Today's high technology products depend critically on a range of ultra precision systems and processes for their creation. Relative accuracies to 1 part in 10^6 are required to enable the superior functionality of next generation products for space, aerospace, energy production, opto-electronics and displays, sensors and advanced medical devices. Such **ultra precision engineering** therefore forms the backbone of the manufacturing sector, providing the machines, tools and equipment needed.

Nanotechnology is concerned with manufacturing to dimensions or tolerances in the range 0.1-100 nanometre. When reaching this scale, which crosses into the atomic and molecular size arena, unique electrical, chemical and mechanical behaviour may be exhibited by structures, devices and systems. These novel properties may be exploited to provide e.g. stronger, lighter materials, more active catalysts or smaller, faster electronics. Often, a "critical dimension" of a specimen or product may be in the nanometre range, even if the specimen itself is of much greater dimension.

Metrology, from the Ancient Greek metron (measure) and logos (study of), is the science of measurement. Today's global economy depends on reliable measurements and tests, which are trusted and accepted internationally. As such, metrology is a natural and vital part of our everyday life: coffee and planks of wood are both bought by weight or size; water, electricity and heat are metered. The quantity of active substances in medicine and the effect of the surgeon's laser must also be precise if patients' health is not to be jeopardised.

For today's manufacturing base, this measurement infrastructure must be extended into the nanoscale and beyond, to bring nanotechnology based products or manufacturing processes successfully and safely into the market place. It must provide the ability to measure in three dimensions with atomic resolution over large areas. For industrial application this must also be achieved at a suitable speed/throughput.

euspen brings together leading expertise world-wide in the fields of precision engineering, nanotechnology and associated metrology, pushing forward the boundaries of manufacturing technologies.



The euspen network



euspen International Conferences & Exhibitions 1999-2012

- Bremen 1999 & 2007
- Copenhagen 2000
- Turin 2001
- Eindhoven 2002
- Aachen 2003
- Glasgow 2004
- Montpellier 2005
- Baden Bei Wien 2006
- Zurich 2008
- San Sebastian 2000/09
- Delft 2010
- Como 2011
- Stockholm 2012
- Topical Forums 1999-2010

euspen network offers countless opportunities to raise your profile and get involved with the global engineering and technology community.

Exchanging ideas with other members based in over 30 countries world-wide will give you an alternative perspective on your discipline.

Joining the network will enhance your profile by demonstrating your professional commitment to leading innovation.

It will help ensure you are the best equipped you can be for the professional challenges ahead - introducing you to the individuals, organisations and competencies you need. To date, more than 4000 experts have been brought together, fostering valuable new partnerships, essential to tomorrow's success.

Special interest groups bring you together with other like minded professionals across the world. Strategic programmes provide opportunities to contribute to government consultations and submissions.

With a **50:50 ratio of commercial companies to research institutes**, it offers a unique platform.

A place to survey or present latest knowledge, products, services and capabilities.

Get involved and raise your profile.

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euspen is grateful for the generous sponsorship of a number of leading companies who set the standard for developments in precision engineering and nanotechnology:

Our Sponsors

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www.agilent.com

As the world's premier measurement company, Agilent works in close collaboration with engineers, scientists, and researchers around the globe to meet the communications, electronics, life sciences, and chemical analysis challenges of today and tomorrow.

www.asml.com

ASML is the world's leading provider of lithography systems for the semiconductor industry, manufacturing complex machines critical to the production of integrated circuits or chips. ASML is committed to providing customers with leading edge technology, production-ready at the earliest possible date. ASML technology is supported by process solutions, enabling customers to gain and sustain a competitive edge in the marketplace.

www.bosch.com

In 1886, Robert Bosch founded the "Workshop for Precision Mechanics and Electrical Engineering" in Stuttgart. This was the birth of today's globally active Robert Bosch GmbH. Today the company supplies cutting edge technology in automotive equipment, power tools, thermo technology, household appliances, automation and packaging.

www.cranfieldprecision.com

Cranfield Precision has over 40 years experience in the design and manufacture of world beating high precision machine tools. Business areas encompass: ultra precision machine tools; precision measuring systems and custom designed special purpose machines. Cranfield Precision ensure customers achieve their manufacturing goals by pushing at the furthest boundaries of present day technology.

www.heidenhain.com

DR. JOHANNES HEIDENHAIN GmbH develops and manufactures linear and angle encoders, rotary encoders, digital readouts, and numerical controls for demanding positioning tasks. HEIDENHAIN products are used primarily in high-precision machine tools as well as the production and processing of electronic components. With their extensive experience and know-how, Heidenhain create the groundwork for the automation of tomorrow's plants and production machines.

Our Sponsors

www.ibspe.com

In IBS Precision Engineering you will recognise an innovator in high-grade precision engineering, active in intelligent measurement solutions that guarantee maximum precision, more efficiency and more productivity. IBS is involved in special machines, machine tool calibration & inspection, noncontact precision sensors, air bearings and laser interferometer systems. IBS will give you a head start when it comes to maximum accuracy. From micrometre to nanometre!

www.kugler-precision.com

Since 1983 Kugler has been manufacturing ultraprecision aerostatic and hydrostatic machine tools among the best in the world. By cooperation with renowned research institutes and associations, product and application know-how at the highest technical level is guaranteed. Comprehensive expertise down to the smallest detail guarantees perfection in all production steps.

www.lionprecision.com

Lion Precision have a passion for solving precision measurement problems and educating sensor users. Their application engineers, design engineers, technical and manufacturing staff pride themselves on an ability to find or create solutions for you. Working alongside customers, Lion Precision provide unique solutions to your unique measurement problems.

www.precitech.com

Precitech provides leading ultra precision single point and multi axis diamond turning machines. From simple machining to the most complex freeform applications. Precitech solutions are used in facilities around the world developing next generation technology for: Military and Defense, Optical systems and Ophthalmic, Medical implants, Biomedical sensors and instruments, and Automotive markets.


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Renishaw is a world leader in metrology and spectroscopy. They design, manufacture and supply metrology systems of the highest quality and reliability to enable customers worldwide to carry out dimensional measurements to traceable standards. In motion control, machine calibration, dental CAD/CAM, spectroscopy and neurosurgery, Renishaw innovations enhance precision, efficiency and quality.


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For over 40 years, Newport Corporation has been a leading global supplier of advanced technology products and solutions for Scientific Research, Life & Health Science, Aerospace & Defense, Industrial Manufacturing and Microelectronics markets. They deliver innovation in lasers, photonics instrumentation, sub-micron positioning systems, vibration isolation, optical components and subsystems and precision automation.


Membership aims



Membership is available on an individual or corporate basis. For those wishing to achieve higher profile, sponsoring membership is also available.



Technology and innovation have no geographic boundaries, and euspen is committed to enabling companies and technology professionals to stand out in a globally competitive environment.



Many euspen members join to connect with others, to share ideas and obtain knowledge. The companies and research institutes who belong to our organisation understand the value of euspen's world-wide network to identify and engage customers, suppliers and collaborators.

We understand from our members that balancing the continuum between technology development and business is a constant challenge. That's why euspen events and meetings are designed to

bring together a unique mixture of industry and scientific expertise - where competing ideas may be viewed together and unparalleled perspectives gained.

euspen provides a range of peer-reviewed publications aimed at advancing technological innovation and excellence. Limited circulation presentations and publications from leading experts provide further vital advantage in competitive fields and markets.

Young technologists are supported through scholarships, bursaries and dedicated training events. If you are looking to recruiting future technical leaders for your organisation or to find recruiting organisations, the euspen network will help you.

www.euspen.eu

Make a connection and be part of a world-wide networking forum

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