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14TH INTERNATIONAL CONFERENCE ON HIPIMS

Fourteenth International Conference on  
Fundamentals and Industrial Applications of HIPIMS  
24 - 27 June 2024, Sheffield, UK  
Venue: Cutlers' Hall

## Conference Announcement and Call for Papers

Organisers

**Sheffield  
Hallam  
University**  
Knowledge Applied

 National HIPIMS  
Technology Centre UK

 **Fraunhofer**  
IST

**I.M3**  Approved  
for CPD  
2024

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## Invitation to participate

Following a number of successful years, the Joint Sheffield Hallam University - Fraunhofer IST HIPIMS Research Centre is pleased to invite you to the fourteenth edition of the International Conference on HIPIMS. The traditional scope of High Power Impulse Magnetron Sputtering plasma and coating technology is now expanded to include a broad range of technologies for plasma coating, plasma surface treatments and non-plasma advanced surface engineering.

The conference goals are to:

- promote High Power Impulse Magnetron Sputtering (HIPIMS) as a novel manufacturing technology for surface modification and coating deposition
- provide a scientific forum for discussion on the fundamentals of plasma science
- exchange ideas for new industrial applications of HIPIMS
- connect the academic research community with the industrial world to foster progress of plasma-based technologies.

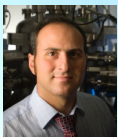
Sheffield is one of the largest cities in UK and as the birthplace of stainless steel has a long history of innovation in materials science and industry. Sheffield Hallam University is leading the way in scientific understanding and industrial implementation of HIPIMS for a range of applications and is said to be the most in-depth facility in this field. The University has provided a home for Industrial HIPIMS for many years and hosted the National HIPIMS Technology Centre in the UK since 2014. We are strengthened by our collaboration in the Joint Sheffield Hallam University - Fraunhofer IST HIPIMS Research Centre - the first of its kind in UK. We strive to contribute to society through our partnerships with the High Value Manufacturing Catapult - one of the largest catalysts for future growth and success of manufacturing in the UK, and have the support of the Henry Royce Institute, the Surface Engineering Association and the Institute of Materials, Minerals and Mining on the organising committee to further strengthen the impact of HIPIMS for both Industry and Academia.



The Coat of Arms of the Company of Cutlers



14TH INTERNATIONAL CONFERENCE ON HIPIMS



Prof. Arutun P. Ehasarian, Conference Chairman  
Sheffield Hallam University,  
Sheffield, UK



Dr. Ralf Bandorf, Conference Co-Chairman  
Fraunhofer Institute for Surface Engineering and  
Thin Films, Braunschweig, DE

## Organisers



National HIPIMS  
Technology Centre UK



Fraunhofer  
IST

HENRY  
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INSTITUTE

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High Value Manufacturing



**Tutorial Courses Provided by**  
Society of Vacuum Coaters

**Promoted and Approved by**  
European Joint Committee on  
Plasma and Ion Surface Engineering  
The British Vacuum Council



**BVC** The British  
Vacuum Council

## Conference Committees

### International Organising Committee

Prof. G. Bräuer Fraunhofer IST, Braunschweig, DE  
Dr. D. Doerwald Hauzer TechnoCoating, Venlo, NL  
Prof. C. Herrmann Fraunhofer IST, Braunschweig, DE  
Prof. A. P. Ehasarian Sheffield Hallam University, Sheffield, UK  
Dr. J. Landsbergen IHI Ionbond AG, Venlo, NL  
Dr. P. Ozimek Trumpf Hüttinger Electronic Sp. z o.o., Warsaw, PL

### International Scientific Committee

Prof. A. Anders Leibniz-Institute IOM, Leipzig, DE  
Prof. P. Awakowicz Ruhr-Universität Bochum, DE  
Dr. R. Bandorf Fraunhofer IST, Braunschweig, DE  
Prof. H. Kersten, Kiel University, DE  
Prof. James Bradley, University of Liverpool, UK  
Prof. G. Bräuer Fraunhofer IST, Braunschweig, DE  
Prof. W. Cranton Sheffield Hallam University, Sheffield, UK  
Prof. A. P. Ehasarian Sheffield Hallam University, Sheffield, UK  
Mr. D. Elliot Surface Engineering Association, Birmingham, UK  
Dr. T. Hurkmans IHI Ionbond AG, Venlo, NL  
Mr. P. Kaestner, TU Braunschweig, DE  
Prof. J. Schneider RWTH, Aachen, DE  
Prof. S. Turner High Value Manufacturing Catapult, Solihull, UK  
Prof. J. Vlcek University of West Bohemia, Plzen, CZ



## Topics of HIPIMS 2024

HIPIMS 2024 will provide a forum for presenting the latest research by scientists and engineers from industry, engineering institutes and academia. Contributions will cover fundamental scientific aspects as well as application-oriented research and development. In addition, successful introduction to market of new products utilising HIPIMS will be addressed.

HIPIMS 2024 will focus on the following topics:

- Generation of HIPIMS and highly ionised plasmas
- Plasma diagnostics and discharge physics
- Coating characterisation and performance
- Reactive and non-reactive HIPIMS processes
- Simulation of HIPIMS processes
- HIPIMS systems and hardware

## Quo Vadis Surface Engineering

David Elliot, CEO of the Surface Engineering Association, will be chairing our panel of experts discussion on the topic: "Surface Engineering in the Digital Age: Transformative Opportunities".

## Call for Papers

As a truly international conference, HIPIMS 2024 will present the most recent results of scientific research as well as new applications in the field of HIPIMS technology. If you wish to present your latest research results or you have developed a new application, your contribution will be very welcome. We encourage you to submit your abstract to:

**[hipims@shu.ac.uk](mailto:hipims@shu.ac.uk)**

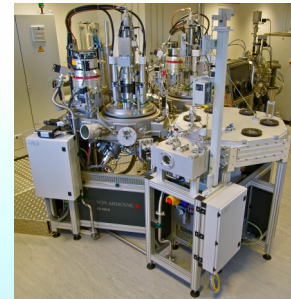
Abstracts (max. 1 page incl. illustration) should be written in English and should include name, address and e-mail of the contact author.

Submission of one page abstract: **4 March 2024**

Acceptance notification: **25 March 2024**

Young Scientist Award

Manuscript Submission: **3 June 2024**







## SVC Tutorial Courses

The Society of Vacuum Coaters is endorsing three of its tutorial courses. Take advantage of learning from these outstanding, internationally recognized instructors and getting answers to your practical vacuum coating problems.

**Monday, 24 June** - full day

**SVC C-323:** High Power Impulse Magnetron Sputtering

**Prof. Arutiun P. Ehasarian**

Fraunhofer IST, Braunschweig, Germany

**Tuesday, 25 June** - half day, morning

**SVC C-338:** Application of Reactive Sputtering

**Dr. Ralf Bandorf**

Fraunhofer IST, Braunschweig, Germany

**Mr. Holger Gerdes**

Fraunhofer IST, Braunschweig, Germany

**Tuesday, 25 June** - half day, afternoon

**SVC C-333:** Practice and Applications of HIPIMS

**Dr. Ralf Bandorf**

Fraunhofer IST, Braunschweig, Germany

**Prof. Arutiun P. Ehasarian**

Sheffield Hallam University, Sheffield, UK

## Tutorial Course Fee:

Full rate:	<b>C-323:</b>	<b>GBP 400</b>
	<b>C-333 and C-338:</b>	<b>GBP 200</b>
Full-time Students	<b>C-323:</b>	<b>GBP 150</b>
	<b>C-333 and C-338:</b>	<b>GBP 90</b>

Register for two or more tutorials and receive a **10% total discount**

The tutorial course fee includes printed notes.

The tutorial schedule is:

C - 323: 8:30am - 4:30pm,

C - 338: 8:30am - 12:00pm and

C - 333: 1:00pm - 4:30pm.

To view the topical outline, description and detailed syllabus for these tutorial courses, visit the SVC Web Site at

**<https://www.svc.org/tutorials/>**

Register for these tutorial courses when registering for the conference.

## Contact (for tutorial course information)

Mr. Frank Zimone Tel.: +1 505 897-7743

SVC Executive Director

Society of Vacuum Coaters [svcinfo@svc.org](mailto:svcinfo@svc.org)

P.O. Box 10628 | Albuquerque, NM 87184 USA



### Conference Fees

Industry	<b>GBP 500</b>	The conference fee includes all technical sessions, book of abstracts, lunches, coffee breaks and the official conference dinner.
Academia	<b>GBP 400</b>	
Students	<b>GBP 150</b>	
Exhibition Space Charge	<b>GBP 250</b>	

### Contact (submission of Abstract)

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### Exhibition

Company participation has always been at the heart of this event with exhibits which are held in parallel to the conference and are in the immediate vicinity of the lecture theatre. Take the opportunity to present your products and services with precision to your target audience. Make valuable contacts. During the conference you will be exposed to key players in the industry accurately, concisely and with a minimum expenditure. We are looking forward to welcoming you here.

### Sponsorship Opportunities

As a sponsor, your company or organisation gains a clear presence within a select circle of participants. During the event we offer a number of possibilities to position your company and connect with potential customers. Take advantage of sponsoring HIPIMS 2024 to address an existing target group, and to enhance your profile in a new industry. Please contact us if you would like to join the group of sponsors.

## Experience Sheffield

With a population of 600'000, Sheffield is one of the largest in UK and one of the main cities in the County of Yorkshire. Founded by Anglo-Saxons before 9th century, Sheffield's growth came about during the Industrial Revolution when it became the centre for cutlery industry in the country. Inventions of high adhesion Sheffield Plate, crucible steel, stainless steel, 18/8 steels and the first industrial production of steel by the Bessemer conversion process all originated in Sheffield and are featured in the Kelham Island Industrial Museum.

Town Hall 1897



Winter Gardens 2003



Historical buildings, theatres, gardens and the natural beauty of the Peak District - Britain's first national park - are all within easy reach.



Tilt Hammer  
Abbeydale Industrial Hamlet 1785



Steam Engine -  
Kelham Island Museum



HIPIMS Discharge  
at Sheffield Hallam  
University  
2003





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Looking forward to welcoming  
you from Sheffield!

Organisers



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