

2nd SUMMER SCHOOL

SEPTEMBER 11 2023

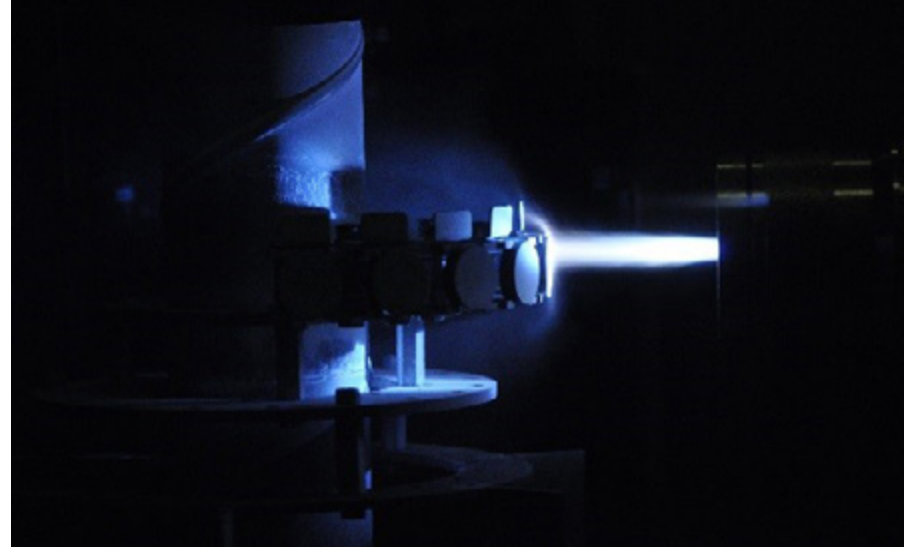
on
Suspension & Solution
Thermal Spraying



SUMMER SCHOOL THEME

Exploiting suspensions or solution precursors for varied functional applications represents a new frontier in thermal spraying and has attracted significant global interest. Use of such liquid feedstock results in unique microstructural features, significantly different from conventional powder-derived coatings.

This approach can be harnessed to develop coatings with diverse functionalities (thermal barrier, environment barrier, wear resistant, superhydrophobic, biocompatible, etc.) relevant to industries like aerospace, biomedicine, energy conversion, automotive etc. Recent developments in thermal spray equipment and feedstock have also mitigated early productivity concerns associated with the technique.



This event follows the success of the previous 'Summer School on Suspension & Solution Thermal Spraying' held in Trollhättan in 2016, bringing together people from both academia and industry. It will include lectures from experts covering all major aspects of liquid feedstock thermal spraying, ranging from fundamentals and process diagnostics to characterisation and applications. A demonstration of the versatile liquid feedstock plasma spraying equipment available at University West will also be included.

HOST – UNIVERSITY WEST TROLLHÄTTAN, SWEDEN

University West was founded in 1990 and currently has about 13,200 students. The research concerning production processes in manufacturing industry is conducted at Production Technology Centre (PTC) in close collaboration with a variety of businesses. The thermal spray research group at University West is the most active and well-equipped thermal spray R&D group in Sweden and was the pioneer in starting up research at University West in the 90s.

Trollhättan is home to a number of high-tech companies, such as GKN Aerospace (producing jet engines and developing rocket engine technology) and NEVS (National Electric Vehicle Sweden – developing its platform for the future generation of electric cars in the former SAAB Automobile factory). In fact, 90% of the world's aeroplanes contain parts manufactured in Trollhättan. The School venue and participants' accommodation will be conveniently located close to the city centre, eliminating need for time-consuming and costly transportation.



WHO SHOULD ATTEND?

All stakeholders (students, scientists, engineers, academicians and consultants) who are associated with the field of surface engineering in any manner.

The school will be organised the day before start of the ASM Thermal Spray Society event [Thermal Spray of Suspensions & Solutions Symposium + EBCs 2023 \(TS4E 2023\)](#), which will take place on September 12–13, 2023 at University West, Sweden.

IN PARTICULAR, PARTICIPATION IN THE SCHOOL WILL BE OF GREAT INTEREST TO:

Young scientists and students, keen to learn about new developments in thermal spray processes.

Knowledgeable researchers, seeking to explore new areas in surface engineering

Experienced thermal spray practitioners, wanting to exploit advanced thermal spray methods, like suspension spraying SPS, SPPS, S-HVOF etc.

Designers and consultants, wishing to familiarize themselves with latest developments

Feedstock manufacturers and developers, with specific focus on nano-sized and sub-micron powders, their suspensions and/or solution precursors

Manufacturers and developers of thermal spray equipment and accessories (spray guns, solution delivery devices etc.)

SPEAKERS

Thomas Coyle

University of Toronto, Canada

Nicholas Curry

Northwest Mettech Corp., Canada

Ali Dolatabadi

University of Toronto, Canada

Tanvir Hussain

University of Nottingham, UK

Shrikant Joshi

University West, Sweden

Nicolaie Markocsan

University West, Sweden

Christian Moreau

Concordia University, Canada

Richard Trache

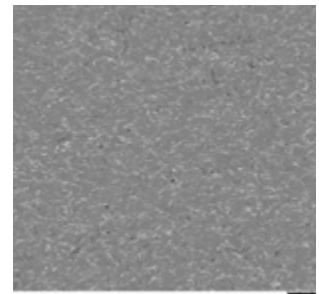
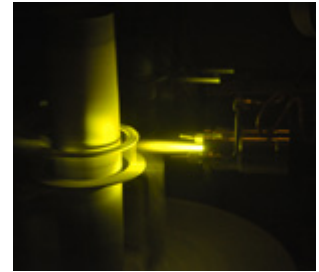
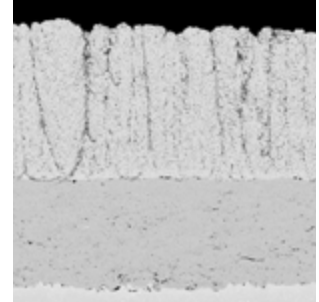
Treibacher Industrie AG, Austria

Stefan Zimmerman

Lincotek Surface Solutions, Italy

TOPICS

- Fundamentals of coating formation – SPS and SPPS
- Modelling of coating formation - SPS/SPPS
- Feedstock preparation, economy and safety
- Advanced TBCs and EBCs
- Wear, superhydrophobic, other non-TBC/EBC applications
- Equipment and diagnostics considerations
- SPS on complex parts
- New thermal spray approaches employing liquid feedstock
- SPS Demonstration



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REGISTRATION

The course fee includes:

- one day on various topics related to suspension and solution thermal spraying and SPS demonstration
- all meals part of the program
- course material
- course certificate

Course fee:

- Student: 1000 SEK
- ETSA member: 2000 SEK
- Non-ETSA member: 3000 SEK

Hotel:

All participants may book accommodation at partner Hotels in Trollhättan at a discounted price.



Venue ADDRESS:

NOVA MAT OCH MÖTEN
Åkersjövägen 10
461 53 Trollhättan Sweden

Please book your spot on hv.se/summerschool

