



ITSC2018
INTERNATIONAL THERMAL SPRAY
CONFERENCE AND EXPOSITION

May 7-10, 2018

Gaylord Palms Resort & Convention Center
Orlando, Florida, USA



ASM International
9639 Kinsman Road
Materials Park, OH 44073-0002



May 7-10, 2018 / Orlando, Florida, USA

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ADVANCE BROCHURE

Co-located with:

AEROMAT 18
CONFERENCE AND EXPOSITION

On behalf of the ASM International Thermal Spray Society (TSS), the German Welding Society (DVS), and the International Institute of Welding (iiw), we invite you to attend the International Thermal Spray Conference and Exposition 2018.

ITSC 2018, located in Orlando, Florida, USA, is where the global thermal spray community will meet and conduct business. This year, ITSC 2018 is co-located with AeroMat offering **2X** the technical program, **2X** the exhibiting companies, and **2X** the connections, all for the price of one show!

Organized by:



Can't Miss Events Include:

- ➔ NEW! Interactive Forums Related to New Technologies and Market Trends
- ➔ NEW! Industry-Focused Chat Sessions
- ➔ Special Keynote Presentations from Prestigious Industry Experts
- ➔ More than 500 information-packed technical sessions
- ➔ A special "Taste of North America" joint networking event with ITSC/AeroMat attendees
- ➔ Oerlikon Metco Young Professionals Session and Competition
- ➔ And much more!

ITSC 2018 General Chairs

D. Puerta, Precision Castparts (US)
W. Krömmer, The Linde Group (DE)

ITSC 2018 Technical Chairs

A. McDonald, University of Alberta (CA)
K. Bobzin, RWTH Aachen University (DE)

REGISTER TODAY AT:
www.asminternational.org/itsc

Registration and Hotel

Visit www.asminternational.org/itsc to register for the conference and secure your hotel reservation.

REGISTRATION FEES	Early Bird Rate (on or before 3/30/18)	Regular Rate (3/31/18 - 5/4/18)	OnSite Rate (after 5/4/18)
Full Conference - Member	\$1,025	\$1,175	\$1,225
Full Conference - NonMember	\$1,180	\$1,330	\$1,380
Speaker - Member	\$850	\$975	\$1,025
Speaker - NonMember	\$950	\$1,075	\$1,125
Student Full Conference - Member	\$299	\$299	\$299
Student Full Conference - NonMember	\$350	\$350	\$350
Expo Only	\$50	\$50	\$100
NEW 1-year ASM + TSS Membership	\$152		
1-year ASM + TSS Membership Renewal	\$147		

ITSC Headquarter Hotel

(location of all conference activities):

Gaylord Palms Resort & Convention Center

6000 West Osceola Parkway
 Kissimmee, FL 34746

Sleeping Room Rate:

\$199 single/double
 (inclusive of resort fee)

Reservation Cut-off Date:

April 16, 2018 (or when room block sells out, whichever occurs first)

Location: Approximately 19 miles from the Orlando International Airport (MCO)

Don't delay! The sleeping room block WILL sell out!

Special Symposia and Keynote Presentations

Monday, May 7, 2018

12:30 – 1:30 p.m.

***SPECIAL FORUM: Materials Development:
New Technologies and Market Trends***

This interactive forum and panel session will highlight new technologies, new market segments, and new market trends in thermal spraying, with a focus on the industrial sector. Dr. Iver Anderson, Senior Metallurgist at Ames Laboratory (USDOE) will kick-off the session with a high level overview of new technologies and market trends and will then moderate a lively discussion from a panel of experts.

1:30 – 2:30 p.m.

Joint Keynote Presentation with AeroMat

Against a background of today's low risk culture, Richard Noble specializes in developing high risk ventures. Obviously, not all of them can be successful, but the Thrust2 program, which brought the World Land Speed Record back to Britain in 1983, and the Thrust SSC first ever supersonic land speed record program, are the best known.



Richard Noble's other projects include the ARV Super2 light aircraft, the Atlantic Sprinter Blue Riband contender, Programme Funding, an original television funding company, Farnborough Aircraft, the first distributed travel air taxi aircraft and currently the Mach 1.4 Bloodhound SSC project, the latest in the long line of Land Speed Record cars now being run through 3600UK schools.

Attend this special keynote session to be inspired by Richard's message on the importance of innovation, risk taking and never giving up!

Tuesday, May 8, 2018

10:30 a.m. – 12:00 p.m.

***SPECIAL FORUM: Metallic Materials
Qualification and Component Certification***

Metallic Additive Manufacturing has the opportunity to provide the aerospace industry with many benefits, including component light weighting, increased system performance, reduction in component lead time and increased aircraft readiness. The panel session will cover current efforts to develop qualification and certification practices, success stories from OEMs who have qualified and flown AM parts and the most pressing challenges and risks that still need to be resolved. The following companies will be represented on the panel: Arconic Titanium and Engineered Products, The Boeing Company, European Space Agency, Federal Aviation Administration, GE Additive; GKN Aerospace and NAVAIR.

12:15 – 1:15 p.m.

***SPECIAL FORUM: Additive Manufacturing:
Post Processing World Roundtable***

This roundtable discussion will feature a panel of experts, discussing the following Additive Manufacturing topics: post processing thermal treatment; testing; post processing machining; and post process finishing.

1:30 – 3:00 p.m.

Joint Keynote Presentations with AeroMat



Tommaso Ghidini
Head of Structures, Mechanisms
and Materials Division
European Space Agency



Dr. James Ruud
Senior Principal Scientist
GE Global Research

NEW IN 2018! Interactive Forums

Join fellow attendees for special forums featuring NEW technologies, NEW market segments and NEW market trends:

- ➔ **Monday, May 7, 2018 – 12:30 – 1:30 p.m.**
Materials Development: New Technologies and Market Trends
- ➔ **Tuesday, May 8, 2018 – 10:30 a.m. – 12:00 p.m.**
Additive Manufacturing: Metallic Materials Qualification and Component Certification
- ➔ **Tuesday, May 8, 2018 – 12:15 – 1:15 p.m.**
Additive Manufacturing: Post Processing World Roundtable

NEW IN 2018! Industry-Focused Chat Sessions

During large conferences, we all know it's a challenge to find meaningful, one-on-one or small group networking opportunities with your peers and colleagues. We're here to help! We are putting together a unique opportunity to share your knowledge and learn from the people around you, in small groups! You'll be able to start your own topic or join one of interest. Topics will be limited to 5 people and under.

Special Keynote Presentation

Don't miss inspiring messages and important updates from the following well-known industry experts, including Richard Noble, Project Director, The Bloodhound Project; James Ruud, Principal Scientist, GE Global Research; and Tommaso Ghidini, Head of Structures, Mechanisms and Materials Division, European Space Agency.

The Price Is Right!

For one registration fee, ITSC conference attendees will have access to the technical programming for two conferences: ITSC 2018 and AeroMat 2018.

More Than 500 Technical Sessions

Learn the latest research and development in your field during symposiums focused on Thermal Spray Applications, Fundamentals/R&D, and Advanced Coatings for the Aerospace Industry (joint symposium with AeroMat). ITSC attendees will also have full access to AeroMat technical programming, AT NO ADDITIONAL COST. Visit the event website to check out the full line-up of presentations.

Networking

We're bringing in the best food and entertainment from around the United States. From the exhibitor networking reception to a special "Taste of North America" networking event, attendees will have the opportunity to build business relationships and network with key contacts across two industries.

Oerlikon Metco Young Professionals Competition

The organizers of the ITSC 2018 and Oerlikon Metco will again offer the young innovative scientists/professionals competition-based award and recognition program. The goal is to encourage participation of young scientists in ITSC, to provide exposure to students and young scientists, and open potential opportunities for them in the global thermal spray community.

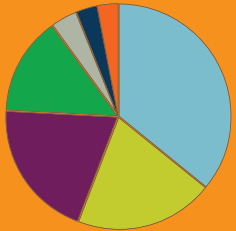
Exhibition

Visit and network with more than 200 exhibits in the thermal spray and aerospace industry, all under one roof.

5K Fun Run/Walk

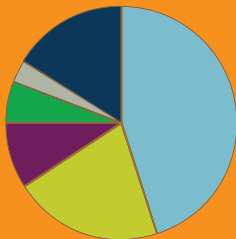
Enjoy a healthy mix of philanthropy and exercise! This event offers attendees an energetic and lively way to start the day while giving back to the ASM Materials Education Foundation. Don't feel like getting up at 6am? That's okay! You can donate to NOT run! We've got you covered!

WHO ATTENDS ITSC?



Connect with Decision Makers

- Engineer/Scientist **(36%)**
- CEO/President/General Management **(20%)**
- Manager/Supervisor of Division or Group **(20%)**
- Program/Project Manager **(14%)**
- Technician/Operator **(4%)**
- Academician **(3%)**
- Student **(3%)**



Connect with These Industries

- Thermal Spray **(45%)**
- Aerospace **(21%)**
- Contract/R&D/Consulting/Testing **(9%)**
- Academics **(6%)**
- Other Industries **(16%)**
- Primary Metals Production **(3%)**

TOP REASONS YOU SHOULD EXHIBIT

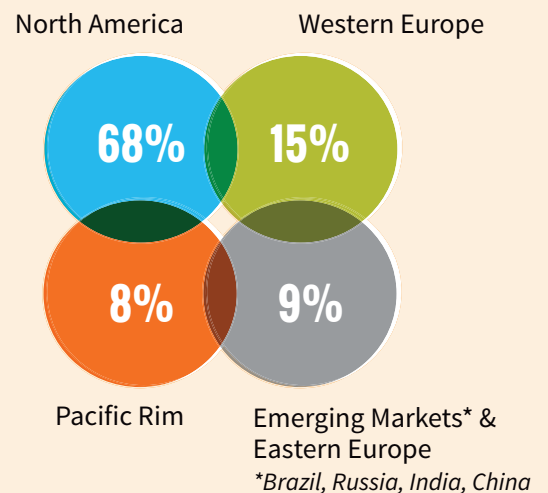
- ### 1 Simulation Capital of the World

Anchored by Lockheed Martin, Orlando is known as the capital of modeling and simulation with a world-leading community of healthcare, aviation and aerospace experts and home to the National Center for Simulation.
- ### 2 Advanced Manufacturing

Orlando's spirit of innovation is evident with the International Consortium for Advanced Manufacturing Research (ICAMR), looking to lead the market in the development.
- ### 3 Innovative Technologies

Technology is Orlando's second-largest industry behind tourism, housing a vibrant tech scene with high-tech digital media and creative companies like Electronic Arts Tiburon and the Golf Channel, plus an emerging new tech village known as the Creative Village to lead business innovation.

4 Connect with an International Audience



Conference Schedule-At-A-Glance (Subject To Revision)

Saturday, May 5, 2018

8:30 a.m. - 4:30 p.m.

**ASM/TSS Education Course:
Introduction to Thermal Spray (Day 1)*

Sunday, May 6, 2018

8:30 a.m. - 4:30 p.m.

**ASM/TSS Education Course:
Introduction to Thermal Spray (Day 2)*

8:30 a.m. - 4:30 p.m.

**ASM/TSS Education Course:
Introduction to Cold Spraying*

4:00 - 8:00 p.m.

Conference Registration Open

**Separate registration required*

Monday, May 7, 2018

7:00 a.m. - 6:30 p.m.

Conference Registration Open

8:00 a.m. - 12:10 p.m.

ITSC Technical Programming

12:00 - 7:00 p.m.

Exhibit Hall Open

12:10 - 1:30 p.m.

Lunch on the Show Floor

12:30 - 1:30 p.m.

*ITSC Special Forum, "Materials
Development: New Technologies
and Market Trends"*

1:30 - 2:30 p.m.

*Combined Plenary Session with ITSC/
AeroMat*

2:30 - 3:00 p.m.

TSS Hall of Fame Awards

3:00 - 3:30 p.m.

Refreshment Break on the Show Floor

3:30 - 5:30 p.m.

ITSC Technical Programming

5:30 - 6:30 p.m.

ITSC Poster Session

5:30 - 7:00 p.m.

Expo Welcome Reception

Tuesday, May 8, 2018

6:00 a.m.

**5K Fun Run, Proceeds Benefit the
ASM Education Foundation*

7:00 a.m. - 5:00 p.m.

Conference Registration Open

8:00 - 11:50 a.m.

ITSC Technical Programming

9:30 a.m. - 5:00 p.m.

Exhibit Hall Open

10:00 - 10:30 a.m.

Refreshment Break on the Show Floor

10:30 a.m. - 12:00 p.m.

*Special Forum, "Additive Manufacturing:
Metallic Materials Qualification and
Component Certification"*

12:00 - 1:00 p.m.

Lunch on the Show Floor

12:15 - 1:15 p.m.

*Special Forum, "Additive Manufacturing: Post
Processing World Roundtable"*

1:30 - 3:00 p.m.

Combined Plenary Session with ITSC/AeroMat

3:00 - 3:30 p.m.

Refreshment Break on the Show Floor

3:30 - 4:15 p.m.

Oerlikon Metco Young Professionals Session

4:15 - 5:00 p.m.

*TSS/ITSC Award Presentations: TSS President's
Award, ITSC Best Paper Award, JTST Best
Paper Award, Historical Landmark, Oerlikon
Metco Young Professionals Award*

7:00 - 9:30 p.m.

***"Taste of North America" Networking Event*
with AeroMat*



Short Courses

Wednesday, May 9, 2018

7:30 a.m. - 5:00 p.m.

Conference Registration Open

8:00 a.m. - 12:00 p.m.

ITSC Technical Programming

9:30 a.m. - 4:00 p.m.

Exhibit Hall Open

10:00 - 10:30 a.m.

Refreshment Break on the Show Floor

12:00 - 1:30 p.m.

Lunch on the Show Floor

1:00 - 4:50 p.m.

ITSC Technical Programming

3:00 - 3:30 p.m.

Refreshment Break on the Show Floor

Thursday, May 10, 2018

7:30 a.m. - 12:00 p.m.

Conference Registration Open

8:00 a.m. - 11:50 a.m.

ITSC Technical Programming

10:00 - 10:30 a.m.

Refreshment Break

12:00 p.m.

Conference Adjourns

Improve your knowledge by taking an ASM Thermal Spray Society education short course.

Taught by industry experts, these interactive learning experiences will help you stay up-to-date and competitive. Separate registration is required for these courses.

Introduction to Thermal Spraying

Saturday, May 5 and Sunday, May 6, 2018

8:30 a.m. - 4:30 p.m.

Instructor: Chris Berndt

Thermal spraying has evolved from a technology designed to be a cost effective method of repairing worn components and machined parts to a process used to provide improved part performance and add longer life to components. As the thermal spray profession has changed, so has the need to ensure safe and consistent methods for thermal spray operators. Leaders in the Thermal Spray Society were brought together to compile their knowledge and experience in a comprehensive, easy to understand course.

Member: \$870 | **Non-Member:** \$1,030 | **Student:** \$550

Introduction to Cold Spraying

Sunday, May 6, 2018

8:30 a.m. - 4:30 p.m.

Co-Instructors: Bertrand Jodoin; Kumar Sridharan

This course will cover the following topics: an overview/introduction to cold spray (historical perspective, how it fits within Substrate preparation and particle impact/bonding mechanism physics; CS additive manufacturing process; commercial applications (aerospace, nuclear, automotive, others), requirements from industry; importance of powder in cold spray (shape, size, oxide level, purity, etc); health and safety.

Member: \$525 | **Non-Member:** \$725 | **Student:** \$275