



# 6<sup>th</sup> Asian Thermal Spray Conference

**November 24-26, 2014**

**Hotel Novotel Hyderabad Airport**

**Hyderabad, India**



Organized by  
**International Advanced Research Centre  
for Powder Metallurgy and New Materials (ARCI)**  
Hyderabad, India

*In association with*

**Asian Thermal Spray Society**



## About ATSC

The Asian Thermal Spray Conference (ATSC), following concerted efforts by all segments of the thermal spray community in the member countries, has emerged as a flagship event in the Asia-Pacific region. The major objective of the event is to provide an attractive forum for all stakeholders (researchers from industry, R&D institutions and academia; practitioners from thermal spray service providers; equipment and feedstock manufacturers as well as OEMs and users) from across the region to network in order to foster a fruitful interaction during and after the conference. The event is also expected to provide an ideal platform for researchers and engineers to familiarize themselves with recent advances in this rapidly evolving, yet industrially well-entrenched, technology as well as for various companies to exhibit relevant products to a dedicated audience. The past editions of the event organized in Japan, Korea, Singapore and China were extremely successful in realizing the above objectives. The 6<sup>th</sup> edition of ATSC, to be held in India for the first time, will be organized in the city of Hyderabad from 24-26 November 2014.



## About ATSS

The Asian Thermal Spray Society (ATSS) is a regional society with a mission to promote advancement of research and development and industrial applications of thermal spray technology in Asian countries. Through the ATSC series, ATSS has provided a forum to regularly share the latest advancements in the field of thermal spray technology.

## About ARCI

The International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI) is an R&D institution of DST specifically setup with a mission to develop unique, novel and techno-commercially viable technologies in the area of advanced materials and subsequently transfer them to Indian industries. "Translating Research to Technology" has been ARCI's motto and the institute has set for itself the task of striving to bridge the gap between conventional research institutes and laboratories and the high-technology industries. One of the thrust areas of ARCI is surface engineering. ARCI has been playing a leading role in the development and demonstration of state-of-the-art surface engineering technologies of industrial relevance and is now recognized globally as a centre of excellence in the field. The Centre's foremost accomplishments have included the successful transfer and implementation of Detonation Spray Coating (DSC), Micro-Arc Oxidation (MAO) and Electro-Spark Coatings (ESC) technologies. Significant progress has been made in taking the Cold Spray Coating (CSC) process closer to commercialization and interesting developments have also been made using the Solution Precursor Plasma Spray (SPPS) facility established recently. Electron Beam Physical Vapour Deposition (EBPVD), Cylindrical Rotating Cathodic Arc PVD and Pulse Electrodeposition (PED) systems at the Centre have been utilized to initiate major programmes in the areas of thermal barrier coatings and nanocomposite wear resistant coatings, respectively.

## Distinguished Speakers

The conference has already enthused considerable all round interest, with several leading experts in the field consenting to deliver Plenary/Invited lectures. Some of the confirmed speakers are listed below:

- Chang Jiu Li, Xi'an Jiaotong University, China
- Changhee Lee, Hanyang University, Korea
- Christian Moreau, Concordia University, Canada
- Christopher Berndt, Swinburne University of Technology, Australia
- William Clyne, Cambridge University, UK
- KA Khor, Nanyang Technological University, Singapore
- Seiji Kuroda, National Institute of Materials Science, Japan
- Sanjay Sampath, Stony Brook University, USA
- Richard Schmid, Sulzer Metco, Switzerland
- G Sundararajan, International Advanced Research Centre for Powder Metallurgy & New Materials, India
- Armelle Vardelle, University of Limoges, France
- Arvind Agarwal, Florida International University, USA
- Jun Akedo, Advanced Industrial Science & Technology, Japan
- Kyeong Ho Baik, Chungnam National University, Korea
- M Fukumoto, Toyohashi University, Japan
- Hongbo Guo, Beihang University, China
- Margaret Hyland, University of Auckland, New Zealand
- J Karthikeyan, ASB Industries, USA
- M Kamaraj, Indian Institute of Technology-Madras, India
- Akira Kobayashi, Osaka University, Japan
- Wen-Ya Li, Northwestern Polytechnical University, China
- Graham McCartney, University of Nottingham, UK
- Per Nylen, University West, Sweden
- K Ogawa, Tohoku University, Japan
- G J Yang, Xi'an Jiaotong University, China
- Petri Vuoristo, Tampere University of Technology, Finland

## Important Dates

Submission of Abstract: May 01, 2014

Submission of Short Manuscript for Proceedings: September 15, 2014

Conference: November 24-26, 2014

Thermal Spray Course: November 22-23, 2014

## Registration

The Registration Fee structure for participation in ATSC-2014 is as follows:

Category	Foreign Participants	Indian Participants
Oral Presentation/Poster Presentation/Participation	\$ 350	₹ 9,000
<i>Early-Bird Registration Discount (register before September 01, 2014)</i>	<i>\$ 300</i>	<i>₹ 8,000</i>
Students	\$ 200	₹ 4,000

Payment by electronic transfer should be made to the following account:		For Remittances in US Dollars
Account Name	ARCI ATSC	A/c with Institution : Canara Bank, International Division, Mumbai
Account Type	Current Account	SWIFT : CNRBINBBBID
IFSC Code	CNRB0001849	Intermediary Institution : JP Morgan Chase Bank, New York
Account Number	1849201000686	SWIFT : CHASUS33
Bank	Canara Bank	ABA Routing No. 021 000 021
Branch	Kanchanbagh	

The above indicated registration fee for Indian participants reflects the subsidy made possible by funds expected from Government sponsoring agencies. The registration fee entitles (a) entry to all technical sessions (b) refreshments, lunches and dinners on all conference days and (c) conference kit. Accommodation is not included.

## Call for Abstracts

The Technical Program at the 6<sup>th</sup> ATSC will address diverse aspects related to thermal spray science and technology, ranging from fundamental research to industrial applications. Prospective authors are invited to submit abstracts of papers dealing with, but not restricted to, any of the several themes listed below:

- Cold Spray/Kinetic Spray
- Solution and Suspension based Spray Processes
- Advances in Thermal Spray Processes
- Hybrid Spray Processes
- Thermal Barrier Coatings
- Repair & Refurbishment
- Wear & Corrosion Protection
- Novel Functional Applications
- Modelling & Simulation
- Process Control & Diagnostics
- Processing-Structure-Property correlations
- Advanced Characterization of Coatings
- Mechanical Properties of Coatings
- Environmental/Occupational Safety
- Advanced Material Systems

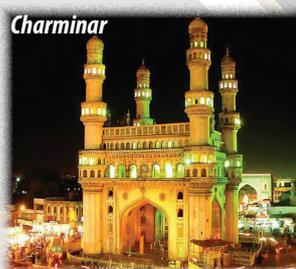
An abstract of approximately 500 words accompanied by all details requested in the accompanying Registration Form, should reach the Conference Secretariat no later than May 01, 2014. Abstracts received shall be considered for both Oral and Poster presentation. Those authors specifically preferring poster presentations should indicate so. Short manuscripts of all accepted papers to be presented at ATSC-2014, orally or in poster form, will be included in proceedings to be published in a book form. In order to ensure that the publication exercise is accomplished on schedule to make the proceedings available to the participants during ATSC-2014, complete manuscripts (prepared according to guidelines to be issued subsequently) will be due by 15<sup>th</sup> September 2014. Efforts are also being made to have selected papers appear as part of a special issue of Journal of Thermal Spray Technology dedicated to ATSC-2014.

## Hyderabad City: A Blend of Rich Tradition and Modern Sophistication

ATSC-2014 will be organized in the South Indian city of Hyderabad. Besides having an international airport of its own with direct flights from many overseas destinations, Hyderabad, with its twin city Secunderabad, is the 5<sup>th</sup> largest city in India well-connected with all other Indian cities. The city is cosmopolitan, and is richly endowed with a variety of cultures. Widely accepted as the "research capital of India" and already a prominent IT hub, Hyderabad is a place where modern sophistication blends majestically with rich tradition handed down the ages from a glorious history. Reliving the past is a rejuvenating experience in this city where old monuments and mausoleums attract the tourists. Opportunities for shopping abound in this "pearl city" and the famous Hyderabad cuisine is also certain to tickle any visitor's palate. Hyderabad is at an altitude of 536 meters above sea level with pleasant temperatures ranging between 20-30°C during the Conference.

## Conference Venue

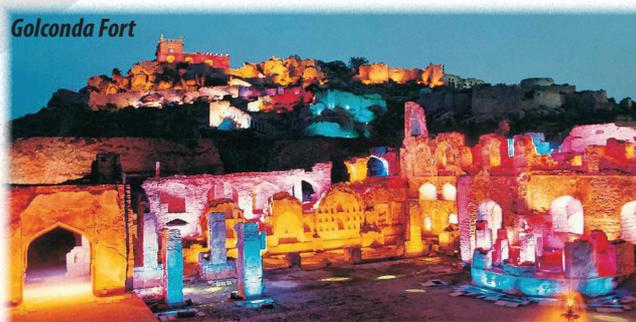
The Conference Venue, Hotel Novotel Hyderabad Airport ([www.novotelhyderabadairport.com](http://www.novotelhyderabadairport.com)) is located amidst 5 acres of beautifully landscaped area in this historical city, just 5 minutes from Rajiv Gandhi International Airport. Offering an outstanding sensory experience, the hotel surpasses the standard of luxury hotel with its modern architecture and world class amenities. This secluded retreat, where architecture echoes beauty, offers unique experience of remote accommodation to make you feel close to nature while you still savour the comfort, convenience and amenities of a business hotel or luxury of a resort. The Hotel is approximately 35 minutes from the city centre with excellent connectivity and access.



Charminar



Ramoji Film City



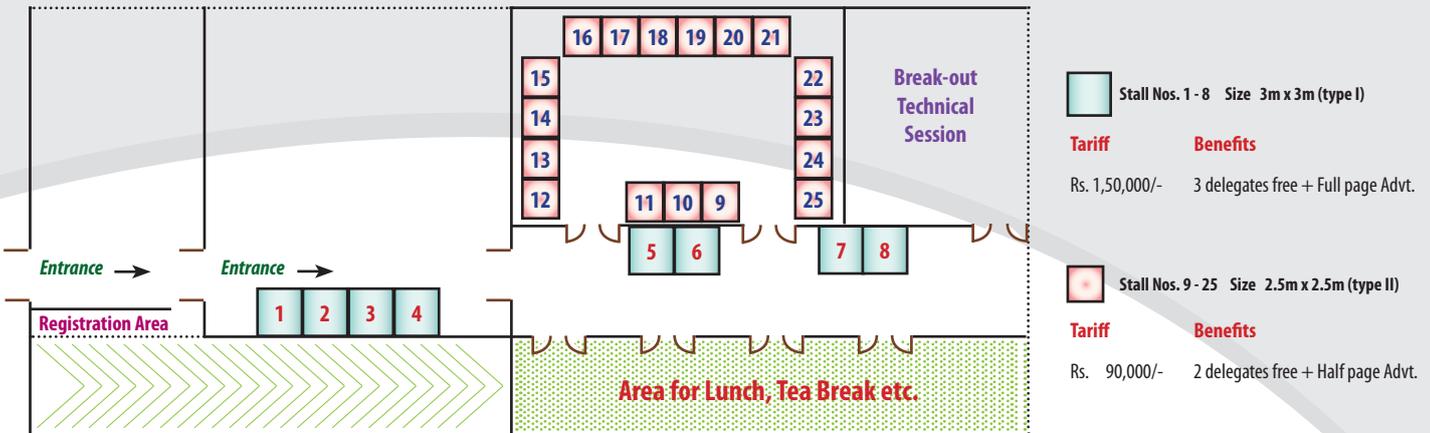
Golconda Fort



NOVOTEL

## Exhibition Layout and Tariff

An exhibition will be held in parallel with the conference, offering a great opportunity for companies to exhibit their products/equipment or advertise their capabilities to a wide cross-section of the surface treatment community. The market potential in India for surface engineering related products and services is enormous and ATSC-2014 is a unique event that will bring exhibitors face to face with prospective customers from academic institutes, research organizations and industry.



## Thermal Spray Course

November 22-23, 2014

09:00-17:00 hrs

At ARCI, Hyderabad

Who Should Attend:

Immediately preceding the Conference, a 2-day Course is being conducted on November 22-23, 2014 to introduce thermal spray (TS) technology as well as its variant processes for protecting and enhancing surfaces for industrial applications. The principal attribute of this novel technique lies in its capability to produce tailor-made properties of coatings by optimizing the nature of the substrate, the material to be deposited and the process design parameters for diverse applications. An interactive session based on real-life case studies will illustrate the potential of TS processes and coatings, and focus on problems and future challenges of the TS technology. Thus, it will ideally compliment the information presented at the Conference.

### Course Outline

**Introduction to Thermal Spray** • Historical perspective • TS process variants • Company and literature resources • Physical models that help understanding the processes • Feedstocks and materials used for TS.

**The Practice of Thermal Spray** • Metallography and analysis of TSCs • Occupational, health and safety for TS installations • **Practical demonstration:** Detonation Spray, Cold Spray and Conventional/Solution Precursor Plasma Spray.

**Design, Testing and Applications for Thermal Spray** • Specific applications for various industrial sectors • Designing components and structures for TS application • Costing considerations • Comparison with other coating and overlay techniques • Future trends for TS.

Managers, technopreneurs, product development and design engineers, product marketers, scientists, lecturers and students who want to understand TSCs for protecting and enhancing product surfaces for diverse applications.

The 2-day Course will be conducted by Prof. Christopher Berndt, who is now at Swinburne University of Technology, Australia. A world renowned expert in the field, Prof. Berndt is a Member of 13 professional Societies in the materials, mechanical, manufacturing and biomedical fields. He is a Fellow of the Australian Institution of Engineers, Fellow of ASM International, and Fellow of The Institution of Metallurgists (UK). He is also a Chartered Engineer (UK), a Professional Engineer (Australia), and a Member of the College of Bioengineers (Australia). He has held positions as a Faculty Fellow of Oak Ridge National Laboratory and Guest Scientist of Brookhaven National Laboratory. He was inducted into the Thermal Spray Hall of Fame in 2007. He has more than 480 publications in the field of Materials Science and Engineering. He is the Editor / Co-editor of 10 conference proceedings on thermal spray. Further information can be found at <http://www.swinburne.edu.au/engineering/staff/Christopher-Berndt-286>.

### Course Fee:

₹ 2,000 for Students  
₹ 5,000 for ATSC-2014 Participants  
₹ 8,000 for Others



## Contact Details

### Convenor

Dr Shrikant Joshi

Additional Director, ARCI

### Co-Convenor

Shri D Srinivasa Rao

Team Leader, Centre for Engineered Coatings, ARCI

## 6<sup>th</sup> Asian Thermal Spray Conference

International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI)

Balapur Post, Hyderabad - 500 005, INDIA

Phone: 0091-40-24441077, 24452374, 24452470; Fax: 0091-40-24443168

Email: [atsc2014@arci.res.in](mailto:atsc2014@arci.res.in)