



## 1<sup>ST</sup> WORKSHOP "THERMAL SURFACE TECHNOLOGIES" (TST) JANUARY 29, 2019

**Venue:** Fraunhofer IWS, Winterbergstraße 28, 01277 Dresden

- 09:00 Welcome and opening  
*Prof. Dr. Christoph Leyens, Fraunhofer IWS, TU Dresden, Germany*
- 09:10 The Fraunhofer Center of Thermal Surface Technology: Tailored solutions for challenging problems  
*Dr. Denise Beitelschmidt, Fraunhofer IWS, Germany*

### Session I: Laser Cladding

*Chair: Prof. Dr. Steffen Nowotny, Fraunhofer IWS*

- 09:40 Laser repair cladding for the nuclear industry  
*Sandro Mehner, Fraunhofer Center for Laser Applications, USA*
- 10:00 Laser ID cladding in industrial dimensions  
*Torsten Bady, NUTECH GmbH, Germany*
- 10:20 Coffee break
- 10:40 Laser wire deposition in aircraft applications  
*Jürgen Silvanus, Airbus Group Innovations, Germany*
- 11:00 Clever solutions for large-area surface claddings  
*Henry Köhler, InnoJoin GmbH, Germany*
- 11:20 Laser cladding/direct metal deposition options for different titanium alloy powders  
*Dipl.-Ing. Jörg Spatzier, Oerlikon Metco, Switzerland*
- 11:40 Lunch break

### Session II: Thermal Spraying

*Chair: Dr. Maria Barbosa, Fraunhofer IWS*

- 12:30 Advanced thermal-sprayed coatings for reinforced polymer composite structures  
*Prof. Dr. André G. McDonald, University of Alberta, Canada*
- 12:50 Development of SPS-sprayed TBC by using the latest cascaded KK plasma gun technology  
*Dr. Alexander Schwenk, CEO, AMT AG, Switzerland*
- 13:10 Suspension spraying enters serial production  
*Dr.-Ing. Richard Trache, Treibacher Industrie AG, Austria*
- 13:30 Environmental, Economical and Performance Impacts of Ar<sub>2</sub>/H<sub>2</sub> & N<sub>2</sub>/H<sub>2</sub> Plasma Sprayed YSZ TBCs  
*Dr. Rogerio S. Lima, National Research Council of Canada, Canada*
- 13:50 Coffee break

### Session III: Laser Hardening

*Chair: Marko Seifert, Fraunhofer IWS*

- 14:10 Machine concepts for laser hardening in tool manufacturing  
*Thomas Arnold, Arnold GmbH, Germany*
- 14:30 Laser beam hardening in engine production  
*Dr. Steffen Bonß, Laserline GmbH, Germany*
- 14:50 Advantages of scanned laser beams in laser heat treatment  
*Marko Seifert, Fraunhofer IWS, Germany*