



TMP  
2020

The 6<sup>th</sup> International Conference  
on ThermoMechanical Processing



August 24-26, 2020  
Shenyang, China



# The 6<sup>th</sup> International Conference on ThermoMechanical Processing

August 24-26, 2020 Shenyang, China

## First Announcement / Call for Papers

### Organized by

The Chinese Society for Metals (CSM)

Northeastern University (NEU)

### Co-organized by

The State Laboratory of Rolling and Automation (RAL)

### Co-sponsored by

Associação Brasileira de Metalurgia e Materiais (ABM), Brazil

Associazione Italiana di Metallurgia (AIM), Italy

Association for Iron and Steel Technology (AIST), USA

Czech Metallurgical Society, Czech Republic

Steel Institute VDEh, Germany

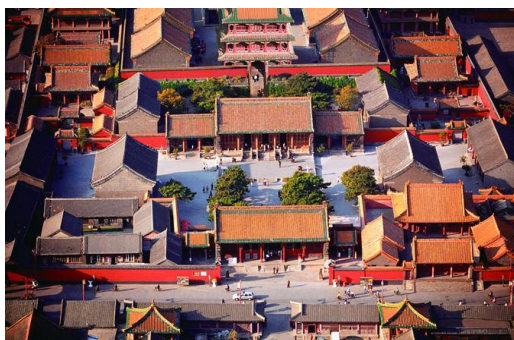
The Austrian Society for Metallurgy and Materials (ASMET), Austria

The Indian Institute of Metals (IIM), India

The Iron and Steel Institute of Japan (ISIJ), Japan

The Korean Institute of Metals and Materials (KIM), Korea

Conference Website: [www.tmp2020.com](http://www.tmp2020.com)



## Invitation to TMP2020

ThermoMechanical Processing (TMP) is an established and vital part of the production method for increasing and tailoring the mechanical properties not only for steels, but also expanding to various non-ferrous alloys. The TMP allows improving the microstructural features in order to realize the metal products fitting the requirement imposed by the modern mechanical and structural engineering.

With a scope that ranges from the latest process and product developments to associating physical metallurgy in the thermomechanical processing of steels and non-ferrous alloys, TMP 2020 Conference aims at examining the key aspects involved in TMP: phase transformations, complex microstructures evolution, applications in CSP/ESP, in-line heat treatments, measurement techniques and the technological forming operations (rolling, forging, extrusion etc.).

We invite you to join us in Shenyang and look forward to hosting a successful and inspiring conference!



Prof. Guodong Wang

Conference Chairman of TMP2020

Northeastern University

## History of TMP Conferences

The International Conference on ThermoMechanical Processing (TMP), held every 4 years, is organized in a way to maximize the interaction and discussion between researchers in the field. The 6<sup>th</sup> TMP Conference will be held in China for the first time, the previous conferences being held in:

1<sup>st</sup> TMP 2000: London, United Kingdom

2<sup>nd</sup> TMP 2004: Liege, Belgium

3<sup>rd</sup> TMP 2008: Padua, Italy

4<sup>th</sup> TMP 2012: Sheffield, United Kingdom

5<sup>th</sup> TMP 2016: Milan, Italy

## Topics

The Conference will cover topics concerning the following issues:

### 1. Technology and Product Development in ThermoMechanical Processing

➤ Steel:

- Hot strips and hot plates refer to the control of rolling and cooling
- Compact Strip Production (CSP)/Endless Strip Production (ESP)
- Continuous strip casting and related short process technology
- Hot stamping and forging
- Non-Ferrous alloys (Al, Cu, Mg, Ti and other alloys):
- Rolling, forging, extrusion and drawing

## **2. Physical Metallurgy of ThermoMechanical Processing**

- Computation and modelling
- Microstructure and property
- Recrystallization, precipitation and phase transformation
- Solidification mechanism of continuous casting
- On-line heat treatment
- Oxidation of steel
- Hot rolling based on the control of oxidation behavior

## **3. Intelligent Manufacturing**

- Industrial big data analytics based on ThermoMechanical Processing
- Establishment of industrial internet platform and cyber-physical system
- Development of digital twin system on key processes
- In process quality control and intelligent optimization decision of ThermoMechanical Processing

## **Honorary Chairman**

**Yong Gan** (Chinese Academy of Engineering / The Chinese Society for Metals), China

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## Deputy Secretary General

**Qing Song** (The Chinese Society for Metals), China

**Wei Xu** (Northeastern University), China

## Plenary Speakers

 (The following speakers are updated on December 14, 2019)

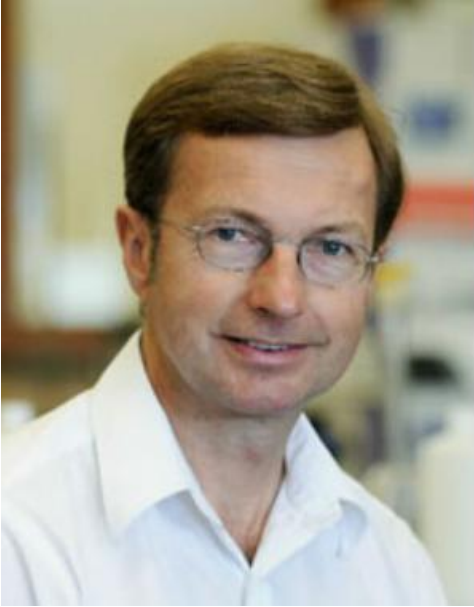
- Guodong Wang, Northeastern University, China



- Harry Bhadeshia, Cambridge University, United Kingdom



- Matthias Militzer, University of British Columbia, Canada



Matthias Militzer is the ArcelorMittal Dofasco Chair in Advanced Steel Processing and the Director of the Centre for Metallurgical Process Engineering at the University of British Columbia in Vancouver. He received a Diploma in Physics from the University of Technology in Dresden, Germany in 1983 and a Ph.D. in Metal Physics from the Academy of Sciences in East Germany in 1987. He moved to Canada in 1990 where he was first a Postdoctoral Fellow at McGill University before joining the University of British Columbia in 1993. He has published more than 200 papers in refereed journals and conference proceedings. His primary field of research is modelling the microstructure evolution during thermo-mechanical processing of steels and other metals. Currently, his major research activities include multi-scale modelling of phase transformations in steels, accelerated cooling of steels and in-situ measurements of microstructures using laser ultrasonics for metallurgy. He is a Fellow of the Canadian Institute for Mining, Metallurgy and Petroleum (CIM) and received the ASM Henry Marion Howe Medal 2010 and the Canadian Metal Physics Award in 2014.

- Peter Hodgson, Deakin University, Australia





- **Andrey Alexandrov, Interstate Association Titan, CIS (Commonwealth of Independent States), Russia**



Andrey Alexandrov has been the General Director of the Interstate Association "Titan" since 2001. After graduating from the Moscow Institute of Steel and Alloys worked as a Researcher at the All-Russian Institute of light alloys (VILS). Later he worked in trading companies specializing in the production and international trade of titanium products. In 1997, he returned to VILS as Head of the Titanium Department. The main scientific works are related to melting of titanium and its alloys, production of alloys with shape memory, development of new equipment, engineering, marketing. Scientific degree is Ph.D Engineering. Have a big international trade experience, management and organizational work in titanium industry. While heading Interstate Association Titan, number of members has increased from 19 to 61. Association has developed into authoritative industry organization with wide business and information contacts in CIS countries and more than 15 countries abroad. Association is full CIS representative in worldwide titanium organizations. Since 2002 he is the editor-in-Chief of the scientific and technical journal «Titanium».

### **Keynote Speakers** (The following speakers are updated on December 14, 2019)

**Ronaldo Barbosa**, Universidade Federal de Minas Gerais, Brazil

**Weilin Gao**, Tongling Gao-Tong Technology Co. ,Ltd., Japan

**Carlos Garcia**, National Centre for Metallurgical Research (CENIM), Spain

**Hélio Goldenstein**, Cidade Universitária, Brazil

**Zhanli Guo**, Sente Software Ltd., UK

**Zhengyi Jiang**, University of Wollongong, Australia

**David San Martín Fdez**, National Centre for Metallurgical Research (CENIM) / Spanish National Research Council (CSIC), Spain

**Pedro Rivera**, Lancaster University, UK

**Tony Rollett**, Carnegie Mellon University, USA

**Sybrand van der Zwaag**, Delft University, The Netherlands

## Abstract Submission

All contributions on the theme of the conference as described previously are welcome. The official language of the conference is English. Prospective authors are invited to submit an abstract of 300 words (in English) by **31 January 2020** through the conference website: [www.tmp2020.com](http://www.tmp2020.com). The abstract should provide sufficient information for a fair assessment.

## Official Language

Official language for the conference is English.

## Exhibition, Workshop & Sponsorship Opportunities

As the integral elements of the event, TMP2020 will feature the exhibition and workshop that will enable excellent exposure for company products, technologies, innovative solutions or services. The exhibition and workshop will be organized near the meeting room during TMP2020. The conference will offer an excellent opportunity for companies to do business and maintain key contacts with customers and suppliers. It is also a unique platform for them to promote new products, outline services and highlight key achievements.

Companies will be able to reinforce their participation and enhance their corporate identification by taking advantage of the benefits offered to them as sponsors of the conference.

If you would like to join the exhibition, workshop or sponsorship, please contact with the Conference Secretariat .

## Conference Secretariat

Dr. Tao Jia, Dr. Chenchong Wang, Northeastern University

Mr. Xin Zhao, The Chinese Society for Metals

76 Xueyuan Nanlu, Beijing 100081, China

Email: [tmp2020@csm.org.cn](mailto:tmp2020@csm.org.cn)

Tel: +86-10-65211205 Fax: +86-10-65124122

Website: [www.tmp2020.com](http://www.tmp2020.com)