

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

July 4-6, 2022 Shenyang, China

## Call for Papers (2<sup>nd</sup> Announcement)

### Organized by

The Chinese Society for Metals (CSM)  
Northeastern University (NEU)

### Co-organized by

The State Laboratory of Rolling and Automation (RAL)

### Supported by

CITIC-CBMM | Niobium

### Co-sponsored by

Associacao 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

The Nonferrous Metals Society of China (Nfsoc), China

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

# Invitation to TMP2022

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The 6<sup>th</sup> International Conference on ThermoMechanical Processing (TMP2022) will be held on July 4-6, 2022 in Shenyang, Liaoning Province, China. It is our pleasure to share with you that the conference has received a highly positive response since the first announcement. More than 230 papers from 19 countries and regions all over the world have been submitted to this event. Many popular experts from domestic and abroad are invited to give keynote presentations in TMP2022. We believe that TMP2022 will be a successful meeting and hope more guests to attend it online.

Due to the present situation of COVID-19, the format of presentation for TMP2022 will be mainly on-site communication combined with on-line presentation (by VCR) from the overseas speakers who are not possible for international travel in the period of TMP2022. We cordially invite you to participate in this upcoming conference and look forward to meeting you in this event.

## 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

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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

# Committees

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**Guodong Wang** (Chinese Academy of Engineering / Northeastern University), China

**Fusheng Pan** (Chinese Academy of Engineering / Chongqing University), China

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**Yongqing Zhang** (CITIC Metal Co., Ltd.), China

## Plenary Speakers/Keynote Speakers

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**Plenary Speakers** (The following speakers are updated on Feb. 24, 2022)

### **Dr. 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».

**Prof. Harry Bhadeshia**

Cambridge University, United Kingdom



Harry Bhadeshia is the Tata Steel Professor of Physical Metallurgy at the University of Cambridge and Professor of Computational Metallurgy at POSTECH. He graduated with a BSc from the City of London Polytechnic, followed by a PhD at the University of Cambridge. His research is concerned with the theory of solid-state transformations in metals, particularly multicomponent steels, with the goal of creating novel alloys and processes with the minimum use of resources. Harry Bhadeshia has carried out important work on the theory of solid state phase transformations, in particular the prediction and verification of microstructural development in multicomponent steels. He has made a major contribution to the understanding of the complex bainitic transformation by developing and using thermodynamic theory to show that different modes of transformation have measurable influences on the final microstructure. He is the author or coauthor of more than 500 research papers and six books on the subject. He is a Fellow of the Royal Society, Fellow of the Royal Academy of Engineering, the National Academy of Engineering (India) and the American Welding Society.

**Prof. Peter Hodgson**

Deakin University, Australia



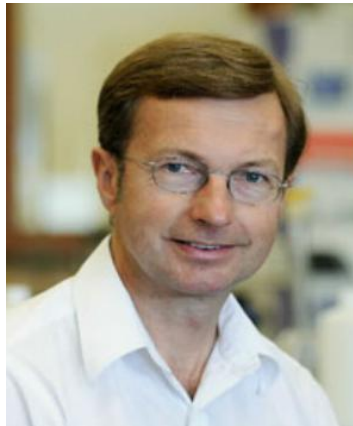
Professor Hodgson's research includes steel processing and the development of new alloys, and downstream ferrous and non-ferrous manufacturing processes associated with the automotive industry. He currently holds several ARC Discovery and Linkage grants, all related to metal processing. In 2004 he was made an Alfred Deakin Professor of the University for outstanding contributions to research and



awarded an ARC Federation Fellow by the Australian Research Council. The University of Valenciennes award made him an Honoris Doctoris Causa in 2005 for contributions to metal forming research, while in 2006 AGH in Poland (EU) awarded him an Honorary Medal for contributions to materials science.

**Prof. 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.

**Prof. Fusheng Pan**

Academician of the Chinese Academy of Engineering

Chongqing University, China



Fusheng Pan is an Academician of Chinese Academy of Engineering, professor in Chongqing University, China. He received his Doctor's degree in Materials Science & Engineering at Northwestern Polytechnical University in 1995. Prof. Dr. Pan also studied and/or worked in Oxford University, Stuttgart University, Chiba University, University of California, Queen Mary, and University of Queensland. He is an honorary professor in University of Queensland, foreign member of Academy of Mining Sciences in Russia, member of Asian Pacific Academy of Materials. He also serves as chairman of Chongqing Association for Science & Technology, director of National Engineering Research Center for Magnesium Alloys (CCMg), vice president of Chinese Material Research Society.

Prof. Pan's research mainly focus on the magnesium alloy, aluminum alloy, and high speed steel. He was awarded 4 National Awards, over 10 Provincial Awards, HLHL Prize, and USA Dupont S&T Innovation Prize. He holds over 130 authorized patents, and has published over 500 SCI journal papers and over 10 national and industrial standards, 16 of his developed magnesium alloys are included in the national standards (GB/T). Prof. Pan is now the chairman of ISO/TC 79/SC 5 (Magnesium and Magnesium Alloys), editor in chief of Journal of Magnesium and Alloys (JMA, IF in 2019 is 7.115), chairman of the 3rd, 4th, 5th, 6th, and 7th International Conference on Magnesium Alloys, chairman of the 1st and 2nd UK-China Advanced Materials Symposium.

### **Prof. Guodong Wang**

Academician of the Chinese Academy of Engineering  
Northeast University, China



Guodong Wang, Professor and doctoral supervisor in Northeast University, was an internationally renowned expert in steel and iron rolling technology, he is now a vice president of steel rolling branch in Chinese Society for metals. In 2005, he was elected as an academician of the Chinese Academy of Engineering.

He has been engaged in the research of rolling theory, process, equipment and products of steel materials over a long period of time, and has made innovative achievements in the aspects of TMCP technologies, rolling technology of plate, shape controlling, digitization and smart technologies of rolling

process, fundamental research and industrial technology of strip casting, equipment of rolling process R&D platform, etc, which had made a great contribution to the development of iron and steel industry and rolling technology in China.

**Mr. Zuo Xu**

CITIC Group, China



Mr. Xu Zuo is one of the eleven founder of CITIC Dicastal Co., Ltd, the first manufacturer of aluminum alloy wheel in China's mainland. With 32 years working experiences in the front line since 1987, devoted himself to the lightweight design of aluminum auto parts. Centering on fundamental and application fields, such as aluminum alloy material, forming process and equipment, performance evaluation and modular manufacturing, Mr. Xu has undertaken large amounts of research works, and a lot of achievements and explorations have been made, and has been the main promoter for lightweight field of aluminum auto parts in China.

Together with his team, 28 manufacturing bases are under operation across the world with Independent intellectual property technology and innovative management mode. So far CITIC Dicastal has become one of the largest supplier in auto aluminum parts, and has been ranked first in the world for 14 years in aluminum alloy wheels with 88 million units per year. Besides, steering knuckles and other auto parts have reached 100,000 tons per year.

**Keynote Speakers** (The following speakers are updated on December 3, 2021)

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

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

**Carlos Garcia-Mateo**, 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 Martin Fernandez**, National Centre for Metallurgical Research (CENIM) / Spanish National Research Council (CSIC), Spain

**Pedro Rivera Diaz Del Castillo**, Lancaster University, UK

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

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

## Schedule

Date	Activity		
	Morning	Afternoon	Evening
Sunday, July 3, 2022	--	Registration	Registration
Monday, July 4, 2022	--	Plenary Sessions	Plenary Sessions
Tuesday, July 5, 2022	--	Parallel Sessions	Parallel Sessions
Wednesday, July 6, 2022	--	Parallel Sessions	Parallel Sessions
<b>Conference Venue:</b> Shenyang, China			

## Call for Papers

### Full Paper Submission

The extended abstracts are requested to submit through the conference website before **April 15, 2022**. All the accepted extended abstracts will be published in electronic form and will be available to download on the conference website.

Please kindly download the authors guide, sample format and copyright transfer form from the conference website ([www.tmp2020.com](http://www.tmp2020.com)).

### Proceedings

The full text of the accepted papers will be published by Metallurgical Industry Press in the form of electronic proceedings and issued to attendees on arrival at the Conference. This proceedings will be indexed by Elsevier (including Scopus, EMBASE, Engineering Village, and Reaxys).

### Official Language

Official language for the conference is English.

## Presentation

Due to the present situation of COVID-19, the format of presentation for TMP2022 will be mainly on-site communication combined with on-line presentation (zoom) for overseas speakers who are not possible for international travel in the period of TMP2022. More details about presentation is as follows:

Duration	Plenary Lecture 45 minutes (including 5 minutes for discussion) Keynote Paper 25 minutes (including 5 minutes for discussion) Contributed Paper 20 minutes (including 5 minutes for discussion)
Format	AVI or MP4
Aspect Ratio	16:9
Submission	<b>Please kindly send a VCR file of ppt presentation with your photo to tmp2020@csm.org.cn before June 15, 2022.</b>

Notes:

1. The official conference language is English.
2. It is mandatory to add the audio of your talk within your PowerPoint presentation or video file.
3. Before you submit your files, please kindly check your recorded audio narration, playback the PowerPoint presentation slide show or video file to verify audio recorded successfully.
4. Videos and animations are supported but will be automatically started with the slide.
5. Please do not use any passwords or encryption for your presentation.
6. Please note that macros should not be used and flash-animations are not supported.

## Registration

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### Registration

Registration Deadline for Authors

**June 15, 2022**

### Fees

✧ **Euro 300 (Regular)**

**Euro 50 (Student)**

\*Notes: 1) Each accepted paper will be published in the conference proceedings only if at least one author's registration fee is paid before **June 15, 2022**.

2) Oral presentation will be arranged only if at least one author's registration fee is paid before **June 15, 2022**.

3) Students are requested to submit the copy of their student ID.

### Entitlement

**Registration Fee covers:** Online Access to All Technical Sessions

### Method of Payment

#### 1. Online Payment

Through the conference online payment , all payments could be made in EURO by credit card.



## 2. Bank Transfer

Please transfer the registration fee to the following bank account, and specify with “TMP2022, Registration No.”. A copy of remittance certificate is requested to send to the conference secretariat or submit to the conference website.

Name of Bank	INDUSTRIAL AND COMMERCIAL BANK OF CHINA BEIJING MUNICIPAL BRANCH WANG FU JING SUB-BRANCH OFFICE
Beneficiary and Account Holder	The Chinese Society for Metals
Address	NO.237 WANG FU JING STREET, DONG CHENG DISTRICT, BEIJING 100006 P.R.CHINA
SWIFT ADDRESS	ICBKCNBJBJM
Account Number	0200000709089116848

**\*Note:** The registration fee doesn't include the bank charge.

## Cancellation

Refunds cannot be given if cancellations received after June 30, 2022. Substitutions can be accepted at any time.

Please indicate the bank, branch and account number clearly to which the refund should be sent, and the refund will be made after the conference.

Cancellation	Refund
Before June 30, 2022	80%
After June 30, 2022	No refund (Conference proceedings will be sent to the authors after the conference)

## Important Dates

- Abstract Submission Deadline: Tuesday, February 15, 2022
- Full Paper Submission Deadline: Friday April 15, 2022
- Author's Registration Deadline: Wednesday, June 15, 2022
- Deadline for Conference Registration Cancellations: Thursday, June 30, 2022
- Registration: Sunday, July 3, 2022
- Conference: July 4-6, 2022

# Conference Secretariat

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Dr. Hongyu Song, Northeastern University

Mr. Xin Zhao, Ms. Fang Liu, 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)