



## **The 14<sup>th</sup> International Conference on Frontiers of Design and Manufacturing (ICFDM2020) First Announcement and Call for Papers**

### **Brief Introduction**

The International Conference on Frontiers of Design and Manufacturing (ICFDM) is biyearly held by National Natural Science Foundation of China (NSFC) and Shien-Ming Wu Foundation of USA. Since 1994, ICFDM has become an important platform to exhibit projects which have been conducted or finished excellently with the support from Mechanical Engineering Division, Department of Engineering & Materials Sciences, NSFC. The conference aims at promoting the development of design and manufacturing science in China, and strengthening international academic cooperation and communications.

ICFDM 2020 will be sponsored by Xi'an Jiaotong University (XJTU), in **Xi'an, China** during **August 19-21, 2020**. On the theme of "Basis·Frontier·Exploration·Innovation", the conference will cover research topics about frontiers of mechanical design and manufacturing. The organizing committee warmly welcomes researchers all over the world to participate in this event.

### **1. Sponsoring Organizations**

**Sponsor:** Xi'an Jiaotong University

**Co-Sponsors:** Northwestern Polytechnical University

**Supporters:** National Natural Science Foundation of China,  
Shien-Ming Wu Foundation of USA,  
Chinese Mechanical Engineering Society (CMES)

### **2. Conference Committees**

**Conference Chair:** Dongming Guo, Dalian University of Technology

**Co-Chairs:** Jun Ni, University of Michigan (USA)

Yanmin Zhang, Chinese Mechanical Engineering Society

Shuguo Wang, Xi'an Jiaotong University

Jinsong Wang, Northwestern Polytechnical University

#### **Scientific Committee**

**Chair:** Jue Zhong, Central South University

**Co-Chairs:** Yubao Chen(USA), Peihua Gu (Canada), S. Jack Hu (USA), Tian Huang,  
Zexiang Li (Hongkong, China), Zhongqin Lin, Bingheng Lu, Luquan Ren, Jianrong Tan,  
Bangchun Wen, Youlun Xiong, Wanming Zhai, Yanmin Zhang, Zhihua Zhong, Di Zhu

**Members:** Donghui Cao (Japan), Jianmin Chen, Ken Chen, Wuyi Chen, Xiaoqi Chen (New Zealand), Xin Chen, Ying Chen, Yunfei Chen, Zezhong Chen (Canada), Jeng-shyong Chen

(Chineses Taiwan), Kai Cheng (UK), Fulei Chu, Jiansheng Dai (UK), Yifan Dai, Zongquan Deng, Fengshan Du, Ruxu Du (Hongkong, China), Fengzhou Fang, Xin Fu, Yongsheng Gao (Hongkong, China), Shirong Ge, Wanlin Guo, Lin Hua, Han Huang (Australia), Qingan Huang, Zhao Huang, Lan Jiang, Zhuangde Jiang, Zhongmin Jin (UK), Yuanzhong Lei, Bin Li, Dichen Li, Guangyao Li, Jianxin Li, Jianfeng Li, Jay Lee (USA), Lin Li (UK), Rong-shean Lee (Chineses Taiwan), Shengyi Li, Yuanyuan Li, Weimin Lin (Japan), Deshun Liu, Hanru Liu, Weimin Liu, Xianping Liu (UK), Xianli Liu, Ke Ma, Xuesong Mei, Donglin Peng, Fangyu Peng, Linmao Qian, Datong Qin, Jinhao Qiu, Yiming Rong(USA), Zhaoyao Shi, Daizhong Su (UK), Lining Sun, Wei Sun (USA), Wencheng Tang, Jinyuan Tang, Jin Tong, Shandong Tu, Yiliu Tu (Canada), Jinsong Wang, Jiaxu Wang, Jun Wang (Australia), Lihui Wang (Sweden), Qian Wang (USA), Tianmiao Wang, Xibin Wang, Yu Wang (Hongkong, China), Liyang Xie, Jiuhua Xu, Deyi Xue (Canada), Jiawang Yan (Japan), Qiusheng Yan, Shaopu Yang, Zhaojun Yang, Guofu Yin, Zhouping Yin, Zheng You, Dejie Yu, Shijian Yuan, Lijiang Zeng, Nong Zhang (Australia), Weihong Zhang, Wendong Zhang, Wenjun Zhang (Canada), Yimin Zhang, Yuru Zhang, Zhengwen Zhang (UK), Liangchi Zhang (Australia), Gang Zhao, Jie Zhao, Li Zheng, Libo Zhou (Japan), Zhenggan Zhou, Zhixiong Zhou, Zude Zhou, Rupeng Zhu, Xiangyang Zhu

#### **Steering Committee**

**Chair:** Xinyu Shao, Huazhong University of Science and Technology

**Co-Chairs:** Guobiao Wang, National Natural Science Foundation of China

Jianbin Luo, Tsinghua University

Huayong Yang, Zhejiang University

Albert Shih, University of Michigan (USA)

**Members:** Chaozhi Chen, Shujun Chen, Xuefeng Chen, Han Ding, Xilun Ding, Ji'an Duan, Yucan Fu, Yadong Gong, Xu Han, Jun Hong, Chuanzhen Huang, Zhenyuan Jia, Chao Jiang, Hong Liu, Zhifeng Liu, Yonggang Meng, Zhonghua Ni, Zhike Peng, Linmao Qian, Chengyong Wang, Shilong Wang, Shuxin Wang, Lifeng Xi, Changle Xiang, Xipeng Xu, Juntang Yuan, Weizheng Yuan, Xianmin Zhang, Yongsheng Zhao, Zhongrong Zhou.

#### **Organizing Committee**

**Chair:** Xuefeng chen, Xi'an Jiaotong University

**Co-Chairs:** Yinan Lai, National Natural Science Foundation of China

Weizheng Yuan, Northwestern Polytechnical University

### **3. Call for Papers**

**Theme: Basis, Frontier, Exploration and Innovation**

**Topics:**

- 1) Innovation design for high-end equipment
- 2) Bio-electromechanical systems
- 3) High-performance and precise transmission and driving techniques

- 4) High-performance mechanical dynamic design
- 5) Machinery vibration/noise traceability and application/control
- 6) Machinery safety and high reliability design
- 7) Machinery surface/interface effect and control technology
- 8) Complex electro-mechanical system design
- 9) Biological/bionic design and manufacturing techniques
- 10) High-performance, lightweight and precise forming and manufacturing techniques
- 11) Additive manufacturing (3D printing) technology
- 12) Precise and ultra-precise processing technology and equipment
- 13) High energy beam and special energy field manufacturing processes
- 14) Sustainable design and manufacturing techniques
- 15) Intelligent digital design and manufacturing approaches
- 16) Information perception and precise measurement of mechanical system and manufacturing processes
- 17) Design and manufacture of Micro-Nano systems
- 18) NC techniques and advanced NC machines
- 19) Design and manufacture of new energy and marine equipment
- 20) Design and manufacture of aerospace equipment
- 21) Trans-scale flexible electronic manufacturing techniques
- 22) Design, manufacture and fault diagnosis of aero-engine
- 23) Basic theory and key technology of fusion robot
- 24) Forming, processing and testing of composite components
- 25) Design, manufacturing and service of high-end bearing

#### 4. Scientific and Technical Programs

- Plenary speeches
- Invited talks
- Presentations/posters of NSFC projects
- Presentations of the accepted conference papers
- Selection of Best Papers and Best Projects
- Selection of Dedicated Service Award

#### 5. Important Dates and Paper Submission

##### 1) Important Deadlines

- Before March 15, 2020** Registration and submission of full papers
- Before May 25, 2020** Submission deadline of full papers
- Before June 05, 2020** Acceptance or revision notification
- Before June 10, 2020** Submission of revised papers
- Before June 20, 2020** Final acceptance notification

## 2) Paper Submission

Papers and slides must be written in English, while presentations may be given in English or Chinese. Papers must be drafted according to the template available on the conference website, and submitted electronically as described on the conference website (<http://www.icfdm.com> or <http://icfdm2020.scimeeting.cn>). The conference proceedings will be distributed to all registered participants via USB-stick (informal publications.)

Excellent papers will be recommended to SCI/EI journals such as *Journal of Manufacturing Systems and International Journal of Advanced Manufacturing Technology*, *Advances in Manufacturing*, *Mechanical Sciences*. The journal list will be shown in later notice. Please pay attention to the update of the conference website for detailed information. The papers that are not recommended can be submitted by the authors by themselves to other journals.

## 6. Presentations and Posters of NSFC Projects

Ten best completed projects granted by NSFC will be selected for poster presentation, oral presentation and assessment. The relevant notice will be issued later.

## 7. Participant Status

There are two types of participant status shown as follows:

- 1) The principal investigator who has been invited, with the project completed well in 2019 (will be noticed before April 2020) ;
- 2) The conference paper authors with final acceptance notification.

## 8. Prototype and Video Presentation Requirement

The principal investigator who will give a prototype presentation should provide all relevant information including brief introduction, size, weight, figures and so on. The principal investigator who will give a video presentation should provide a subtitled video file, with the length that is not more than ten minutes. Relevant files must be submitted to [mech2@nsfc.gov.cn](mailto:mech2@nsfc.gov.cn) before May 25, 2020. Excellent prototypes or videos will be selected, and the corresponding principal investigators will receive notification of acceptance before June 10, 2020.

## 9. Registration Fee and Requirements

- 1) Online registration

May 1, 2020: Online registration is open, and the online registration fee is ¥1800 or \$300.

June 30, 2020: Deadline of online registration.

- 2) On-site registration

The on-site registration fee is ¥2600 or \$400.

## 10. Contact Information

### (1) Conference Affairs

Address: School of Mechanical Engineering,  
Xi'an Jiaotong University



The 14<sup>th</sup> International Conference on Frontiers of Design and Manufacturing (ICFDM2020)  
第 十 四 届 设 计 与 制 造 前 沿 国 际 会 议

---

No.28 Xianning West Road, Xi'an, 710049

Shaanxi,

P.R.China

Contacts: Jinyou Shao, Shuming Yang, Xingong Zhang

Tel: +86-29-82668602

Secretaries: Xiaorong Liu 86-131 8613 8173, Yan Mo 86-180 0921 6026,

Yanli Liu 86-132 2802 8168, Yuanbing Ji 86-159 9127 0032

Email: [icfdm2020@mail.xjtu.edu.cn](mailto:icfdm2020@mail.xjtu.edu.cn)

Website: <http://www.icfdm.com> or <http://icfdm2020.scimeeting.cn>

**(2) Paper Affairs**

Address: School of Mechanical Engineering,

Xi'an Jiaotong University

No.28 Xianning West Road, Xi'an, 710049

Shaanxi,

P.R.China

Contacts: Jinyou Shao, Shuming Yang, Guimin Chen, Yu Sun

Tel: +86-29-82668602

Secretaries: Yuanbing Ji 86-159 9127 0032, Leqin Wei 86-135 7254 8115,

Huinan Qi 86-159 2994 8920, Yanli Liu 86-132 2802 8168

Email: [icfdm2020@mail.xjtu.edu.cn](mailto:icfdm2020@mail.xjtu.edu.cn)

Website: <http://www.icfdm.com> or <http://icfdm2020.scimeeting.cn>

**(3) Mechanical Engineering Division, NSFC**

Contacts: Hongwei Li, Zhibo Yang

Tel: +86-10-62327084

Email: [mech2@nsfc.gov.cn](mailto:mech2@nsfc.gov.cn)