



APACM Thematic Conference  
IACM Special Interest Conference

The 2nd International Conference on Computational Engineering  
and Science for Safety and Environmental Problems

## COMPSAFE 2017

15th-18th October, 2017  
Chengdu, China

**Hosted by**

The Chinese Society of Theoretical and Applied Mechanics (CSTAM)

**Organized by**

Chinese Association of Computational Mechanics (CACM)  
Southwest Jiaotong University (SWJTU)

September 2017

<http://compsafe2017.org>



## General Information

The 2nd International Conference on Computational Engineering and Science for Safety and Environmental Problems (COMPSAFE 2017) will be held in Chengdu, China, from 15th to 18th October, 2017. The Conference is hosted by **The Chinese Society of Theoretical and Applied Mechanics (CSTAM)**

The Conference venue is **InterContinental Century City Chengdu**, which is just a 10-minute drive from Chengdu's City Centre, and a very convenient 20-minute drive from Chengdu Shuangliu International Airport, and just 40-minute from Chengdu North Railway Station.

### Co-Chairs of COMPSAFE 2017

**Mingwu Yuan**, Peking University

**Zhuo Zhuang**, Tsinghua University

### Executives of Local Organizing Committee

Pu Chen, Peking University

Xu Han, Hunan University

Guozheng Kang, Southwest Jiaotong University

Gang Li, Dalian University of Technology

Yanan Tang, CSTAM

Rong Tian, China Academy Engineering Physics

Decheng Wan, Shanghai Jiaotong University

Dongdong Wang, Xiamen University

Qing Zhang, Hohai University

Yao Zheng, Zhejiang University

### Secretary-General of COMPSAFE 2017

Zhanli Liu, Tsinghua University

Han Jiang, Southwest Jiaotong University

Jie Chen, CSTAM

Correspondence related to the Conference should be sent to:

### COMPSAFE 2017 Secretariat

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## Program Overview

### Saturday, October 14th, 2017

Time	Event	Venue
14:00-20:00	Registration	Lobby of Holiday Inn Chengdu Century City

### Sunday, October 15th, 2017

Time	Event	Venue
8:00-20:00	Registration	Lobby of Holiday Inn Chengdu Century City
9:30-19:00	Conference Tour	Beichuan Earthquake Site Museum
19:00-21:00	Welcome Reception	Skybar, 19 <sup>th</sup> floor, West Tower Holiday Inn

### Monday, October 16th, 2017

Time	Room A	Room B	Room C	Room D	Room E	Room F
8:30-9:00	Opening Ceremony (Room A)					
9:00-9:40	Plenary Lecture 1 (Room A)					
9:40-10:20	Plenary Lecture 2 (Room A)					
10:20-10:40	Coffee Break					
10:40-11:10	Semi-Plenary Lecture 1	Semi-Plenary Lecture 2				
11:10-11:40	Semi-Plenary Lecture 3	Semi-Plenary Lecture 4				
12:00-13:00	Lunch					
13:00-15:20		MS02	MS12, MS22	MS15	MS07	MS04
15:20-15:40	Coffee Break					
15:40-18:20		MS08	MS01, MS10	MS13, NMS86	MS16, MS23	MS04, NMS

### Tuesday, October 17th, 2017

Time	Room A	Room B	Room C	Room D	Room E	Room F
8:30-9:10	Plenary Lecture 3 (Room A)					
9:10-9:50	Plenary Lecture 4 (Room A)					
9:50-10:30	Plenary Lecture 5 (Room A)					
10:30-10:50	Coffee Break					
10:50-11:20	Semi-Plenary Lecture 5	Semi-Plenary Lecture 6				
11:20-11:50	Semi-Plenary Lecture 7	Semi-Plenary Lecture 8				
12:00-13:00	Lunch					
13:00-15:20		MS19, MS09	MS20	MS14, MS15, MS18	MS16	MS05
15:20-15:40	Coffee Break					
15:40-18:20		MS09	MS22	MS17	MS16, MS21	MS05
19:00-21:00	Banquet	IC Ballroom, 5th Floor, Century City International Convention Centre				

### Wednesday, October 18th, 2017

Time	Room A	Room B	Room C	Room D	Room E	Room F
8:30-9:10	Plenary Lecture 6 (Room A)					
9:10-9:40	Semi-Plenary Lecture 9	Semi-Plenary Lecture 10				
9:40-10:00	Coffee Break					
10:00-12:20		MS08	MS06	MS03	MS21	MS11
12:40-13:30	Lunch					

## Plenary Lectures

PL01		<b>Title:</b> <i>Trans-scale simulation of aeolian sand/dust transport and landform evolution process</i> <b>Lecturer:</b> <b>Xiaojing Zheng</b> , Xidian University, Xi'an, China
PL02		<b>Title:</b> <i>Development of Integrated Earthquake Simulation Enhanced with High Performance Computing</i> <b>Lecturer:</b> <b>Muneo Hori</b> , The University of Tokyo, Japan
PL03		<b>Title:</b> <i>Recent Advances in Accelerated and Stabilized Meshfree Method for Modeling Man-made and Natural Disasters</i> <b>Lecturer:</b> <b>J. S. Chen</b> , University of California, San Diego, United States
PL04		<b>Title:</b> <i>Petascale Finite Element Simulation Based Investigation on Structural Integrity of Nuclear Power Plant Attacked by Strong Earthquake</i> <b>Lecturer:</b> <b>Shinobu Yoshimura</b> , The University of Tokyo, Japan
PL05		<b>Title:</b> <i>Stability Analysis Based on Inequality Equations</i> <b>Lecturer:</b> <b>Gen-hua Shi</b> , University of Chinese Academy of Sciences, China
PL06		<b>Title:</b> <i>Microstructural material database for self-consistent clustering analysis of strain softening materials</i> <b>Lecturer:</b> <b>Wing Kam Liu</b> , Northwestern University, United States

## Semi-plenary Lectures

SPL01		<b>Title:</b> <i>2D and 2.5D Responses of long underground tunnels to moving train loads: a comparison study</i> <b>Lecturer:</b> <b>Yeong-Bin Yang</b> , Taiwan University, China
SPL02		<b>Title:</b> <i>Multi-scale and -physics tsunami disaster simulation for disaster prevention and mitigation</i> <b>Lecturer:</b> <b>Mitsuteru Asai</b> , Kyushu University, Japan
SPL03		<b>Title:</b> <i>Stochastic process of earthquake motion phase and its inherent features</i> <b>Lecturer:</b> <b>Tadanobu Sato</b> , Southeast University, China
SPL04		<b>Title:</b> <i>Ratchetting and Ratchetting-fatigue Interaction of Metallic Materials: Experiments and Modeling</i> <b>Lecturer:</b> <b>Guozheng Kang</b> , Southwest Jiaotong University, China
SPL05		<b>Title:</b> <i>Simulation of Extreme Events with Finite Element Material Point Method</i> <b>Lecturer:</b> <b>Xiong Zhang</b> , Tsinghua University, China
SPL06		<b>Title:</b> <i>A novel cohesive model for simulating delamination propagations in composite laminated structures</i> <b>Lecturer:</b> <b>N. Hu</b> , Chongqing University, China
SPL07		<b>Title:</b> <i>Doing Topology Optimization Explicitly and Geometrically Based on Moving Morphable Components (MMC) approach-A New Paradigm</i> <b>Lecturer:</b> <b>Xu Guo</b> , Dalian University of Technology, China

SPL08		<p><b>Title:</b> <i>Development of a Citywide Real-time Landslide Warning System in Busan, Korea</i></p> <p><b>Lecturer:</b> <b>Seung-Rae Lee</b>, Korea Advanced Institute of Science and Technology, Korea</p>
SPL09		<p><b>Title:</b> <i>Uncertainty Quantification and Propagation in Materials and Structures</i></p> <p><b>Lecturer:</b> <b>C. F. Li</b>, Swansea University, United Kingdom</p>
SPL10		<p><b>Title:</b> <i>Nonlinear Time-History Analysis of A City: Methodology and Application</i></p> <p><b>Lecturer:</b> <b>Xinzheng Lu</b>, Tsinghua University, China</p>

### Mini-Symposia

- MS01 *Computational Biomechanics for implantable medical devices*
- MS02 *High Performance Computing for Environmental Problems*
- MS03 *Novel numerical methods and simulation-based prediction for extreme events*
- MS04 *Computational Marine Hydrodynamics*
- MS05 *Discrete and Discrete-Continuum Multiscale Approaches for Geo-hazard Simulation*
- MS06 *Computational Mechanics in Shale Gas Exploration*
- MS07 *Simulation-based Engineering for Structure Resilience to Disastrous Events*
- MS08 *Advancement of computational fracture mechanics applications*
- MS09 *Numerical Modelling and Analyses for Safety and Catastrophic Failure of Important Infrastructures*
- MS10 *Multi-stage failure simulations*
- MS11 *Recent Development of Computational Technology in Geotechnical Engineering*
- MS12 *Hazard and Disaster Simulation of Earthquake and Tsunami with HPC*
- MS13 *Advances in nonlinear simulation of solid and structure for safety*
- MS14 *Advanced Techniques for Nonlinear Problems in Engineering*
- MS15 *Computational Methods and Modeling for Disaster Prevention and Mitigation*
- MS16 *Computation Methods for Water Environment Research and Flood Hazard Mitigation*
- MS17 *Atmospheric Boundary Layer and Atmosphere Environment*
- MS18 *Uncertainty Quantification and Propagation in Safety and Environmental Problems*
- MS19 *Advances in structural collapse analysis*
- MS20 *Advanced Modeling and Simulation of Geo-disasters*
- MS21 *Uncertainty quantification in Computational Engineering*
- MS22 *Multiscale for safety and environmental problems*
- MS23 *Recent Advances in High-Performance Geotechnical Modeling and Simulations*

## Registration

Registration for participation in the Conference should be done through the conference Registration website: <https://www.bagevent.com/event/compsafe-2017>.

The registration fee, charged in Chinese Yuan (CNY), is as follows:

Date of Registration	Participant	Student	Accompanying person
Early-September 15, 2017	CNY 4,000	CNY 2,000	CNY 1,800
September 15-October 9, 2017	CNY 4,500	CNY 2,500	CNY 1,800
After October 9, 2017 (on site)	CNY 5,000	CNY 3,000	CNY 1,800

The conference registration fee for a regular participant or a student covers admission to all scientific sessions, a book of program, refreshment breaks, reception, and organized excursion. \*Please notice that a student participant must provide a valid document showing his/her identity as a registered full-time student.

The conference registration fee for an accompanying person covers welcome reception and participation to the excursion. Online registration can be made through the conference website.

## Accommodation

Hotel rooms in **the InterContinental Century City Chengdu** and **the Holiday Inn Chengdu Century City-West Tower** have been blocked for Compsafe2017 participants until **October 7th, 2017 only**. Reservation for the hotel can be made via the website, more information could be found at the website listed below: <http://compsafe2017.org/accommodation>.

Hotel Name	Hotel Address	Price	Booking Details
InterContinental Century City Chengdu  (In Chinese 成都世纪城天堂洲际大饭店)	88, Century City Boulevard: Chengdu, Sichuan, 610041, China  (In Chinese 四川省成都市高新区世纪城路 88 号)	CNY 950.00 per night* for King Deluxe Room / Doubles DeluxeRoom  (Daily breakfast, service charges and taxes inclusive)	Reservations for the InterContinental Century City Chengdu can be made via the <b>room block reservation website</b> .  Reservations can also be made by calling +86 28 85349999  Please mention that you are part of the COMPSAFE 2017 (Group code: <b>TL8</b> ).
Holiday Inn Chengdu Century City-WestTower  (In Chinese 成都世纪城假日酒店 (西楼))	208 West Tower, Century City Boulevard, Chengdu, Sichuan, 610041, China  (In Chinese 四川省成都市高新区世纪城路 208 号西楼)	CNY 550.00 per night* for Standard Room  (Daily breakfast, service charges and taxes inclusive)	Reservations for the Holiday Inn Chengdu Century City-WestTower can be made via the <b>room block reservation website</b> .  Reservations can also be made by calling +86 28 85348888  Please mention that you are part of the COMPSAFE 2017 (Group code: <b>TL8</b> ).

## Social Events

### Pre-Conference Tour

Time: 9:30\*-19:00, Sunday, 15th October 2017

Location: Beichuan earthquake site museum

\*Notice: Departure time to the museum by shuttle bus is 9:30AM. Please make sure to wait in the lobby of InterContinental Century City Chengdu before the departure time.

### Reception

Time: 19:00-21:00, Sunday, October 15th, 2017

Location: Skybar, 19th Floor, West Tower HolidayInn.

**Banquet will be:** 19:00-21:00, Tuesday, October 17th, 2017

Location: IC Ballroom, 5th Floor, Century City International Convention Centre

Price\*: 400RMB/person

\*Notice: The banquet ticket could be bought easily both on the conference registration website (<https://www.bagevent.com/event/compsafe-2017>) and on site.