Preface

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Editor, Proceedings of the International Conference on Materials in Civil Engineering (MICE 2020)

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The International Conference on Materials in Civil Engineering (MICE 2020) was planned to be held on October 23-25, 2020 in Sanya, China. Due to the COVID-19 epidemic and to avoid the risk of crowd gathering, the organizing committee decided to hold MICE 2020 virtually/online on October 23-25, 2020. Although held online, this year’s conference also attracted many scholars and experts in the field of Materials and Civil Engineering to share new research results, novel policy developments, and practical implementation experiences regarding. MICE2020 was a successful, fruitful online academic event. Nearly 40 participants from 4 different countries and regions attended the online meeting.

The conference consists of three parts: keynote presentations, oral presentations and poster presentations and discussions covering a wide range of subjects from materials for structural damage monitoring, potential applications of SMAs in buildings and bridges, recycled waste materials in reinforced concrete construction, study on the properties of concretes at the nanoscale. We are very grateful that Professor Qing Wang from Shandong University of Science and Technology presided over the morning conference, and Professor Mohamed Abdel Kader El Gelany Ismail, from Miami College of Henan University, took charge of the afternoon conference. Thanks for all participants for attending and sharing!

It is our great honor to invite 4 experts to give the outstanding and excellent keynote speeches: Prof. Qing Wang, from Shandong University of Science and Technology, China; Prof. Shahria Alam, from The University of British Columbia (Okanagan Campus), Canada; Prof. Faiz Uddin Ahmed Shaikh, from Curtin University, Australia and Prof. Mohamed Abdel Kader El Gelany Ismail, from Miami College of Henan University.

After keynote presentations, there were 8 orals presentations and 7 poster presentations. Oral speakers and poster presenters shared their latest research results with the audience, the audience actively and enthusiastically participated in by asking questions and voting.

This conference proceeding included 15 accepted articles selected from 41 submissions.

We would like to express our gratitude to the reviewers of these manuscripts, who provided their time and expertise to review papers and facilitate the smooth running of MICE. We are extremely grateful for organizers, technical program committee and editors and extend our most sincere thanks to all the authors for their excellent contribution and work and participants for their active attending. Our sincere thanks also go to the IOP Publishing editors and managers for their helpful cooperation during the preparation of the proceeding.

On behalf of the Organizing Committee of MICE 2020
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Conference Overview

2020 International Conference on Materials in Civil Engineering was held on October 23-25, 2020 via online platform due to the pandemic of COVID-19. It aims to provide an international platform for scholars, practicing engineers, designers, researchers and other practitioners who are interested in all aspects relating to properties and applications of civil engineering materials.

Below is the overview of MICE2020 online conference.

There were nearly 40 experts and scholars from 4 countries and regions attending the MICE2020 online conference. The conference consisted of three parts: keynote presentations, oral presentations and poster presentations. Professor Qing Wang, from Shandong University of Science and Technology, China, presided over the morning conference. Professor Mohamed Abdel Kader El Gelany Ismail, from Miami College of Henan University, took charge of the afternoon conference.

We invited 4 keynote speakers to deliver keynote speeches during the conference.

Prof. Qing Wang, the first keynote speaker, representing Shandong University of Science and Technology, China, held a speech on” Study on Flexible Intelligent Sensing Materials for Structural Damage Monitoring”(Figure 1).

The second keynote speaker, Prof. Shahria Alam, from The University of British Columbia (Okanagan
Campus), Canada, delivered a speech on “Utilizing shape memory alloys (SMAs) for our next generation smart civil infrastructure” (Figure 2).

The third keynote speaker, Prof. Faiz Uddin Ahmed Shaikh, from Curtin University, Australia, gave a speech on “Effect of nano calcium carbonate on compressive strength development and durability properties of high volume slag and slag-fly ash blended concretes” (Figure 3).

The fourth and also the last keynote speaker, Prof. Mohamed Abdel Kader El Gelany Ismail, from Miami College of Henan University, talked about “Recycled waste materials in reinforced concrete construction: developing research and wealth prospects” (Figure 4).

After keynote presentations, there are 8 oral presentations (Figure 5) and 7 poster presentations (Figure 6). Oral speakers and poster presenters shared their latest research results with the audience, the audience actively and enthusiastically participated in by asking questions and online voting.

Figure 3. Keynote presentation from Prof. Faiz Uddin Ahmed Shaikh.

Figure 4. Keynote presentation from Prof. Mohamed Abdel Kader El Gelany Ismail.

Figure 5. 8 Oral presentations of MICE2020.
We would like to express our deepest feelings of respect and gratitude to the host, outstanding keynote speakers, oral speakers as well as all the audiences. MICE2020 online conference was held successfully because of their great supports and help.