

Introduction to Rammed Earth and Hakka Tulou Special Session

The *International Workshop on Rammed Earth Materials and Sustainable Structures*, as a special session of the *International Symposium on Innovation and Sustainability of Structures in Civil Engineering* (ISISS'2011), takes place from October 28 to 31, 2011, Xiamen University, Xiamen, China. This workshop is being organized as the 2nd event of Hakka Tulou Forum Series. The first *Hakka Tulou Forum: Lessons to Be Learned, Past, Present and Future* took place on June 24, 2009 at Xiamen University, China where the International Hakka Tulou Alliance (IHTA) was also launched at the same time.

Rammed earth is both a construction material and technique with favorable life cycle impact on the planet Earth, yet there are challenges to implement rammed earth technologies in modern constructions. This workshop brings together experts from Australia, Canada, China, Japan, UK and USA to examine the research potential of rammed earth materials and structures. Topics include: 1) Rammed earth both as a structural material and construction technique for sustainable structures; 2) Status and issues related to construction specifications and standards; and 3) Challenges and strategies for incorporating rammed earth in modern architecture. An important outcome of this workshop is to: 1) Establish a network of professionals to catalyze collaborative research, development and implementation including international partnerships and 2) Develop joint R&D and educational programs emphasizing the implementation of rammed earth construction with its inherent environmental and structural stability and sustainability.

The World Heritage Hakka rammed earth buildings, i.e. Fujian Tulou of China, serve as a prime example of what rammed earth construction can offer. The workshop to take place in a city near the Hakka villages offers a unique opportunity for the workshop participants to witness the sustainability of Hakka architecture, look back in order to move forward, and adapt the past for the world to come.

The papers of the workshop published in this special session of the proceedings highlight the state-of-the-art of rammed earth material and construction technologies. These papers will surely play multifold roles in building a sustainable 21st century; including helping make the engineering community aware of the advantages of rammed earth construction and promoting new research opportunities that can further advance our knowledge on the rammed earth material for modern construction.

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