

The Summary and Action Items of the Rammed Earth Workshop and Hakka Tulou Forum 2011

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Greetings from West Virginia! For some of you who participated in the International Workshop on Rammed Earth Materials and Sustainable Structures/Hakka Tulou Forum 2011, I hope you enjoyed the time and discussions we had together in Xiamen and Yongding, Fujian, China, Oct 28-31. We had a total of 21 presentations that stimulated many interesting and valuable discussions. I will upload all ppt files to the International Hakka Tulou Alliance (IHTA) website (<http://www2.cemr.wvu.edu/~rliang/ihta.htm>), along with the electronic version of the proceedings of the workshop that as a collection of full length papers will provide additional technical details for each presentation.

The following is a draft summary of action items that were drawn from the Roundtable Discussions and Program Development session. Please comment, revise, and expand as you see fit.

1. Applied research: Future research should focus on thermal insulation of rammed earth wall, material formulation, natural binder in lieu of cement, bonding issue between earth and wall reinforcement, acoustic performance of rammed earth wall, cost analysis of rammed earth construction. A study should be conducted to establish if sticky rice was used as a part of mortar mix in the great wall construction. The formulation and durability of Hakka rammed earth wall should be systematically investigated. The participants of the workshop are encouraged to submit research proposals to funding agencies of their home country such as National Science Foundation. International collaborations and partnerships are strongly suggested.
2. Specifications, codes and standards: It is suggested to establish a committee to review existing specifications and codes available and develop an universal code applicable worldwide. The proposed code should cover both SRE and RE construction.
3. The “Center for Earth Structures” Project: The proposed center will be used as a work base not only to help save, preserve and revitalize Hakka rammed earth buildings for our common World Heritage, but also to implement Hakka sustainable technologies for design, construction and operation of green structures, and to advance and promote use of rammed earth as a viable building material option for a more sustainable future of planet Earth. The proposed center can be built upon existing Hakka Tulou museum or Yongding museum and affiliated to Xiamen University. The commissioner of Yongding County has expressed full support to the idea and agreed to provide financial support to the proposed center. It can be located near the world heritage site or within eco- Hakka Park that is being constructed near Yongding city area. This project needs a full time position in place. The communication between Yongding government and Xiamen Univ is to be initiated.

4. The demonstration project of modern rammed earth construction: The team should work together to develop a proposal for a SRE or RE construction demonstration project with emphasis on energy-efficient, sustainable, and environmentally responsible building system. This demo project can be similar to the U.S. Department of Energy Solar Decathlon that is an international competition that challenges 20 collegiate teams to design, build, and operate the most attractive, effective, and energy-efficient solar-powered house that blends affordability, consumer appeal, and design excellence with optimal energy production (http://en.wikipedia.org/wiki/Solar_Decathlon).

5. The documentary production of Hakka Tulou construction techniques: This task is to interview Hakka masters who have built a number of Hakka Tulou and document the Hakka Tulou construction techniques. The knowledge of rammed earth structures is extremely limited when compared to that of steel or concrete, and the art and engineering of building with rammed earth is lost, in most industrial nations, while Hakka rammed earth buildings reflect the emerging innovation and advancement in the science and engineering of rammed earth construction, from the 8th to 20th century. It is time to learn how Hakka Masters build Tulou while they are still in good health. Funding for this project is to be sought.

Again, you are very much welcome to expand or revise the above items.

In addition, you are cordially invited to attend the Hakka Tulou Forum 2012: Putting Sustainability into Practice, in conjunction with the 4th Toronto Hakka Conference to be held June 30 to July 1, 2012 at York University, Toronto, Canada. An invitation letter from Dean Martin Singer of York University is attached.

Finally, I am attaching the electronic version of the group photo we took in front of Zhencheng Tulou.

Regards.

Ray

<http://www2.cemr.wvu.edu/~rliang/ihta.htm>

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