

# AVEI NEWSLETTER



*Corbelled and decorated dome at September's AVD training course*

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The Earth Institute celebrated its 29th anniversary in August. We are already starting to look ahead to the big 30 next year!

Over the past two months, we have had several very interesting visitors from the earthen architecture community, particularly due to the International Symposium on Earthen Structures (ISES 2018) in Bangalore and the AVEI training courses.

Lara presented a paper on "Case Studies Pushing the Mechanical Properties in Poured Earth Concrete" at ISES 2018. Hilary also traveled to the International Library & Information Science Conference (LIS 2018), which took place in Bangkok, where she presented on her experiences as a librarian in the Auroville context.

Please feel free to share this newsletter with your friends and colleagues as we spread the knowledge of earth architecture to the world!

Earthily yours,  
The AVEI Team

## ISES 2018 at IISc Bangalore

The International Symposium on Earthen Structures (ISES 2018) was held at the Indian Institute of Science (IISc) Bangalore from the 22nd to 24th of August 2018. Chaired by Prof. B.V. Venkatarama Reddy (Dept. of Civil Engineering, Center for Sustainable Technologies, IISc) and Prof. Pete Walker (Dept. of Architecture & Civil Engineering, University of Bath), this second ISES symposium aimed to bring together practicing professionals and students for information dissemination and exchange – including engineers, architects, manufacturers and builders, academics and researchers. The symposium themes included:

1. Earthen materials & technology
2. Energy & environmental performance
3. Structural performance & durability
4. Architecture/ design
5. Heritage conservation, repair & reuse
6. Indoor air quality
7. Codes & design guidelines
8. Climate-change mitigation
9. Seismic performance & design

This forum provided the rare opportunity for earth building experts in India to gather together, with a solid representation of international practitioners, academics and researchers. Well represented themes included presentations on geopolymers, thermal comfort, building health, and recycled waste flows. A session on “presentations from industry” also juxtaposed this pure



*Presentations at ISES 2018 in Bangalore*

research with the broad efforts in practice on the subcontinent. At the kind invitation of Dr. Reddy, Lara gave a paper presentation, “Case Studies Pushing the Mechanical Properties of Poured Earth Concrete”, which outlined the major developments in the applied research of Poured Earth Concrete at the Earth Institute.



[www.astra.iisc.ernet.in/ises2018](http://www.astra.iisc.ernet.in/ises2018)

Organized by CST & Dept. Civil Engineering @ IISc Bangalore, Dept. Architecture & Civil Engineering @ U. Bath, Centre for Low Impact Buildings @ Coventry U., Dept. Engineering @ U. Durham, ENTPE Lyon, Dachverband Lehm e.V.

## Building Extension for Pottery Sipapu

In August, the Earth Institute architecture team began construction on a small building extension project in Auroville for Pottery Sipapu, the workspace of Auroville ceramic artist Priya Sundaravalli. This simple and modest extension links two existing buildings, to provide a covered, semi-outdoor art-making space. The walls are now being built with CSEB and poured earth concrete, and ferrocement channels will soon be laid for the roof.

We look forward to seeing the beautiful and expressive creations that Priya will bring to life in this new space. ■



*Sambasivam and Mani working on Priya's extension*

## LIS 2018 in Bangkok

In August, Hilary traveled to Bangkok to take part in the International Library & Information Conference (LIS 2018), an annual Library & Information Science conference that gathers LIS practitioners from around the world to present their work and research, as well as to network with others in the field. This year, LIS was co-located with the International Conference on Business, Information, Tourism, and Economics (BITE) and the International Conference on Education and Global Studies (IConEGS) and brought together people from 31 countries.

Hilary submitted a paper to the conference entitled "Library Services in the International Township of Auroville: the role of libraries in a 'place of an unending education'" and presented it during one of the poster sessions.

This conference gave Hilary a unique opportunity to engage with other librarians, and she hopes that it will result in her continued professional development and new collaborations with other libraries in India.



*LIS / BITE / IConEGS - Summer 2018*



*Vaulted meeting space at Masons Ink's The COurtyard*

**Vanitha Veedu Awards  
for Masons Ink**

Earth Institute alumni Rosie Paul and Sridevi Changali have recently been honored with two awards from the Vanitha Veedu Architecture Awards, an annual awards ceremony hosted by the leading Kerala-based architecture and interiors magazine Vanitha Veedu. From over 200 submissions, The COurtyard was selected for Best Public/ Urban Building and Raa Maram was selected for Best

Young Architects, both of which were designed by Masons Ink. The panel of judges included Prof. Richard Ho, a Singapore-based academician and principal architect at Richard Ho Architects; Prof. Sunjay Kanvinde, a Delhi-based architect, urban designer and academician; and Dr. B. Shashi Bhooshan, a Mysore-based architect and academician.

Sridevi and Rosie founded their architecture firm Masons Ink in Bangalore in 2015. They have taken on architectural and interior design projects around

South India as well as initiated several noteworthy educational endeavors, including earth construction workshops and heritage conservation awareness programs.

Their projects Raa Maram and The COurtyard are stunning examples of their design philosophy, combining CSEB construction with other locally sourced and re-purposed materials to create modern spaces inspired by vernacular traditions and a holistic approach to life. ■

[www.masonsinkstudio.com](http://www.masonsinkstudio.com)



*Vanitha Veedu Architecture Award recipients (Sridevi and Rosie at center)*

*The COurtyard (top) and Raa Maram (middle and bottom)*

## Visitors

These last months were an exciting time for visitors at the Earth Institute, as ISES Bangalore brought many earth-building experts in from out of town. Specialists came from Turkey, Iran, Singapore, Germany and USA.

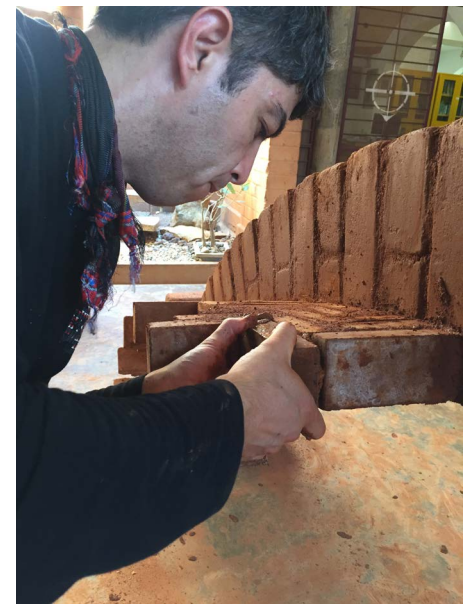
### *Mostafa Aref Haghi*

Mostafa Aref Haghi, an architect and historian of traditional Persian architecture, was finally able to come to visit us in September. Mostafa has been working on a beautiful manuscript documenting and translating traditional knowledge on the construction of “Karbandi” domes (see **Newsletter Issue 40** for more).

Mostafa has written papers on a wide range of traditional Iranian architecture, including the Karbandis, prefabricated arches, and windmills. He has also been developing a method to train ordinary people as “vernacular architects”, to continue the unique living traditions of earthen heritage in Iran as well as context and climate responsive design.

### *Dr. Bilge Işık*

Professor Emeritus Bilge Işık came to visit us from Turkey before ISES 2018. Bilge – a seasoned academic in the field of earthen architecture – has invested a great deal of research into the topic of the seismic performance of buildings.



*Mostafa working on a Persian herringbone bond pattern*

As an architect, her philosophy has been to look at the way details in traditional buildings have addressed concerns of seismic stability. Her research premises have often challenged status quo ideas of seismic performance in the field of civil engineering. For example, she has looked extensively at how horizontal

bedding in traditional masonry – e.g. horizontal bands of weak, low density materials – concentrates seismic stresses in the horizontal bed joint. This allows shear cracks to propagate horizontally, rather than diagonally, compromising less the stability of buildings.

<http://www.kerpic.org/>



**Visitors (cont.)**

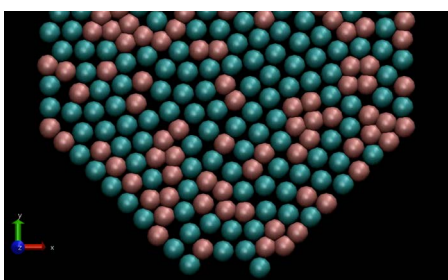
*Dr. Shubha Tewari*

Dr. Shubha Tewari, Senior Lecturer in physics at UMass Amherst, and her son Kabir came to visit in the month of August. Shubha's work concentrates in the areas of Theoretical Condensed Matter Physics and Soft Matter Physics – a mouthful for laymen builders like us! :) Earth builders and physicists have in fact a lot in common.

“Soft Matter” is a category of materials in which solid state materials “flow” like liquids – this includes the earth and other granular materials like sand. It was the great French Soft Matter physicist Pierre-Gilles de Gennes whose work inspired the ElemenTerre program developed by our partners at CRAterre.

One fascinating aspect of Shubha's work is her modeling of forces at the bottom of columns of flowing granular material (e.g. grain silos). The “arching action” seen here is similar to forces in arches – jumping from a material scale to a structural scale! ■

<https://www.physics.umass.edu/people/shubha-tewari>  
<http://blogs.umass.edu/tewari/>



**ElemenTerre Gearing Up**

The Earth Institute is gearing up its ElemenTerre program once again, offering a hands-on approach to the science of earthen construction for general audiences, students and professionals of architecture alike.

Meenakshi, who joined the Earth Institute team over the summer, will be offering this dynamic pedagogical demonstration, which was developed by CRAterre.

Through a series of experiments, ElemenTerre is able to show the

principles of earthen construction and the role that soil particles (granular material), air, and water play in creating such a multifarious building material.

The ElemenTerre demonstration has already been incorporated into the Earth Institute's training courses and is also available as a special awareness program for student groups and general audiences. To organize a demonstration, please contact: ■

[training@earth-auroville.com](mailto:training@earth-auroville.com)

[www.earth-auroville.com/elemenTerre\\_en.php](http://www.earth-auroville.com/elemenTerre_en.php)



*ElemenTerre demonstration – Granular forces*

**Earth USA News**

*A Comprehensive Electronic Newsletter – Dedicated to Promoting and Preserving Earthen Architecture*

The Adobe in Action team responsible for the Earth USA conference has announced that it will be publishing an electronic newsletter about earthen architecture, with news articles, interviews, book reviews, podcast links, and a calendar of events. They will be welcoming contributions from the entire earth-building community. To contribute to the first issue, send your article by 15 October to [editor@adobeinaction.org](mailto:editor@adobeinaction.org) ■



**AVEI Training Course Schedule for 2018**

- October  
8th to 13th: Ferrocement
- November  
12th to 17th: Wind Generator
- December  
10th to 15th: AVD Intensive

**AVEI Newsletter**

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Editorial Team:  
Hilary D. Smith  
Lara K. Davis

Auroville Earth Institute  
Auroshilpam  
Auroville 605 101 T.N.  
India

Tel.: +91 (0) 413 - 262 3330  
/ 262 3064  
Fax: +91 (0) 413 - 262 2886

[www.earth-auroville.com](http://www.earth-auroville.com)

[info@earth-auroville.com](mailto:info@earth-auroville.com)  
[training@earth-auroville.com](mailto:training@earth-auroville.com)



*Jyoti Khare's decoration of the Matrimandir amphitheatre for the dawn bonfire, August 15th  
(photo copyright Ireno Guerici)*