



*Report by*

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# *Team Niketh*

## *Organizing Student Committee*

Lokesh Udatha, Alumni MEC

Namratha Reddy, Alumni MEC

Trishala Daka, Alumni MEC

## *Student Volunteers*



Rishitha Boddu (UG4), Shubhika (UG4), Vineeth (UG4), Aalekhya(UG4), Sai Kiran (UG4), Phani(UG4), Likitha(UG3), Sai Sree(UG3), Geetha (UG3), Anudeep (UG3), Satwik(UG3), Kishore(UG3), Abhinav.K(UG2), Sushmitha (UG2), Keerthi(UG2), Abhijeeth(UG2)



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## *Acknowledgement*

We are very grateful and indebted to many people who influenced and supported the whole team on journey leading towards organizing Niketh.

First and foremost we would like to thank the Director Prof Yaj Medury, for all his consistent support throughout the event starting from seed of thought till the execution. We thank our Prof. Bishnu Pal, Prof Arya K Bhattacharya, Dr. Prabhakar Singh for their encouragement to share our thoughts.

We warmly thank our panel members Dr. Subba Rao S and Dr. Deepti for their time and patience to judge the models.

Many thanks to Registrar, for providing contacts of sponsors. This event would have not been happened smoothly without the efforts of Mr. Joseph, Mr. Praveen Raj, Mr. Mohan and maintenance staff, a special mention to all of them.

Power boosters for the event are all our student volunteers, who have taken initiative to be with us helping throughout. All credits goes to their effort. We truly thank Mr. Vinayak for facilitating us with event coverage. Our MEC colleagues a special mention to you all for bearing with us in last minute adjustments.



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# *Introduction*

## **Why?**

India has a unique mix of cultures and is also one of the oldest civilizations of the world. The seventh largest country in the world, India's land mass extends from the snow-capped Himalayan mountains in the North to tropical coastal regions of the South; from the Arabian sea in the West to the deeply forested mountainous regions in the Northeast and the Bay of Bengal in the East.

The diversity in culture, tradition and geography of India can be seen in traditional housing practices, which are eco-friendly and sustainable. Due to the present era of modernization, the knowledge of traditional housing practices is on the brink of being lost.

Mahindra École Centrale presents "Niketh- A traditional housing challenge" aimed at preserving the wisdom of traditional construction practices, viewing them through lens of science, engineering and technique.

## **How?**

The Challenge has been conducted in two phases as below

### PHASE-1

A two page write up on any of the Indian housing typology (preferably from participant state/region) has to be submitted for the initial screening. The article must display its traditional importance associated with Science, Engineering & Techniques.

### PHASE-2

Participants who were selected from Phase 1 should built a prototype model of above-chosen housing typology to the scale of 1:10 to 1:15 and the same has to be showcased during the event.

## **When?**

12<sup>th</sup> – 13<sup>th</sup> October 2018 at Mahindra École Centrale, Hyderabad



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# *Program Schedule*

## **Day 1 (12 Oct 2018)**

09:00 – 10:00	Registration
10:00 – 10:45	Inaugural Session
11:00 – 12:30	Guest Lecture <b>Aruna Kappagantula &amp; Prashant Lingam</b> Co-Founders, Bamboo House India
14:00 – 16:30	Model Showcase
17:00 – 18:00	Treasure Hunt
18:00 – 20:30	Cultural Night

## **Day 2 (13 Oct 2018)**

09:30 – 10:30	Lecture at National Institute of Rural Development <b>Dr. S. Ramesh Sakthivel</b> Associate Professor & Head Centre for Innovations and Appropriate Technology, NIRD & PR, Hyderabad
10:45 – 12:45	Field Visit at Rural technology park, NIRD
14:30 – 15:30	Guest Lecture <b>Er. P. Surya Prakash</b> Co-Founder and Director SatyaVani Projects and Consultants Pvt. Ltd.
15:30 – 16:30	Valedictory Session



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## *Statistics*

A total of 45 teams representing various institutes across India have submitted and reviewed, out of which 20 teams have been selected.

Few lists of institutes which have shown interest in niketh'18 viz; IIT Roorkee, IIT Indore, VIT University, Nirma University, NIT Trichy, Pandit Deendayal Petroleum University, Shiv Nadar University, Northcap University, JK Lakshmipat University, Pimpri Chinchwad College of Engineering, Srinivasa Ramanujan Institute of Technology, Vidya Jyothi Institute of Technology, Anurag Group of Institutions, Vardhaman College of Engineering, CVSR college of Engineering, ISL Engineering College etc.



# Niketh Days

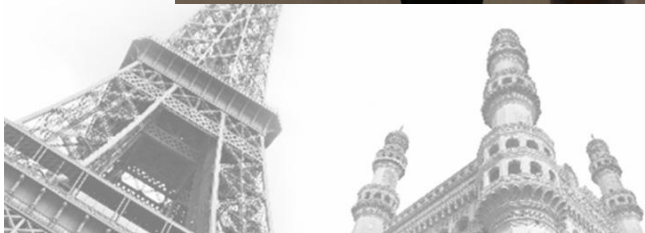
## Day-1

### 1. Inaugural Session

"I am that Change" the session has started with this video to convey that we at Mahindra École want to be the change in Civil engineering for future India.

The session was chaired by Prof. Bishnu P Pal, Dean Academics; Prof. Arya Kumar Bhattacharya, Dean R & D; Dr. Prabhakar Singh, Coordinator Civil Engineering; Dr. Ramachandra Prasad, IIIT-H; & Prashant Lingam, Co-Founder of Bamboo House India.

The event chair Dr. P. Venkata Dilip Kumar has presented the vision and mission of Niketh. The Vision dealt with writing a book on "Housing Typologies of India" and building a website consisting all the details of each individual traditional houses build across the country. India still has 70 % of its population living in villages. Mission of the Niketh was to encourage natural and local construction materials in current education. Which will be done in three categories Student National Challenges, Student Research Project, National Workshops and conferences.





Niketh will be an annual event and duration of the event will be increased based on number of participants. Co-chair Prafulla Kalapatapu compered the whole event and officially welcomed the participants for Niketh'18. The session chairs have given a glimpse about Mahindra École Centrale and their encouragements towards student events. Finally, with their wishes the challenge has begun.

## 2. Guest Lecture by Prashant Lingam, Co-Founder of Bamboo House India

**Prashant Lingam** a Serial Social Entrepreneur from Hyderabad. He has given lecture on his experiences and about his success by failing. He shared the opportunity involved for young Engineers in promoting natural materials in construction activities.

Briefly in his words " *I can never forget that phase, about two and a half years, when we barely had one meal a day,*" says Prashant. " *It has been a big teacher for me.*"



Figure 1: Talk by Prashanth Lingam on Bamboo Housing

*My First Social venture is "Bamboo House India" - [www.bamboohouseindia.org](http://www.bamboohouseindia.org), which mainly works in " Sustainable bamboo-based livelihoods and low-cost prefabricated bamboo shelter solutions.*

*My focus is in utilising bamboo as an economic driver for providing sustainable livelihood opportunities at the base of economic pyramid and promote bamboo as an eco-friendly substitute to wood, steel, iron & plastic.*

*There are various resources in local communities which if harnessed through joint community, corporate, governments and CSO partnerships, based on capacity building and value-added activities, can be the basis for providing increased sustainable livelihoods to the poor.*



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*Bamboo falls within at least three distinct areas:*

*1) Natural resources 2) social development and 3) economic development.*

*Bamboo is part of bio diversity and a source of our country's floristic wealth; it provides ecological services; and is a commodity that can be used and sold providing employment and income opportunities.*

*My Second Social Venture - RECYCLED INDIA - works towards addressing the burning issue of urban scrap and waste - mainly unused tyres and drums, more than a million tyres across the globe are dumped in landfills and water streams and no concrete solution is available to address this problem, through our venture we are trying adding value to scrap and create livelihoods in the process and support environment.*



*"I am happy with what I have, and work is my passion," he concludes. "I hope I can help entrepreneurs in their bamboo start-ups and spread the word on the boons of bamboo."*

### **3. Model Showcase**

Participants from various colleges across India participated in Niketh challenge along with their housing models. The competition was much focussed on traditional techniques of housing in India. Since we abandoned the use of locally natural materials in our present era, this challenge stress its importance more on use of it. A total of 18 teams have presented their models and where assessed by 5 panel committee.

The showcase was visited by several dignitaries from Mahindra Ecole Centrale, faulty members and students. Participants put their effort to deliver the importance of traditional houses and need of rebirth of these typologies in the present generation.

Few volunteers from Mahindra Ecole Centrale have built Kerala boat house and



Evolution of houses where the centre of attraction. Below is a glimpse of showcase.

Table 1: List of Participants

Sl. No	Participant-1	Participant -2	College	Housing Typology
1	Rajat Tekchandani	Rajat Sharma	Institute of Technology, Nirma University	Houses of Jalwali
2	Patel Sahaj Ruchirbhai	Patel Hardik Mineshkumar	Institute of Technology, Nirma University	Thathara house
3	Kamlesh R Daxini	Jignesh M Sonagra	Institute of Technology, Nirma university	Bhunga
4	Trishna Singh	Tanay Honey Dash	VIT, CHENNAI	IKRA HOUSE
5	Shubham Ashok Padia	Swapneel Shah	Pandit Deendayal Petroleum University	Dhajji House
6	Valaboju viranyu	Harika podishetty	VJIT, Hyderabad	Chettinad
7	Sagar Agarwal	Vineeth Yerramaneni	Shiv Nadar University	Garo bamboo house
8	ARRA RANJITH REDDY	K INTIYAZ BASHA	Anurag Group of Institutions	Rural mud house with pitched roof
9	CH Vanya	CH Ruchitha	Vardhaman College of Engg	Pol Housing
10	Kavyalakshmi N	Vakada Lakshita	Mahindra École Centrale	Kerala Nalukettu House
11	Shalin Mathew	Gandham Laxmi Manisha	Mahindra École Centrale	Kath kuni
12	Satvik Tallam	Y .S.N .Kishore	Mahindra École Centrale	Bamboo arunachal
13	Abhinav Kolla	Vika Varma	Mahindra École Centrale	Manduva logilli
14	Rishita Boddu		Mahindra École Centrale	GUTHU MANE
15	Soma Shekhar	Swaroop	Mahindra École Centrale	Yumjaos
16	Rumajid Mushtaq	Irshad ul islam	Mahindra École Centrale	Kashmir boat house
17	Yeshwanth thalari	Palla Saikiran	SRIT, Anantapur	Mud House
18	Vumapathikari Manoj	D. Gnanaprakash	SRIT, Anantapur	Kottam, Mud House



(a) French Architecture

(b) Stone House/Thatra house





(a) Kerala Naukettu House



(b) Evolution of Houses



(a) IKRA House



(b) Guttu Manne, Karnataka



(a) Kottam/Mud House, Anantapur



(b) Manduva logili





(a) Koti-Bansal Architecture



(b) Assam Bamboo House



(a) Chettinad House



(b) House of Jalwali



(a) Dhajji Dhewari House



(b) Yumjaos house

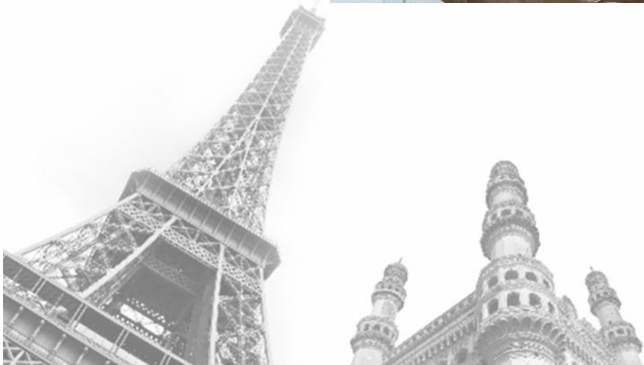




(a) Kashmir Boat House



(b) Bamboo house demonstration



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## 4. Cultural Night

The idea to organize a cultural night is to exchange of different cultures of all the participants at one platform. A small attempt has been made by organizing several activities.

### Day-2

#### 1. Field trip to Rural Technological Park, NIRD, Hyderabad

The participants were received by Dr.S.Ramesh Sakthivel, Associate Professor & Head, Centre for Innovations and Appropriate Technology, National Institute of Rural Development and Panchayati Raj, Hyderabad. He delivered a lecture about RTP and benefits for the society associated with several housing prototypes at RTP.

#### **About RTP:**

RTP-NIRDPR- is a place, where a variety of models of rural technologies are showcased with practical demonstration, in other words Training cum Production Centre. RTP spread across 65 acres in NIRDPR. RTP is an instrument in disseminating appropriate and affordable rural technologies to villages through dynamic approach. RTP is run on Partnership basis with the active participation of individual entrepreneurs, NGOs and government agencies. The guiding principles of RTP include use of local resources, cost-effectiveness, eco-friendly and blending tradition with modern technologies. Rural Housing, Renewable energy and natural resource management and Skill development & Promotion of entrepreneurship.

#### **Summary:**

- Live demonstration/dissemination of cost-effective, local resource based and environment friendly technologies of different sectors of Rural Development
- Provide functional exposure to replicable models to meet location-specific, season-specific and social contextual needs
- Promote participative-cum-partnership collaboration between frontline / forward demonstration teams, other official and NGO institutions of NIRDPR
- Facilitate transfer of technologies to users and help improve the operational skills to produce high quality products
- Link users and institutions (PRIs, NGOs, CBOs) with technology developer / suppliers

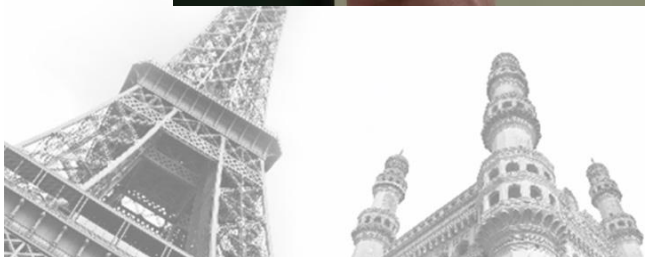




Lecture at NIRD and field visit

## 2. Guest lecture by Er. P. Surya Prakash

A lecture was delivered by Er. P.Surya Prakash, Founder and Director, SatyaVani Projects and Consultants Pvt. Ltd on use of natural materials in construction. The session has given a lot of insights about the use of natural materials over modern materials. A person with 30 years of expertise as an engineer, has build the bridge between the gap from academia and industry.







### 3. Valedictory session

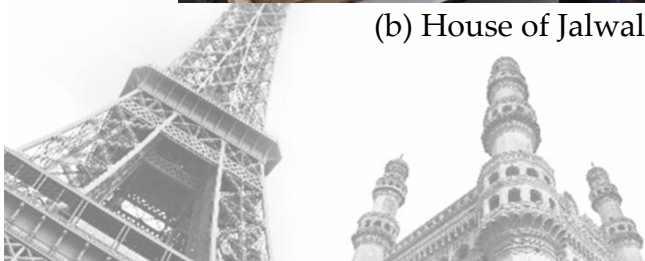
Niketh has come to end by declaring the winners. Every participant has put their effort in making the housing model beautiful. But finally it was Gnanaprakash & Manoj kumar from SRIT, Anantapur made it first and Rajat.T & Rajat .S from Nirma University along with Satvik and Kishore from MEC made it second. A cash prize of Rs. 15000/- for first and Rs. 10000/- each for second prize has been awarded.



(a) Mud House/First Prize from SRIT, Anantapur



(b) House of Jalwali/ Second Prize from Nirma University





(c) Bamboo House/Second Prize from Mahindra Ecole Centrale



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## *Conclusion*

We are glad to let you know that “Niketh- A Traditional Housing Challenge” was very successful. We want to make this as an Annual event open to all disciplines. Totally 18 models were presented. All the participants thoroughly learnt many aspects and enjoyed their stay during the event. Participants shared their feedback saying “Niketh is one of its kind” and they would like to participate in every annual challenge.

**\*\*\*\**THANK YOU*\***



