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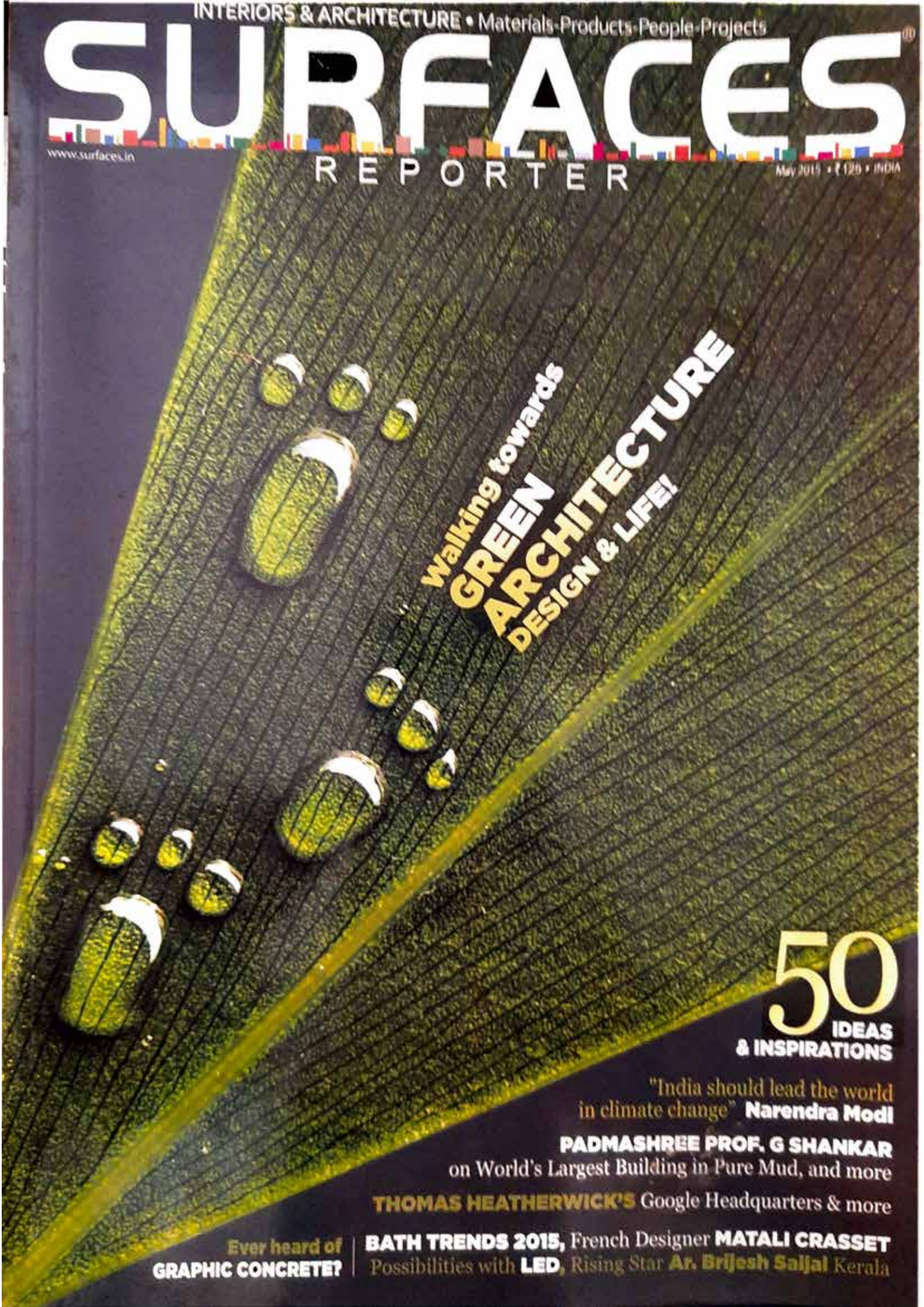

Walking towards GREEN ARCHITECTURE DESIGN & LIFE!

50 IDEAS & INSPIRATIONS

"India should lead the world in climate change" **Narendra Modi**

PADMASHREE PROF. G SHANKAR on World's Largest Building in Pure Mud, and more

THOMAS HEATHERWICK'S Google Headquarters & more

Ever heard of **GRAPHIC CONCRETE?**

BATH TRENDS 2015, French Designer **MATALI CRASSET**

Possibilities with **LED,** Rising Star **Ar. Brijesh Saijal** Kerala

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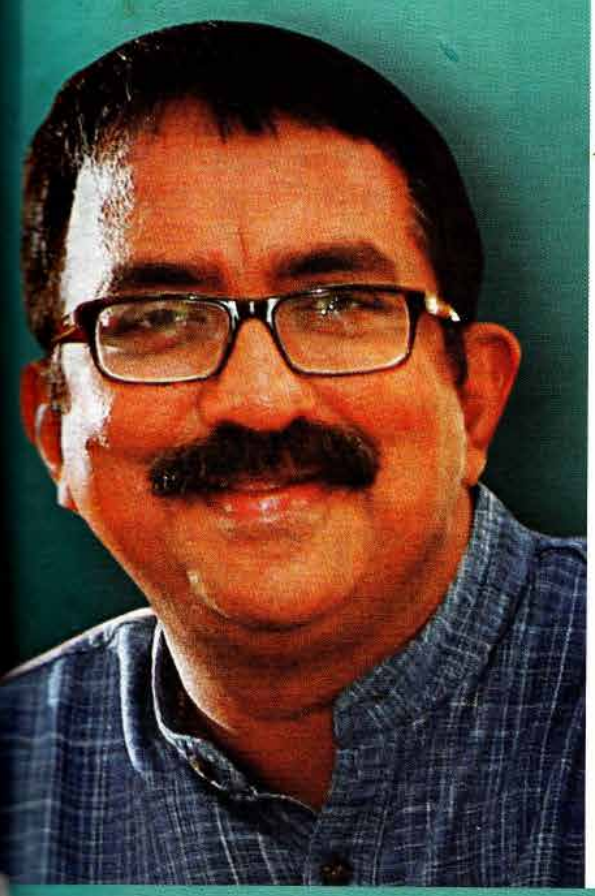
Thank you for your inquisitiveness and eagerness to read Surfaces Reporter!

PRODUCT POINTER



Padmashree Prof G. Shankar needs no introduction. A pioneer in the development of one million mass housing, not only in India but around the world, he is known for his passion for Sustainable Architecture. He supports going back to our roots and the use of local materials. Awarded Padmashree in 2011 by the Government of India, Ar. Shankar started as a lone crusade, his concept of green architecture has brought about a much-required qualitative change to the shelter sector in ***Kerala, India.*** *A socially concerned architect, his initiative turned out to be the most effective effort in bringing about a momentous change in the habitat culture of Kerala, which thereafter spread, to other parts of India.*

The 1980s saw the Gulf money boom in Kerala. The middle class, ignorant of what was to be done with the large amount of money that flowed in from the expatriates working in the Persian Gulf countries, finally decided to revert it for building large mansions. The gulf boom brought forth an economic imbalance in Kerala. This was when Shankar came forward as the propagator of nature friendly and cost effective building technology. Shankar draws inspiration from Architect ***Laurie Baker.*** *His sensitivity to the needs of the common man, the marginalized, the slum dwellers and the tribal earned him the title of "People's Architect". Winner of numerous accolades, he is Member, Board of Studies, University of Kerala and other reputed institutions in the country. More facets of* ***Padmashree Architect Professor G. Shankar, Founder, Habitat Technology Group, Thiruvananthapuram, Kerala,*** *are found in an interesting and knowledge-aspiring conversation with* **SURFACES REPORTER®**.

10-on-10 with PADMASHREE PROF. G. SHANKAR

"RENOWNED AS 'PEOPLE'S ARCHITECT', A PIONEER IN THE DEVELOPMENT OF ONE MILLION MASS HOUSING, NOT ONLY IN INDIA BUT AROUND THE WORLD, PROF. SHANKAR IS KNOWN FOR HIS PASSION FOR SUSTAINABLE ARCHITECTURE AND THE USE OF 'MUD' AS A BUILDING MATERIAL."

1 Tell us about your journey in Architecture?

I came to Delhi to study Masters in Architecture. Working with a leading architecture firm, as a junior architect, I was a part of the construction of buildings like Le Meridien and underground Palika Car Parking where I learnt the unsustainable character of architecture. Thereafter, I came back to ***Thiruvananthapuram*** and began my own practice. I had to wait for almost a year before someone who understood my vision, approached me for his project since I neither wanted to design unsustainable nor intended to be bogged down on my principles. And hence the journey of sustainability began.

2 What do you think today is missing from the Modern architecture?

Today, the connection of sensibility and sensitivity between architecture and people is missing. Often people fail to realize that **every building, be it commercial or residential, has a soul**. The same thing was taught to us by the forefathers of architecture. Talking about Organic Architecture, ***Ar. Frank Llyod Wright*** essentially said the same thing. The sensitiveness and sensibility towards our buildings and materials will drive us to the right path. But the journey will not be easy; it will be full of thorns and you will find hostility along the way. But it's a beautiful journey that makes architecture meaningful.

3 You talk mostly about Responsive Architecture. Please throw some light over the concept?

Responsive architecture is about looking at the resources. I am a person who continuously build in Mud; uses earth as the building material. **With 600,000 sq ft, I have created World's Largest Earth Building in Pure Mud with no processing.** Being a mason myself, I talk about Mud as the sustainable building material and know the characteristics, beauty, versatility, durability and elasticity of the material which is unlike any other conventional building material.

4 In a recent Summit, you spoke about Transitional Rurality and said that most demand would come from this space created between Rural and urban. Tell us about it.

In the transition from rurality to urbanism, visual memory operates much less consciously. Urban living demands labour all the year round; there is no time for building and maintenance. Shanty settlement dwellers acquire a new know-how: obtaining waste materials from the city itself with which to make lamps, cookers, rope – and their houses. Eventually, more elegant solutions to the problems of building in the city periphery

Kerala Haat, an eco rehabilitation project of an abandoned quarry.

With 600,000 sq ft, I have created World's Largest Earth Building in Pure Mud with no processing. Being a mason myself, I talk about Mud as the sustainable building material and know the characteristics, beauty, versatility, durability and elasticity of the material which is unlike any other conventional building material.

will evolve, differentiation of skills may appear, know-how will be expanded and passed on to subsequent generations. With the possible growth in literacy, problem isolation and the conceptualizing of solutions may become commonplace. But if it does, will the resultant forms of shelter still be 'vernacular'?

However, it seems likely that we witness the processes of emergent vernacular and the acquisition of new know-how, as successive waves of migrants to the city learn to cope with it.

We are in a position, as the traditional builder often is not, of seeing his building types in the context of others built by comparable cultures in similar physical or economic conditions. With the knowledge to which we have access and with the advantages of mobility, comparative data and the means of information exchange, we are in a position to assist in the sharing of technological know-how. For those who are facing the difficult adjustments necessary in a period of cultural change; for those who have been subjected to fragmentary exposure to modern technology but who are still deprived of the basic necessities of shelter and services; for the victims of natural and man-made disasters who have seen their homes disintegrate; for those who are ciphers in a statistical survey and are numbers to be housed in a planning scheme; for all these and more, we should surely have much of value to offer.

5 PM Modi has announced the Housing For All by 2022. How do you think the target can be achieved sustainably?

I would like to quote few lines by ***Hassan Fathy***, one of the pioneers of Earth Architecture here.

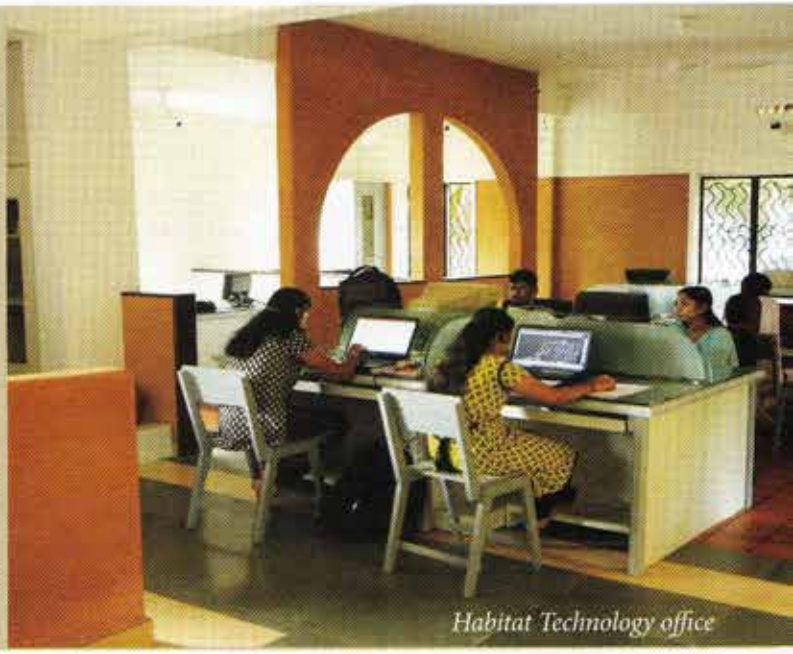
" If only the government will change its attitude to housing, will remember that a house is the visible symbol of a family's identity, the most important material possession a man can ever have, the enduring witness to his existence, its lack one of the most potent causes of civil discontent and conversely its possession one of the most effective guarantees of social stability, then it will recognize that nothing less will do than the utmost a man can give in thought, care, time and labour to the making of the house he will live in. It will recognize that one of the greatest services a government can tender to its people is to give each family the chance to build its own individual house, to decide at every stage how it is to be, and to feel that the finished building is a true expression of the family's personality."

PM's target of 'Housing for All' can be achieved if we approach shelter as a **"process" rather than a "product".**

7 What is the acceptance level of 'Mud' as a building material? What sort of processing does it require to be used as the building material?

Mud has an enormous potential as a building material. It can be recycled, moulded into plastic forms and shapes and is so resilient and versatile. Once people are convinced of the benefits, there has been a widespread acceptance and a conscious choice by people across all cross sections of society.

One needs to check the clay content of the soil before going in for a particular building process. Soil needs to be sieved to clear it of weeds, pebbles etc. If the clay content is more, one needs to add inert materials like sand or quarry dust. Binders like lime or cement in small quantities provides additional strength. The mix can be manually or compacted by a press or in a mechanized process. In traditional houses in rural Kerala, people used to make mud blocks mixed with straw or bale and store them for future use.



Habitat Technology office

6 Today, architects are working with materials like glass and ACP to bring down the weight of the structure and ensure strength. Do you think that unconventional materials like mud, bamboo etc., can compete with them in terms of beauty, elevation and strength?

There is no question of competition but we could talk of completion. There is also a question of appropriateness with reference to design, local availability and costs. As with the housing design process, cautious consideration of contextual conditions is crucial to developing appropriate construction technologies. In addition, any selected technology must be constantly reviewed and, if necessary, upgraded during the construction process.

Recycling of waste products or by products which are polluting the environment like fly ash, quarry dust, plastic can be easily recycled and used as building components. It just requires a little more input in terms of design and execution.

8 How Habitat Technology is striving to make the lives of people better?

Habitat's approach to housing is backed by a vision to provide housing for all. **In contrast to the approach that the house is merely an end product of a long chain of social, economic, technological, environmental, and political & other interactions, the approach to Shelter is more as a process rather than a product.** We ensure that the following parameters are taken into account.

Equitable Use: *The design is useful and acceptable to people with diverse abilities.*

Flexibility in Use: *The design accommodates a wide range of individual preferences and abilities.*

Simple and Intuitive Use: *Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.*

"My office is a six storey mud building with absolutely no artificial lighting and fans switched on only during day hours."

Perceptible Information: *The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.*

Size & Space for Approach & Use: *Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.*

9 Your message to the budding architects?

Making a Green, maintainable building is the solution. Today we see buildings being ruthlessly demolished, destructed, murdered and slaughtered in the name of strength and durability. Retrofitting, reusing, recycling and maintenance of building can go a long way in maintaining a Green Tradition.

My office is a six storey mud building with absolutely no artificial lighting and fans switched on only during day hours. I don't talk about technical terms like preserving natural lights, fenestration, glare analysis, green air conditioning etc. I am only interested in making people's lives more meaningful and comfortable.

10 If you are given a Magic wand and the freedom to change the buildings, how would that world look like?

Green Rehabilitation in key areas like land planning, house design, green technologies and water conservation; the objective is to have an overview of potential measures and practices which can be implemented to reduce the ecological footprint of building interventions and securing local livelihoods in the long term. ***Mud, bamboo, lime, recycled materials*** would have been used.