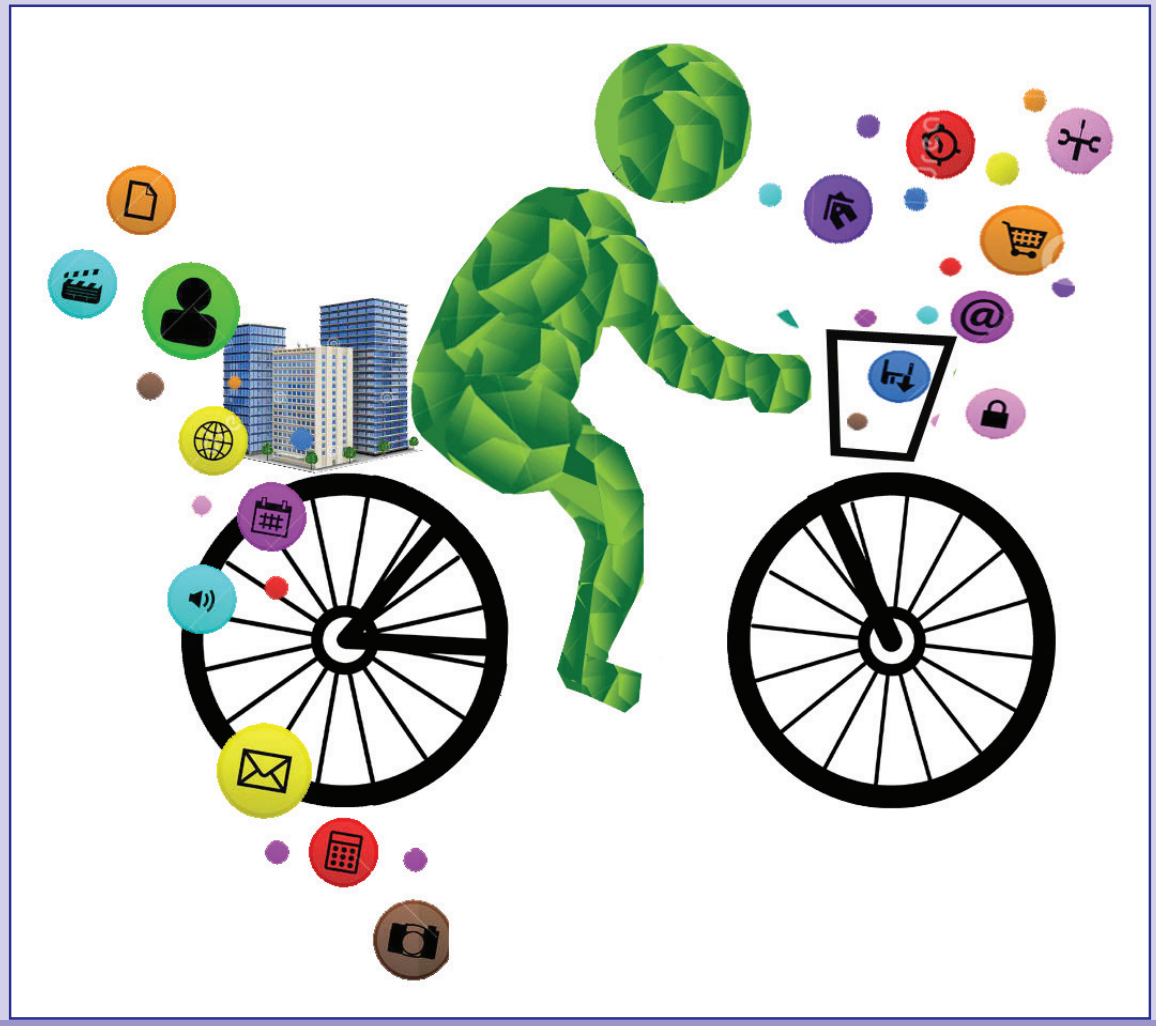
National Award Competition for Students 2017

For The Best Innovative use of Steel in Architecture



THEME: ELEVATED CYCLE TRACK

Institute for Steel Development & Growth

Announcement for NACS (A) 2017

NATIONAL AWARD COMPETITION FOR STUDENTS (2017)

FOR THE BEST INNOVATIVE USE OF STEEL IN ARCHITECTURE

THEME: ELEVATED CYCLE TRACK

THE INSTITUTE

Institute for Steel Development & Growth (INSDAG) is a non-profit making, member based organization established at Kolkata by the **Ministry of Steel, Govt. of India** and the **major steel producers** in the country. The Institute primarily works towards the development of advanced design methodologies and technical marketing by expanding applications of steel in different segments, upgrading skills and know-how, creating awareness amongst potential users, providing efficient steel-usage technology /design aids / teaching aids, upgrading skills/ know-how, disseminating steel related information / database, establishing intimate industry-university interface and communicating the benefits of steel vis-à-vis other competitive materials, etc. To promote steel usage in India, the Institute has identified various projects / thrust areas under the direction of its Executive Council

THE MISSION

To work in unison with all the stakeholders in the Steel Industry so as to evolve ways & means for more efficient use of steel and provide optimum value to the customer.

THE OBJECTIVE

To create interest among the students of Architecture in using steel as a medium of their architectural expression and in exploiting numerous advantages of structural Steel as a material of construction, the Institute organises a ***"National Award Competition for Students for the Best Innovative use of Steel in Architecture"*** as a part of its Industry-University interface. Starting from the year 1999-2000, the Institute is arranging an interesting and exciting competition every year for the students of Architecture all over India with a view **to recognizing and rewarding the talents of budding Young Architects of tomorrow for "Excellence in Steel Architecture".**

THE BRIEF & THE THEME

This is the **18th year of the Competition**. The **Theme** of the competition for the year 2017 is Steel intensive **Elevated Cycle Trac**k. The **Brief** of the **Competition** is available in this brochure.

THE PRIZES

1st Prize : ₹ 35,000/- + Certificate
2nd Prize (2 nos.) : Each ₹ 25,000/- + Certificate
3rd Prize (2 nos.) : Each ₹ 15,000/- + Certificate

Further all submitted Entries will receive Participation Certificates.

ELIGIBILITY

The **"Competition"** is open to all the **first year to final year UG & PG Architecture Students** (for UG students, individual participant / team of maximum 4 students in the team & for PG students only 1 PG student either individually or in a team with maxm. 3 UG students) from any AICTE / COA approved University / Schools of Architecture in India. Students from Schools of Design in India may also participate. Students from different colleges may form groups but in such case the colleges should be from same zone. Each participating group is required to fill in the enclosed **"Expression of Interest"** form (photocopies are acceptable) for participation and send the same with student membership fees of ₹ 500/- for each participant in the form of draft to INSDAG. Students who have already been enrolled as members of the Institute would mention their membership number only in the EOI form and need not to pay any further membership fees.

THE SELECTION

Four Zonal Selection Committees (one each for East, West, North & South Zone) consisting of renowned Architects and Faculties will make the Zonal Ranking (and Screening) of Entries at each Zone. In the **Zonal Round**, max. 16 (sixteen) best Entries will be selected (maximum 4 numbers from each Zone) based on the Zonal Ranking of the proposals, as per the criteria formulated by the Committee. The participants of 16 short listed entries will be duly informed and called to Kolkata to appear before the **Central Selection Committee** in the **Final Round** of Competition to display and present their entries. The approximate timing of the same is around **February 2018**. However, the detailed programme will be intimated later on. The top five Entries will receive the **Awards**.

ENTRIES / APPLICATIONS

- **Last date of sending Expression of Interest - 30th September 2017**
- **Last date of sending entries - 31st October 2017**

ZONAL COORDINATORS

NORTH ZONE [NCR; Himachal Pradesh; Haryana; Jammu & Kashmir, Madhya Pradesh; Punjab; Uttarakhand; Uttar Pradesh]
Ar. Ritu Verma
Associate Dean; Department of Architecture
Om Institute of Architecture & Design
NH - 65, Chandigarh Road; Juglan (Hisar) - 125 001
M: 8222888051
E-mail: rituverma06@rediffmail.com

SOUTH ZONE [Andhra Pradesh; Telengana; Karnataka; Kerala; Tamil Nadu]
Ar. Gauri N Shiurkar
Principal; McGan's Ooty School of Architecture
5/635, Perar; Kothagiri Road; Mynala Post; The Nilgiris - 643 002
Tel: 0423 2225970 / 2225999; M: 8007983158 / 9488229599
E-mail: mosa.principal@gmail.com

EAST ZONE [Assam, Bihar; Jharkhand; Odisha; West Bengal; Chhattisgarh; Tripura]
Ar. Sanghamitra Sarkar
Assistant Professor; Department of Architecture
Jadavpur University; Kolkata - 700 032
M: 9836048430
E-mail: sanghamitra.ju1@gmail.com

WEST ZONE [Goa; Gujarat; Maharastra; Rajasthan]
Ar. (Dr.) Sudhir D Chavan
Principal; Sinhgad Technical Education Society's
Smt. Kashibai Navale College of Architecture
S. No. 10/ part Ambegao(Bk); Pune - 411 041
Tel: 020 2435 1438 / 2410 0000 Extn. 876; M: 9923056961
E-mail: sudhirdchavan@yahoo.co.in

Request to Principals, Directors and HODs of all the Architectural Institutes.

This is a prestigious National Level Competition. You are requested to encourage & assign the Brief as a project / sessional work to the students.

DELIVERABLES & SUBMISSION

The participants are invited to send their entries / application containing the followings:

- A self-declaration by the applicant(s) certifying the originality of the work should be submitted.
- A report - 8 pages (maxm.) A4 size (inspiration, case, idea exploration, material palette, concept)
- Perspective View of the buildings/structures
- A physical model in 1:200 scale (for selected entries for Final)
- Technical Drawings in 1:100, 1:200, scale (guidelines) – 4 Nos (maxm.) A1 size
- Presentation Drawings 1:200, 1:500 scale (guidelines) – 6 nos (maxm.) A1 Size
- 3D model in software (for selected entries for Final) to exhibit the design detailing and overall form.
- Soft copies of drawings/ reports/ presentation work must be submitted in CD / DVD form in addition to the hard copies.
- EOI is to be sent to The Director General, INSDAG with Kind Attention to INSDAG Coordinator Mr. Debashis Datta – 09007302333 / 09231693829
- Entries including drawings and other documents (excepting the physical model and 3D soft model) are to be sent to respective Zonal Coordinators within the date of submission of entry.
- If selected for final round, physical model & 3D soft model shall be brought by the participant(s) for presentation during final evaluation round to be held in Kolkata.

GENERAL RULES

1. The participating students are required to enroll themselves as student member of INSDAG before submission of entries.
2. There is no limitation of the numbers of participating groups from any Institution.
3. Originality of work is essential and the application will be disqualified, if found otherwise.
4. The decision of the Expert Committee is final and binding. Canvassing in any kind will lead to disqualification.
5. Outstation candidates appearing for the final round of competition in Kolkata will be reimbursed with to-and-fro ordinary AC 3-tier sleeper class / AC Chair Car fare by the shortest route on production of proof of travel. Accommodation in Guest House / Hostel will be considered depending upon availability.
6. Family members / relatives of Selection Committee / INSDAG Staff are debarred from taking part in this competition.
7. All the entries / proposals received by INSDAG at all stages of the above competition shall be treated as property of INSDAG.
8. INSDAG will not take any responsibility in case of missing of any documents /communications (if any) from any side while in transit.

THE BRIEF

DESIGN TOPIC:

Elevated Cycle Track in Delhi–a responsible interpretation in STEEL

AIMS & OBJECTIVES:

The aim of this design is to explore potential of Steel as a versatile material for architectural and engineering expression through innovative thoughts and intend in smart cities.

PREAMBLE:

New Delhi, the capital of India is one of the most polluted cities of the world. A large number of studies in Delhi have examined the effect of air pollution on respiratory functions and the associated morbidity. The most comprehensive study among them was the one conducted by the Central Pollution Control Board in 2016. It concluded that the uncontrolled increase in the number of motorized vehicles is the primary reason behind this scenario.

In order to overcome the situation, the city needs to preserve and increase the share of walking and cycling, which has been on a steady decline over past few decades. In 1957, Delhi's cyclists accounted for 36 per cent of trips - the highest amongst all modes of transport. In 2008, the share has dropped down to a mere 4 per cent. The lack of road safety is the primary reason for this decline. Besides with the present state of air pollution and vehicle population (set to touch 10 million in capital), the city roads are not conducive for cycle track. Even where cycle tracks exist, they have been encroached by motorized vehicles or street vendors. Also extreme weather conditions discourage people to use cycles for their daily commute.

In order to combat this condition, the government plans to build an elevated cycle track. The track will be covered so that riders are safe from sun and rain. Solar panels will be installed on the roofs. Also CCTV cameras, Wi Fi amenities will be provided on the streetlights to ensure safety of commuters. Solar panels will be installed on the roof of the track as well as all net facilities.

One such initiative will be a project of 6-km long, 20-feet wide elevated cycle track, running through areas such as Sheikh Sarai, Panchsheel Enclave, Siri Fort, Andrews Ganj, Lajpat Nagar and Defence Colony. It is expected to cost around ₹ 50 crore.

PROJECT BRIEF

You are expected to evolve a new prototype design for above mentioned ***'Elevated Cycle Track'*** based on road typologies, which can be replicated with minor variations, in similar situations, all across the major cities in our country including the roposed smart cities.

The proposed track shall accommodate the following facilities:

- Cycle parking spaces, with locking facilities
- Cycle renting spaces, with payment facilities
- Food courts
- Convenient shopping facilities / retailment centres (both formal and informal)
- Public recreation facilities

- Public Toilets and Rest rooms
- Transit accommodation facility (in case of Metro Station/Bus Stands)
- Any other facilities (as felt necessary)

The design should reflect the rapid development path that our county is professing as well as project image of contemporary India. It should also ensure ease of access, interesting visual experience and high safety. Added to this the overall form should be innovative, attractive and iconic. Most importantly the innovations in the Steel design must be clearly presented.

JUDGEMENT CRITERIA

The submission would be graded according to the following criteria:-

1. The physical manifestation of the brief into the design - its form and functionality.
2. The innovative and judicious usage of Steel in the design.
3. The presentation of the said design - via. Drawing sheets (for both Zonal and Final Round, if selected) and physical model and 3D sketch-up model in software (for Final Round only, if selected).
4. Final Round to be held in Kolkata.

GUIDELINES

1.0 The following suggestions are made for design of the Steel intensive **Elevated Cycle Track**:

a. The proposed Structure will be eye-catching in its features, quality, aesthetics and visual impact.
b. The Students are free to evolve the Steel Structures having any suitable shape satisfying the basic requirements furnished in the Brochure.
c. Larger column free areas inside the Structures are desirable.
d. INSDAG defines the competition problem to the architectural design of the Steel intensive **Elevated Cycle Track** as specified in the Brief. Innovative use of steel in the best possible way in roof and other structures along with the associated services is desirable. Any other parameters required for the design may be suitably assumed by the students.

2.0 The followings may be noted while working out the schemes:

a. Use of steel to the maximum extent in structural framing.
b. Use of steel elements in roofing, cladding, fascia, stairs, main entrance gates and other areas as far as possible along with other construction materials.
c. Use of Steel-Concrete Composite Structures could be proposed because it may be desirable to include RCC elements in some locations such as slabs etc

3.0 Emphasis should be laid on design process and conception of innovative steel structures of various forms tempered with the practicality of putting the concept into reality along with Structural Stability.

4.0 Fire Safety/Lightning Protection norms are imperative. Encasement with concrete *may not be adopted*.

CODES AND REFERENCES

1. Use of Internet and recent publications for obtaining information on similar Structures worldwide is suggested. However, direct copying is prohibited.

   (Also refer rules under submission criteria in the announcement section)

2. **Detailed structural design and cost estimation / plumbing & sanitary design and auxiliary services design are outside the scope of the competition.**

   The following codes and publications may be used for reference purpose:

- IS:800, IS:801, IS:806, IS:875, IS:1161, IS:1893, IS:4923, IS:9595, IS:11384 – the latest versions of these codes are to be referred.
- National Building Code (latest) and other Guide Books.
- The candidates are free to refer suitable Indian/ British or other International codes as applicable.
- The INSDAG Design Competition for students of Architecture – A compilation of the outstanding designs for the competitions held 1999-2002–INSDAG Publication No. INS/PUB/053.
- Reference manual for Structural Engineers–INSDAG Publication No. INS/PUB/003.

- Multistoreyed Residential Building [B+G+20] with Steel-Concrete Composite Construction–INSDAG Publication No. INS/PUB/117.
- Multistoreyed Residential Buildings with Steel-Concrete Composite Construction - (G+3) & (G+6)–INSDAG Publication No. INS/PUB/132.
- (3B+G+40) Storeyed Residential Building with Steel-Concrete Composite option–INSDAG Publication No. INS/PUB/104.
- Guidebook on Connections using HSFG Bolts (Design & Installation)–INSDAG Publication No. INS/PUB/102.
- Guidebook on Embossed Profiled Sheet acting as Composite Deck–INSDAG Publication No. INS/PUB/079.
- Design Guidebook on Plain Profiled Sheets used as Roofing & Cladding–INSDAG Publication No. INS/PUB/059.
- Corrosion Protection of Structural Steels used in Buildings and Bridges–INSDAG Publication No. INS/PUB/005.
- The Fire Resistance of Composite Floors with Steel Decking (second edition)–INSDAG Publication No. INS/PUB/026.
- Design for Structural Fire Safety: A Handbook for Architects & Engineers–INSDAG Publication No. INS/PUB/033.

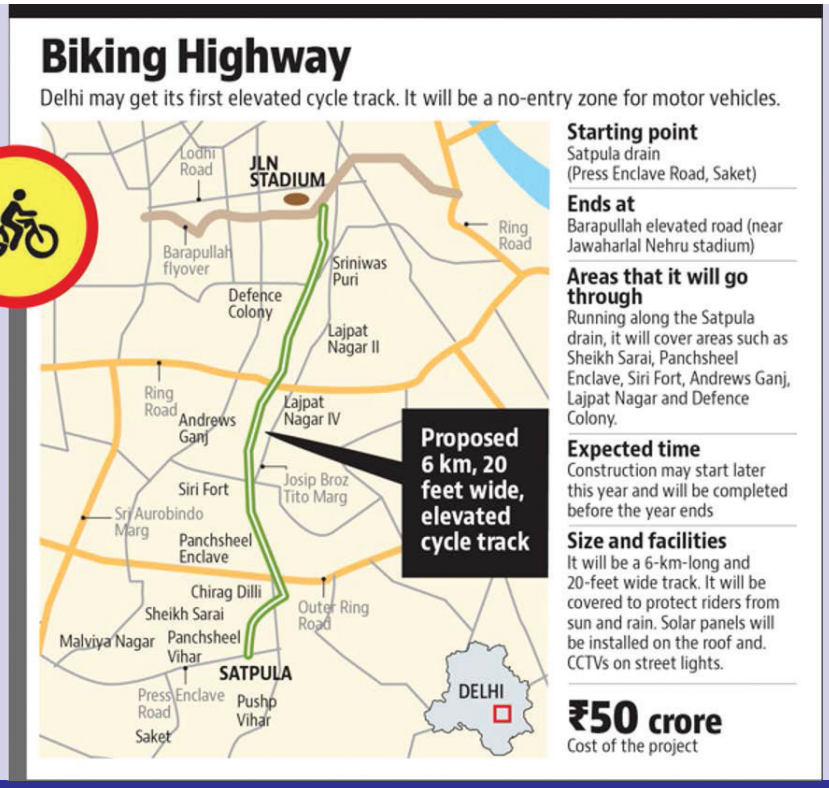
STEEL ELEMENTS

All available **Steel Elements** may be used for the above purpose. These include:

- Mild Steel Rolled Sections including Beam Sections (wide flange, castellated etc), Channel Sections and Angle Sections etc.
- Mild Steel Fabricated / Built-up Sections
- Rectangular, Square & Circular Hollow Sections
- Plates and Flats, Rounds and Squares
- Wire Ropes
- Cold Formed Steel
- Corrugated / Plain / Embossed Profiled Sheet
- Colour Coated / Plastic Coated / Galvanized Sheet
- Stainless Steel Sheet and Sections
- High Tensile Steel, Weather Resistant Steel etc

INSDAG PUBLICATIONS

For list of publications of INSDAG and announcement and Brief of this year's competition please visit our website www.steel-insdag.org.



EXPRESSION OF INTEREST FOR PARTICIPATION

(To be submitted on or before 30th September 2017)

NATIONAL AWARD COMPETITION FOR STUDENTS FOR THE BEST INNOVATIVE USE OF STEEL IN ARCHITECTURE

YEAR 2017

You are requested to fill in this form of intent and return the same to the address given below in a sealed envelope along with a DD as mentioned below.

Name & Address of the college:

Name of the guiding faculty/HOD:

Signature of the guiding faculty/HOD with date:

Student's name (Capital)	Mr. / Ms.	:…….
	Year of Study	:……Telephone No.:……
	E-mail address	:……..
Student's name (Capital)	Mr. / Ms.	:…….
	Year of Study	:……Telephone No.:……
	E-mail address	:……..
Student's name (Capital)	Mr. / Ms.	:…….
	Year of Study	:……Telephone No.:……
	E-mail address	:……..
Student's name (Capital)	Mr. / Ms.	:…….
	Year of Study	:……Telephone No.:……
	E-mail address	:……..

I/We ***agree to participate in the Competition*** organized by INSDAG for the year 2017 and would request you to enroll my/our name/s in your database for record. I/We also ***agree to become Student Member/s of INSDAG*** by paying ₹ 500/- only ***for each one of us*** (onetime only) through Demand Draft drawn in favour of **"Institute for Steel Development & Growth"** payable at **Kolkata** enclosed herewith. Students applying in a group may submit a consolidated draft.

Signature(s): 1. 2. 3. 4.

Date

Please send to:

The Director General
Institute for Steel Development & Growth (INSDAG)
"ISPAT PRAGATI BHAWAN", 2nd Floor
793, Anandapur, Kolkata-700 107
[Behind Fortis Hospital & Honda Service Centre
Near Ruby/Desun crossing of E M Bypass]
E-mail: ins.steel@gmail.com / insdag@rediffmail.com
INSDAG Coordinator – Mr. Debashis Datta, AGM
M: 09007302333 / 09231693829

Avail Student Membership of INSDAG

Pay one-time ₹ 500/- only for your full period of student life and get INSDAG regular publications

*****Have your college participated in INSDAG Competition earlier? If yes, which year(s)?***

Winning Colleges of the Competition (1999-2015)

Anna University, Chennai; Rizvi College of Architecture, Mumbai; SRM Engineering College, Tamil Nadu; Jadavpur University, Kolkata; LAD & SRP College, Nagpur; Priyadarshini College, Nagpur; Academy of Architecture, Mumbai; Dr. MGR Engineering College, Chennai; TVB School of Habitat Studies, New Delhi; IIT, Roorkee; Measi Academy of Architecture, Chennai; D Y Patil College of Architecture, Pune; Apeejay SAP, Noida; Chitkara SPA, Patiala; SPA, New Delhi; Sathyabama University, Chennai; VNIT, Nagpur; Bharathi Vidyapeeth College of Architecture, Pune; Jamia Milia Islamia, New Delhi; D C Patel School of Architecture, Gujarat; Birla Institute of Technology, Mesra; IIT, Kharagpur; School of Architecture, IPS Academy, Indore; School of Architecture, M M University, Ambala, Haryana; VIT's Padmabhushan Dr. Vasantdada Patil College of Architecture, Pune; Md. Sathak A J Academy of Architecture, Chennai; Sunder Deep College of Architecture, UP; MITS, Gwalior; Sardar Vallabhbhai Patel Institute of Technology, Gujarat.

Zonal Coordinators of the Competition (1999-2015)

Year	North Zone	East Zone	West Zone	South Zone
1999-2001	Prof. A K Maitra Director SPA, New Delhi	Mr. Kabir Ray Chairman, IIA, W.B Chapter	Prof. S P Gad Principal, Sir J J College of Architecture, Mumbai	Prof. A Mohammed Haris Dean, SAP, Anna University, Chennai
2001-2003	Prof. A G Krishamenon Director, TVB School of Habitat Studies, New Delhi	Prof. Nirmalendu Sengupta, HOD, BIT Mesra, Ranchi	Prof. P P Ambedkar, Principal, Academy of Architecture, Mumbai	Dr. K S Ananthakrishna HOD, R V College of Engineering, Bangalore
2003-2004	Prof. M N Joglekar Vastu Kala Academy's School of Architecture, New Delhi	Prof (Dr.) Manju Halder HOD, Dept. of Architecture, Bengal Engineering College & Science University	Prof Manoj Parmar Kamla Raheja Vidyanidhi Institute for Architecture,Mumbai	Prof. R P Deshmukh HOD, Dept. of Architecture, Manipal Institute of Technology, Karnataka
2004-2006	Prof. Anurag Roy Vastu Kala Academy's School of Architecture, New Delhi	Prof (Dr.) Manju Halder HOD, Dept. of Architecture, Bengal Engineering College & Science University	Prof Manoj Parmar Kamla Raheja Vidyanidhi Institute for Architecture & Environmental Studies, Mumbai	Prof. Harimohan Pillai HOD, MES School of Architecture, Kerala
2006-2007	Prof. Anurag Roy Vastu Kala Academy's School of Architecture, New Delhi	Prof. K B Mahapatra Director, Piloo-Mody College of Architecture, Orissa	Prof. (Dr.) U S Chakradeo Head of Department, School of Architecture, LAD College for Women, Nagpur	Prof. (Dr.) Ranee Vedamuthu HOD, SAP, Anna University, Chennai
2007-2008	Prof. Satish Khanna HOD, SPA, New Delhi	Prof. K B Mahapatra Director, Piloo-Mody College of Architecture, Orissa	Prof. (Dr.) U S Chakradeo Head of Department, School of Architecture, LAD College for Women, Nagpur	Prof. (Dr.) Ranee Vedamuthu HOD, SAP, Anna University, Chennai
2008-2009	Prof. Satish Khanna HOD, SPA, New Delhi	Prof. Tapas Kumar Bhattacharya HOD, Department of Architecture Jadavpur University, Kolkata	Prof. Dhananjay Chaudhuri Padmashree Dr. D Y Patil College of Architecture, Pune	Dr. Vijay Kishore Director, SPA, JNTU, Hyderabad
2009-2012	Prof. S M Akhtar The Dean, Faculty of Architecture Jamia Millia Islamia, New Delhi	Prof. Tapas Kumar Bhattacharya HOD, Department of Architecture Jadavpur University, Kolkata	Prof. Dhananjay Chaudhuri Padmashree Dr. D Y Patil College of Architecture, Pune	Prof. N Altaf Ahmed The Director, MEASI Academy of Architecture, Chennai
2013-2015	Prof. Ranjana Mital Professor, Faculty of Architecture SPA, New Delhi	Prof. Shankha Pratim Bhattacharya Asst Professor, Department of Architecture, IIT, Kharagpur	Prof. Anand Ukidve Aayojan School of Architecture & Design, Pune	Prof. D V Solomom The Director, McGan's Ooty School of Architecture, Tamilnadu
2016-2017	Ar. Ritu Verma Associate Dean; Department of Architecture, Om Institute of Architecture & Design, Hisar	Ar. Sanghamitra Sarkar Associate Professor, Department of Architecture, Jadavpur University, Kolkata	Ar. (Dr.) Sudhir D Chavan Principal, Smt. Kashibai Navale College of Architecture, Pune	Ar. Gauri N Shiurkar Principal McGan's Ooty School of Architecture

Themes of the Competitions (From 1999 to 2015):

Centre for Performance of Arts at Kolkata; Sports cum Recreation Centre at Chennai; International Standard Shopping Plaza at Mumbai; World-class National Art Gallery at Banjara Hills, Hyderabad; International Cricket Stadium at Raipur, Chattisgarh; International Airport Terminal Building at Vishakhapatnam; World-class Permanent Trade Fair Complex at Kolkata; World-class Railway Station in Rajasthan; 200 bedded Hospital at Burari, Kaushik Enclave, Delhi; World-Class Vehicle Terminus; Steel intensive village; Steel intensive Martyr Memorial; Steel intensive (B+G+4) Storeyed Office Building; (B+G+8) Storeyed super specialty hospital in Kolkata; Cultural Complex-cum-Spiritual Centre in any urban centre in India; Steel intensive Highway amenities center; Tall Building(s)