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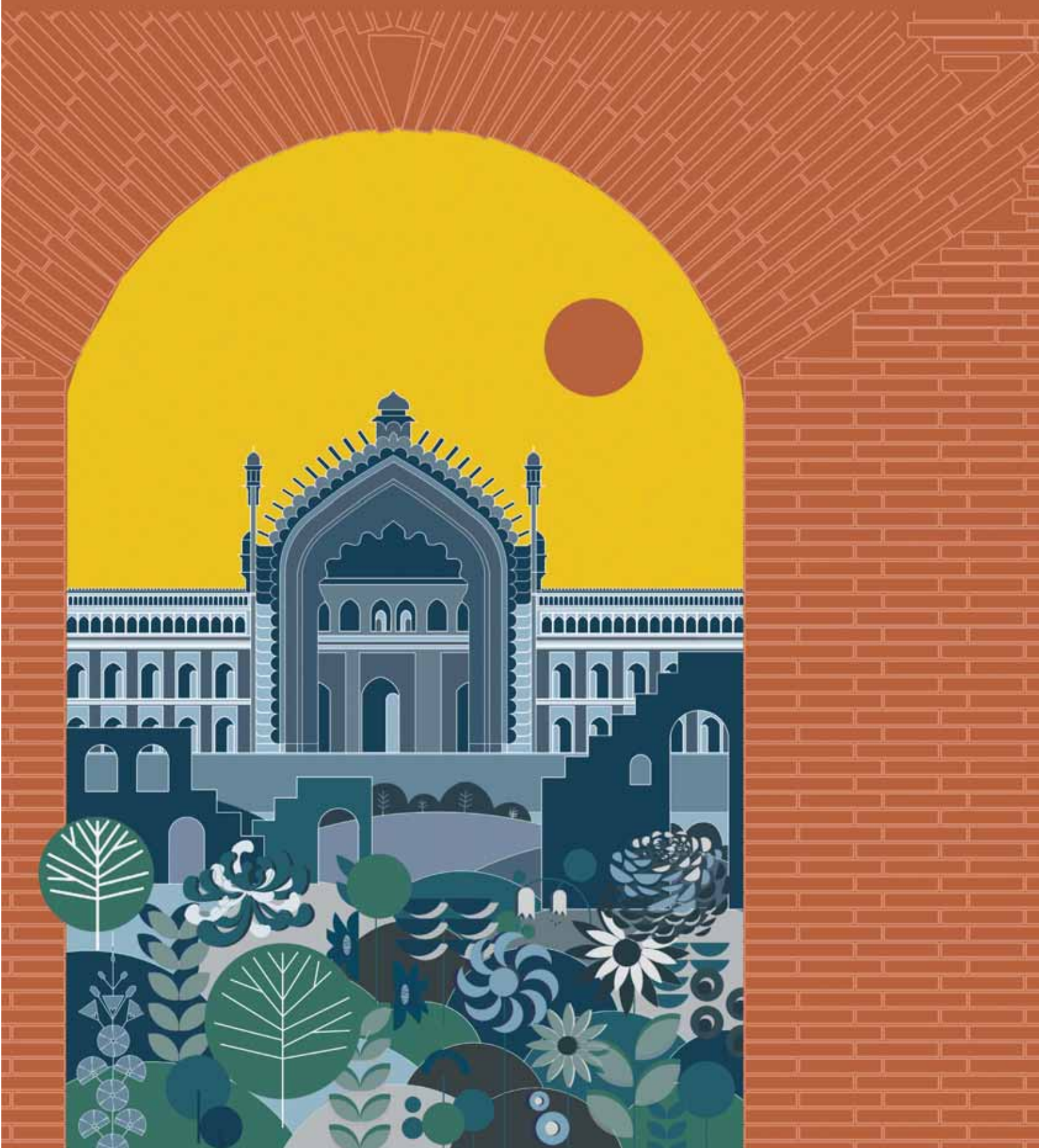

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CONTENTS


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EDITOR'S NOTE

Dear Fellow Members of the Indian Institute of Architects,

February, the month for celebration of love: love for your profession, love for your fraternity, love for your work. Though it's the shortest of all months, for IIA it has been a month full of events. We started with the much-awaited IIA National Conference, NATCON, from 9 to 11 February 2024 in the *Nawabon ka Sheher*, Lucknow in Uttar Pradesh, under the dynamic leadership of Ar. Sandeep Saraswat. Inaugurated by our COA president Ar. Abhahy Purohit, it had insightful panel discussions with great speakers from across the country.

NATCON has always been the most awaited national event as it is the platform where we value the performance of our own Chapter, Centre, Sub-Centre and also individual IIA members, by appreciating the value we have added to our fraternity with our work and recognized through various awards. It is a moment of celebration as well as a moment of introspection, both of which are important to lay the path for the upcoming year- to plan and execute successfully and await the next year, looking forward to the appreciation. I guess it's an amazing system to put us in the motivational zone to perform for fellow professionals to be aided and esteemed.

This year all the Chapters have shown great agility during this new term to conduct IIA events and have made the evaluation much tougher and more delightful as well. We thank our National Council for encouraging such organisation of events by each Chapter, Centre and Sub-Centre.

NATCON also marks the announcement of the distinguished *Madhav Achaval Gold Medal* for a lifetime of contribution to architectural education, the highest recognition given in India for academicians in the field of architecture. This year, it was bestowed upon Prof. Madhav Deobhakta. Also the most prestigious *Baburao Mhatre Gold Medal 2024* was awarded to the much-deserving Prof. Christopher Benninger for his significant contribution towards the advancement of architecture in India.

This year, Shri Chandrakant Sompura, the 'architect' of over 200 temples and the famous Shri Ram Mandir at Ayodhya was the recipient of the *IIA Honorary Fellowship*. IIA also announced the *IIA Meritorious Award* initiated in the year 2012 by the IIA Board of Examination for the students of the IIA Associateship examination. This year's winners were Ms Deepa Raju from Kerala and Mr. Arun Saini from Punjab. Along with this, IIA also has declared the *Best Outgoing Students* from its 36 affiliated colleges for the year 2023. We congratulate all the award winners and wish them the very best of luck for their future endeavours.

All these events and initiatives only show the commitment of IIA towards the fraternity to support fellow professionals in every manner. In this issue of JIIA, the *News Section* shows how all Chapters and Centres, along with Sub-Centres are working rigorously to better previous performances in terms of organising greater number of events relevant to our fellow professionals. I am sure that in the near future this will be evident with each new event.

Talking about events, another much-awaited national event, the *IIA National Awards for Excellence in Architecture 2022*, scheduled on 22 and 23 March 2024 is being hosted by the Brihan Mumbai Centre at JW Marriott at Sahar, Mumbai. I urge all members to register for this national event in large numbers and make this a grand success. This will be followed by the *Young Architects Festival* (YAF) curated and hosted by IIA Goa Chapter on 19 and 20 April 2024 at Panjim in Goa. I am sure you all will book your dates for this as well.

Looking at the future need of integrating research in the practice of architecture and to enrich the experience of the same in different aspects of the built environment, the IIA Research and Development Committee is organising the *IIA International Research Conference*, ANVESHAN on 29-31 August 2024 at the Marian College of Architecture & Planning, Thiruvananthapuram, Kerala. It is high time we invested in research to secure our future by participating in IIA's *first* Research Conference.

An appeal to all the IIA members to contribute to JIIA in terms of articles, projects, cover designs, research papers and most importantly, in terms of sponsorship and funding.

Thank you for your continued support and readership.

Prof. Vinit Mirkar
Editor

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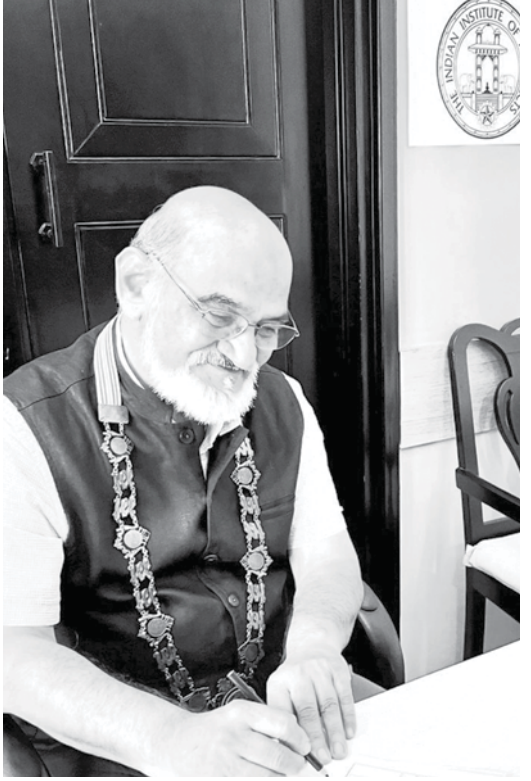

Dear Fellow Members,

It gives me immense pleasure to inform you all that the IIA Chapters and Centres are working hard towards promoting and making the outreach of IIA stronger. Recently, IIA Akola Centre of Maharashtra Chapter arranged MAHACON and the Western Region Conference, *Mirage: Imagination Creates Reality,* on January 12–13, 2024, in a very creative manner at *The Grand Jalasa at* Akola.

Immediately after this, another successful event, the 13th Edition of IIAPL, was arranged from January 31 to February 3, 2024, by the Maharashtra Chapter's Sambhaji Nagar Centre. It was a well-planned cricket tournament, along with badminton and table tennis. Congratulations to the winning team of the Maharashtra Chapter and other participants' chapter teams. Maharashtra Chapter has won consecutively four times.

The first Natcon of this term was conducted successfully by the IIA Uttar Pradesh Chapter in Lucknow on February 9–11, 2024. The deliberation and presentation, along with the technical sessions, were *par excellence*. In this Natcon, IIA awarded the *Baburao Mhatre Gold Medal* to Master Planner Ar. Christopher Benninger. The *Madhav Achwal Gold Medal* was awarded to the lifetime educator, Ar. Madhav Deobhakta. An Honorary Fellowship of IIA is awarded to Shri Chandrakant Sompura, the architect of the Shri Ram Mandir.

The UP Chapter Chairperson and his team have worked hard to make this Natcon successful. On March 22–23, at the IIA Awards, organised by Brihan Mumbai Centre of Maharashtra Chapter, all members are requested to register themselves and grace the event.

I really congratulate the Maharashtra Chapter for initiating all the events and making them successful. My best wishes to all the other chapters of IIA. On March 8, International Women's Day, I request all the chapters, centres, and sub-centres to celebrate it in a grand way—my best wishes.

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City of Gardens

Ar. Juhi Prasad Singh

Lucknow has always been known for the sprawling gardens that are a symbol of the past and for all the gardens and parks developed in recent times. The city is beautifully filled with small gardens at the residential scale, orchards and also at large scale urban parks which have become magnetic recreational spots. Many of these great gardens or *baghs*, as locally called, are reminiscent of a colonial-*nawabi* past. This graphic is an impression of the imagery of Lucknow which reminds us of the beauty and elegance of the *baghs, bagiche, gulistan* and a great example of Awadhi architecture, that is, the Rumi Darwaza.

Lucknow is also known for its architecture in *lakhori* red clay bricks which are the building blocks of many magnificent buildings in the city. The bricks are thinner than conventional bricks and red-coloured, along with the presence of lime crushed aggregates that make up the *surkhi* mortar which was used to build many arches, sculptural facades, intricate details and even carve on walls and column surfaces which made it a unique material.

There are many places in the city which have a suffix *bagh* meaning garden attached to their name. It shows the significance of gardens in the landscape of Lucknow like *Alam Bagh, Kaiser Bagh, Sikandar Bagh,* etc. Also, the etymology of names of many parts are dedicated to the flora growing dominantly in that area. For instance, Hussainabad area was formerly known as *Jamuniya Bagh* as the area was covered in *jamun* trees. *Sikander Bagh* which was the royal garden of the nawabs of Lucknow is now National Botanical Research Institute. NBRI has done a lot of work in agro-technologies and plant conservation, and also developing varieties of flowers like gladiolus, rose, chrysanthemum, canna, bougainvillea, lotus and many more.

The graphic celebrates the specific flora that Lucknow is blessed with and the variety of flowers which adorn the landscape of Lucknow.

There are multiple facets of Lucknow which form its identity but this cover graphic focuses on the significance of gardens or any scale of open spaces in a city. The value and purpose of these *baghs* is not measurable and it becomes significant in biodiversity, urban ecology, well-being of people and their lifestyle and culture.

It is my hometown and I do believe that along with the architecture and city planning of Lucknow, there is much to appreciate and learn from the way Lucknow has always made place for beautiful *baghs* in the lives of people.

Ar. Juhi Prasad Singh (A27729) practices as a landscape architect and an illustrator, based in Mumbai. She has completed her Masters of Landscape Architecture from CEPT University, Ahmedabad. Having worked as a landscape architect at M/s. Prabhakar B. Bhagwat, she co-founded a design initiative called *Artmosphere*, working on projects of landscape architecture, graphic design and illustrations. She is currently Assistant Professor at Rachana Sansad's Academy of Architecture, Mumbai.
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JIIA Call
for Papers, Articles, Projects

The Journal of the Indian Institute of Architects invites original and unpublished contributions from members **ONLY** (academicians, practitioners and students) under the following FOUR categories. Submission in each category is strictly only through the respective google forms.

In order to be accepted for publication, all material sent in these categories should have the following components:

1. MS Word document file with text only. Please do not format it in anyway. The numbered captions for all the images will also be in this document.
2. Folder with all images (minimum 300 dpi), numbered according to the captions given in your text file
3. Photograph of the author/s (minimum 300 dpi).
4. Author biodata – Maximum 50 words.
5. PDF (optional)– showing the intended layout. This pdf should include text and all images, with numbered captions.

Category 1 : Articles

google form link: https://forms.gle/7pDFva1HDH4hfUyj8

Essays, interviews, articles (1500- 2500 words), book reviews (600 and 750 words), travelogues, sketches and photo-essays in the areas of architecture, planning, urbanism, pedagogy, heritage, technology, ecology, theory and criticism, visual design, practice or any other relevant subject pertaining to the built environment. (Details of the format will be available on the JIIA website).

- For a design project, please include the 'Fact File' with the following details : Project Name, Location, Plot area, Total built up, Structural consultants, Project completion. Also please give the photo captions and credits. Please ensure that the image is referred to within the text. For eg, "As seen in Figure 1…". This is essential for the layout.
- For design projects, plans and sections of the project are desirable along with the photographs.
- Book reviews should be only of books by Indian authors. please include the "Fact File" with the following details: book title, author name, publisher, year of publication, ISBN, language the book is written in, genre (technical/ fiction/ etc.), no of pages, dimensions (in cm), type (Kindle/ paperback/ hardback), available at (amazon.in/ flipkart.com/ others).
- Please send a write-up of about 200-300 words along with sketches and photo-essays.

Category 2 : Student Work

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Summaries of dissertations (2000-3000 words) at the level of B.Arch. & M.Arch., and theses at the Ph.D. level. The Guide for that work will be mentioned as the Co-author. (Format will be available on the JIIA website).

Category 3 : Contributions from Chapter Correspondents

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(a) *Chapter News:* This includes various interesting activities from the Centres of your Chapters (maxm. 500 words for the news from the *entire* Chapter).

(b) News of conferences by the academic institutes in your respective Chapters.

(c) *Obituaries :* Obituaries of IIA members should consist of the photograph of the departed soul, the dates of birth and death and a short 50-word note.

Category 4 : Research Papers

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Research papers (2000-5000 words) in the prescribed format. The research may be based on their ongoing or completed research. (Format is available on the JIIA website). All contributions in this category will be double blind peer-reviewed before being accepted for publication by academic experts of repute.

Category 5 : Cover Design

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Students from affiliated colleges are invited to design the cover page theme. This should be a graphic based on some aspect of Indian Knowledge Systems. The submission will include the graphic file (jpeg or corel draw); a theme note (with a title) of about 500 words explaining the concept of the graphic.

Please note that the image you send will be adjusted as per the layout requirements of the JIIA Cover.

Please note:

1. All submissions will be accepted only through google forms.
2. Submissions will **NOT** be accepted through email.
3. Any queries to be addressed to : jiiaeditorial@gmail.com.
4. When you correspond with us, please give your email id (that you regularly use) and your cell no. (preferably with WhatsApp).
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RESEARCH PAPER

Thermal Comfort as a Determinant of Usability

A Case Study of Central Open Space in Multi-storeyed Apartment Building Complex, Greater Noida, India

By Ar. Kamini Singh, Prof. Arunava Dasgupta and Prof. Mandeep Singh

Abstract

Group housing societies with a central common public space, is a popular typology for the composite climate of Delhi NCR region. This study evaluated the impact of physical design elements on user perception of outdoor thermal comfort in high-rise group housing neighbourhoods. The spatial parameters being studied are building form, orientation, and surface material and thermal.

The research tools include: thermal imaging camera, climate monitoring probes, simulation of 3D models, mapping of building form, orientation and user activity along with videography, photography and user interviews. The study is conducted in the composite climate of Greater Noida city located in National Capital Region of Delhi. The site is a 15-year-old and 11-acre group housing with a large central open space and the data was collected during warm conditions with daytime air temperature above 27 degree C. This study explores how user perception and adaptation of thermal comfort is related to the thermal conditions of outdoor environment. Furthermore, the research paper draws conclusions on the usability of urban open spaces in group housing society with thermal comfort as a key causal factor.

Keywords *– Aspect Ratio, High-rise Housing, Urban Climatology, Thermal Comfort, Pavement Materials, User Perception*

1. Introduction

People are not meant to work constantly; nor are they meant to live alone, ideally these different needs- to escape from the pressures of work, to feel part of a community, to be around and possibly interact with others- can all be met in the same place. When people are drawn to public spaces, they can perform multiple roles for others as well as for themselves. (Efroymson, Ha, & Ha, 2009).

Central public spaces in high-rise group housings provide a positive connection between private and public realm. A couple of pregnant ladies stroll on the grass lawns to save themselves from racing young bicyclers. A group of middle-aged men sit at the central circular bench on an elevated platform, conversing noisily on heated political topics attracting people on the balconies of high-rise apartments. The older generation females were seen occupying most of the benches overlooking the large area of lawn. Children are spread over the entire park grouped in rough age and gendered categories and so are their activities. These spaces indeed serve more than the intended design purpose.

This paper evaluates how the user thermal, visual and sensory comfort perception is influenced by building form, orientation, and outdoor surfaces materials, as a determinant of user choice for outdoor activities in high-rise residential environments. The research finds a niche in understanding the patterns of use by varied user groups, mapping their activities and then

overlapping it with the thermal comfort conditions in outdoor spaces to explore the correlation between two. The thermal comfort was clearly influenced by the physical elements such as the site layout, building height, solar and wind orientation, surface materials and their thermal properties. Additionally, clear patterns of adaptation with respect to age, gender and activity level were recorded during the study.

2. Literature Review

2.1 Need for Public Space at High-rise Neighbourhood

The idea of the public sphere, developed into the idea of a public realm. In the 18th century Europe, the public sphere was seen as a place between private individuals and government authorities where upper-class people or the bourgeoise could have critical debates about public matters (Habermas, 1989). The humanistic perspective later identified public spaces as need for all instead of a luxury, limited to only the elite. These spaces are expected to be firstly, inclusive and accessible for all; secondly, a place closer to nature that in outdoor where people can feel the sun, wind and rain and thirdly, a place where everyone is at ease, that is in a state of physical, psychological and physiological comfort. We can therefore feel that a certain place is friendly or that a certain space rejects us; that a majestic construction intimidates us with its arrogance; that a park packed with people is either happy or, on the contrary, frightening (Duarte & Pinheiro, 2016). These spaces also encourage physical activity and may help address worrisome health issues such as the rising level of child obesity (Ryan 2006). (See Fig. 1)

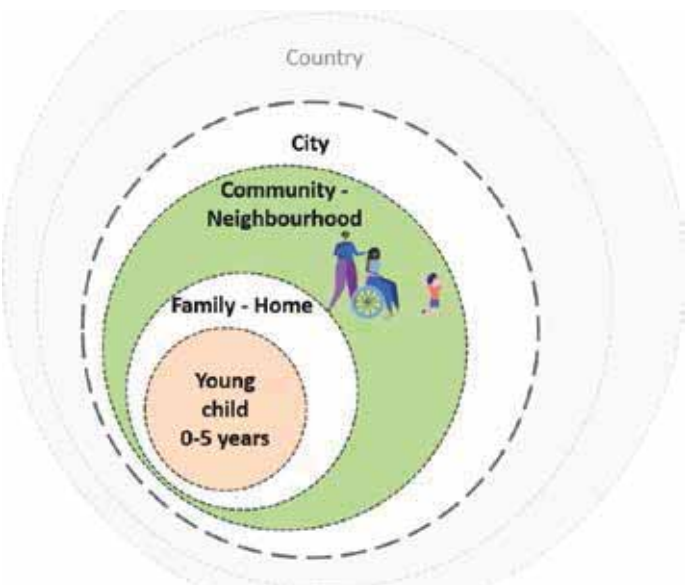


Figure 1: The neighbourhood as a spatial and social entity
Source: Belpaire, 2020

There are variety of reasons for which people come to neighbourhood parks. Even the same person comes for different reasons at different times; sometimes to sit tiredly, sometimes to play or to watch a game, sometimes to read or work, sometimes to show off, sometimes to fall in love, sometimes to keep an appointment, sometimes to savour the hustle of the city from a retreat, sometimes in the hope of finding acquaintances, sometimes to get closer to a bit of nature, sometimes to keep a child occupied, sometimes simply to see what offers, and almost always to be entertained by the sight of other people. (Jacobs, 1989)

Life between buildings comprises the entire spectrum of activities, which combine to make communal spaces in cities and residential areas meaningful and attractive (Gehl, 2011). Social activity occurs in this in-between interstitial spaces, such as the front porch. These spaces have an ambiguous character where we negotiate both, the 'public' and the 'private' (Dovey & Woods, 2015). Therefore, this interface is both where we welcome and exclude strangers and is essentially double, separating and connecting levels of a socio-spatial hierarchy- part/ whole, individual/ collective, self/ society (Dovey & Woods, 2015).

2.2 Determinants of Comfort in Urban Public Spaces

A public space should be safe, relaxing, with opportunities to stop and linger. For example, with good quality, comfortable and preferably moveable formal seating, informal seating opportunities (on steps, kerbs and walls), toilet facilities, soft landscaping and careful consideration given to microclimate (places to sit in the sun, and to shelter from the wind and the rain) (Carmona M. , 2003; Carmona M. , 2018).

The study conducted by William H. Whyte (1980) on the plazas of Manhattan in the 1970s, affirms that the presence of sun, wind, shade, trees, water and their accessibility for public (e.g. can you touch them, bathe, etc.) is an elemental point of a good urban space. Whyte also tried to find out how activity patterns interrelate with the physical dimensions of urban spaces (Efroymson, Ha, & Ha, 2009). The study by Whyte was followed by the works of Jan Gehl (2011) and David Sim (2019) under the broad umbrella of *Project for Public Spaces* continue to identify comfort and image as key ingredients for a successful place.

Thermal comfort has been described by ASHRAE (2017) as *that condition of mind which expresses*

satisfaction with the thermal environment. Because there are large variations, both physiologically and psychologically, from person to person, it is difficult to satisfy everyone in a space.

The range of thermal comfort experienced depends on the age, gender, clothing and activity level of the user (Singh & Singh, 2021). In high density-roof details, material, urban surface albedo, surface emissivity, shade and diffused lighting, day length, aerodynamic roughness of surfaces, interaction between street and the air above roof level are determinants of human comfort in open spaces (Givoni, 1998).

The form of outdoor spaces is defined by the surrounding building heights and volumes that surround the spaces. The canyons are 2D cross-sections, with dimensionless ratios, i.e., height/ width (H/W). This is relevant for evaluating radiation access, shade and trapping, wind effects, thermal comfort and the dispersion of vehicle pollutants (Singh & Singh, 2021). Review of literature suggests that the users' preference of urban space enclosure is an inverted U-shape relationship (Carmona M. , 2003). A higher degree of spatial enclosure causes a feeling of being trapped and whereas a low degree of enclosure fails to provide the desired physical and psychological shelter in open spaces (Alkhresheh, 2007). The enclosure along the solar and wind orientation determines where the 'hot-spots' and cold-spots' are, which then determines the user preferences, for sun, wind or shade.

Ensuring the accessibility of the public realm to all individuals without compromising their dignity is paramount, with surfaces providing a desirable spatial texture. Additional design elements such as landscape, curbs, barriers, lights and furniture serve as 'visual cues', signalling changes in spatial context at transitional spaces, vehicular to pedestrian spaces and change from public to private realm.

Incorporating alternative pavement materials helps in marking territory of possible use and activity. Norms of universal design recommend paving surfaces in public spaces to be stable, firm, smooth and slip resistant. The strategic use of contrasting or bordering materials, along with the placement of bollards, aids in clearly demarcating the walkable zone versus zone for vehicles. The surface properties such as albedo, colour, texture, grip and glare have an influence on the user preferences and experiences of comfort.

3. Research Method

The research was conducted during the summer months of May and June 2021 in four time-intervals- morning, afternoon, evening and night, over a period of 3 consecutive non-cloudy days. The tools used were photography and time-lapse videography to map user activity. The micro-climatic data was collected with Testo 174 H mini data logger for temperature and humidity for 2 weeks' continuous measurement. Testo 480 Multi-Function HVAC Meter was used for spot level temperature, humidity, wind velocity and CO_2. Testo 872 IR Image camera was used for thermal imaging to collect the surface temperatures.

The research evaluates the outdoor horizontal surface properties, their material, surface temperature, albedo, tactile qualities, and visual qualities. Their quality and maintenance level are expected to influence the user's thermal, physical, and psychological comfort. The user perception of comfort is evaluated through a series of personal interviews conducted between 6:00 to 7:00 pm for three consecutive days with questions under three broad categories:

- Demography- age, gender, duration of residence in the society
- Thermal perception of comfort on a 5-point Likert scale, and
- Open-ended questions on spatial choice for everyday evening activity and reason behind preferences for a certain space.

The intensity of user activities, duration of stay and time of the day are influenced by the spatial factors including building form, solar and wind orientation, layout, surface material properties and presence of architectural and natural shading systems. The research incorporates a causal analytical framework between the dependent variable of comfort and usability on the independent variable of spatial design.

4. Case study: Group Housing, Greater Noida

4.1. Site Characteristics

The site is in the city of Greater Noida adjoining the City of Noida, Delhi and Ghazibad. The climate is composite with a temperature range of 47 degrees C in summer afternoon to 3 degree C in winter morning. The Study is conducted in outdoor spaces within a group housing located at Sector, Zeta 1, Greater Noida. The site has green fields, an urban village and a couple of groups of housing in the surrounding context. The site itself have variety of landscape zones including a peripheral vehicular track, landscape podium above basement parking, tree court zone, mounds, kids play areas, swimming

pool and clubhouse, a basketball court and a central axis that terminates at a large plaza with stepped court and a clock tower (Figure 2). The group housing, which is the case study, has about 500 residents and covers 11.30 acres. The ground coverage is 23% and floor area ratio is 2. The maximum building height is 42 meters with 11 towers of 10 to 11 floors. The site has large trees on peripheries and low height trees

Figure 2: Site plan with key outdoor spaces
Source: Author

Figure 3: The urban form of selected group housing
Source: Author

on central park above podium (see Figure 3).

4.2 Mapping of Horizontal Surfaces

The map in Figure 4 shows the materials of the horizontal surfaces on site. The site has large trees along the periphery shading the surface parking and vehicular pathway made up of interlocking concrete pavers. The pathway extends to another inner ring to connect with both entries of the towers which are highlighted with a square made up of *kotah* stone paving. Further the building edges are defined with grass pavers that doubles up for surface parking. All the pedestrian pathways, till the building entrances and walking track in the park is made up of concrete grit paving with regular bands of *kotah* stone. The site has a central lawn with manicured grass which is bisected by a central axis connecting the main entry with the clock tower square and stepped court paved with reflective granite stone. The clubhouse area with an open air swimming pool is paved with *kotah* stone paving and tiles. There is a basketball

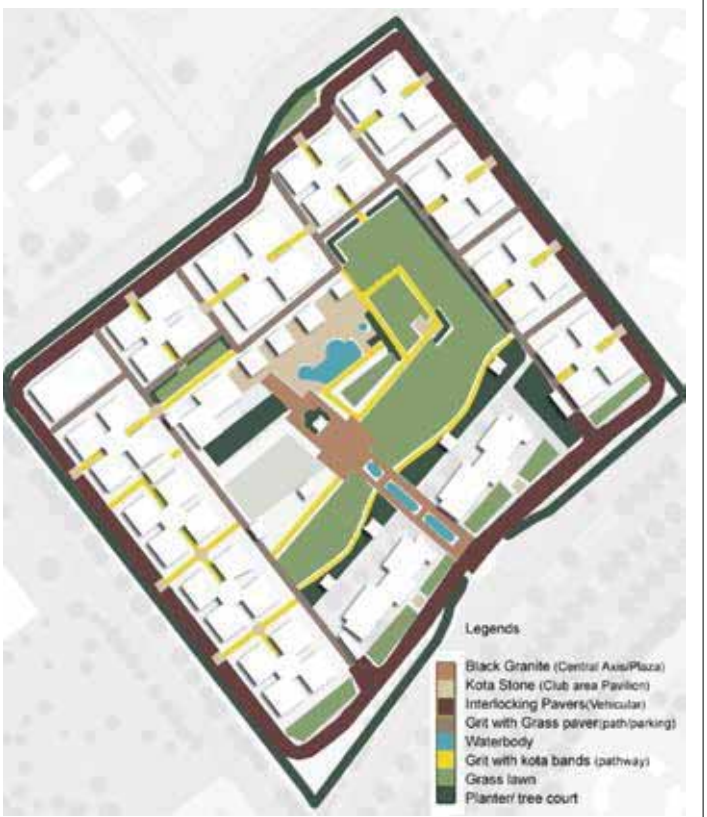


Figure 4: Site plan showing key horizontal surfaces and materials
Source: Author

court and tree courts with mounds at the edges of the central park.

Table 1 presents a comparative analysis of the real image of materials used in outdoor horizontal surfaces in the study area along with their thermal properties as recorded with an infra-red thermal imaging camera. The images were taken in the months of May and June 2021, when the daytime air temperature range was 38 to 44 degrees C and humidity was between 10 to 40 %.

4.3 Spatial Form and Orientation

The building towers with a height of 38 to 42 metres are arranged along the periphery of the group-housing plot, the high rise-built form surrounding a central park in the selected case study has a uniform building height of 42-meter-high towers on three sides and 8-meter hight villas at front. The aspect ratio thus varies from 0.3 at the central park and 3 between two buildings. The shadow analysis further highlights the zones of shadows cast by buildings during the day (see Figure 5).

4.4 Wind Flow

The high-rise and high-volume buildings have

Table 1: Comparison of Surface material properties of outdoor Urban Surfaces
(Recorded by Author in May-June 2021)

Surface material	Finish	Color	Space	Photograph	Infra-red photograph	Surface temp◦C (Sun)	Surface temp◦C (Shade)
Black Granite	Glossy		Central Axis & Plaza			56	36
Kota Stone	Polished		Club area & pavilion			54	46
Interlocking paving	Grainy		Vehicular Path in periphery			48	38
Grass paver	Grainy / Natural		Parking area			42	33
Waterbody	Natural		Pool and Fountain			31	36
Grit paving with Kota bands	Grainy		Pathway			52	45
Grass lawn	Natural		Lawn			45	32
Planter & Tree court	Natural		Park edges			36	33

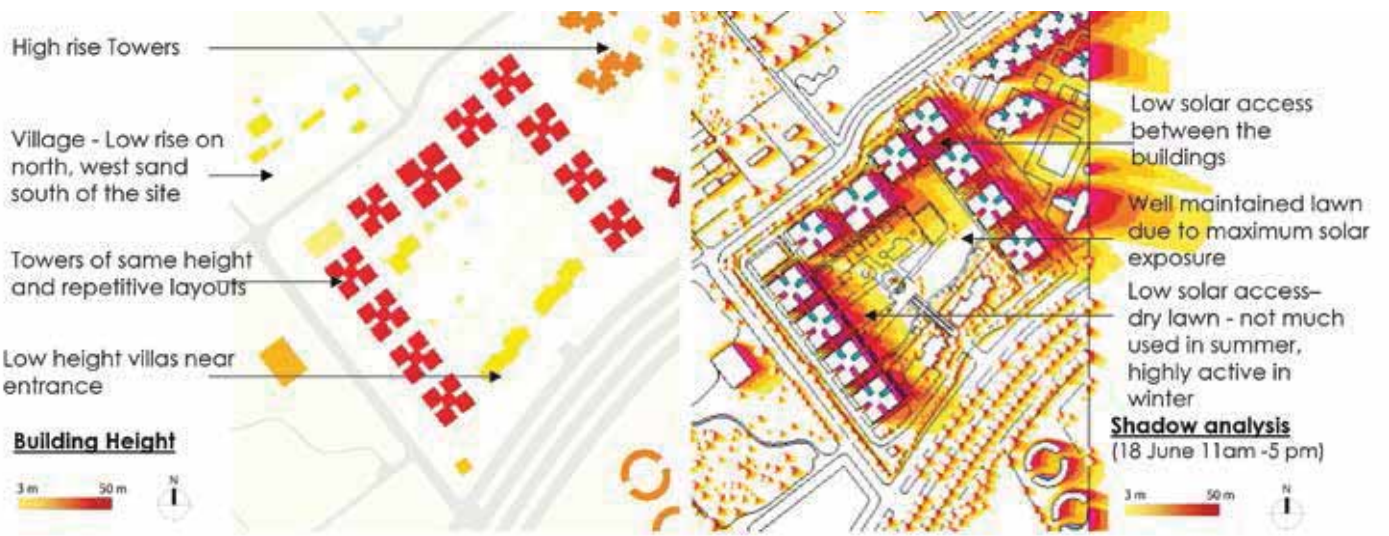


Figure 5: Building height map and shadow analysis map
Source: Generated by Author from Envimet software

notable effects on the local wind flow patterns. The tall building mass pushes the wind down to the ground creating 'downwash' and 'turbulence''. The staggered placement of buildings creates a 'corner effect' with higher wind velocities. The 'Venturi effect' is also created between tall buildings with narrow gaps. The wind flow pattern at 11:00 am and at 3:00 pm for the study duration generated from Autodesk Flow Design has been shown in the map in Figure 6. The maps show maximum wind

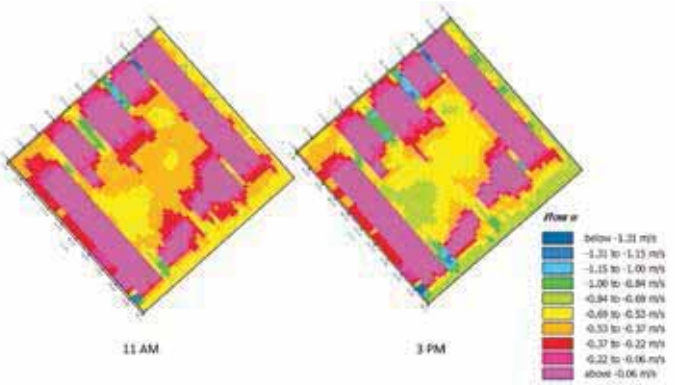


Figure 6: Wind analysis map
Source: Generated by Author from Autodesk Flow Design Software

velocity between staggered towers in the north-west direction whereas lowest wind velocity at the south-western edge of the plot.

4.5 Demography of Users

The residents are from higher income groups but with varied levels of education. There are IT companies and MNC employees, employees of educational institutions, small businesses and industry owners, retired government servants settled in their own apartments, etc. Most of the residents are migrants from nearby towns and neighbouring villages. The broad categories for activity distribution taken for this research are:

- Age: 0-3 years (infants and toddlers with adult supervision)
- Age: 4-18 years (children)
- Age: 18-60 years (adults)
- Age: 60 + (senior citizens)

4.6 User Perception and Spatial Engagement

According to literature, the user activity is categorised in two broad categories and are shown in site photographs in Figure 7:

a) Passive engagement: sitting on a bench, reading, knitting, using mobile phone, laptop, standing, laying etc.

b) Active engagement: walking, running, cycling, playing, exercising etc.

The user perceptions were further understood through the interviews of each user group as mentioned above. Apart from the physical activity level, questions on the reason behind using the

Figure 7: Photographs showing spatial preference and activities at various zones in the central space between 5:00 to 7:00 pm.
Source: Author

same space in the entire park was understood. Additionally, the user thermal comfort perception and climatic conditions or spatial conditions causing the comfort were evaluated.

The user activity distribution and engagement level are mapped with circles representing active engagement and triangles representing passive engagement with further categorisation in legends. The activity distribution is shown in the maps below (Figure 8 and Figure 9) in the following time slots:

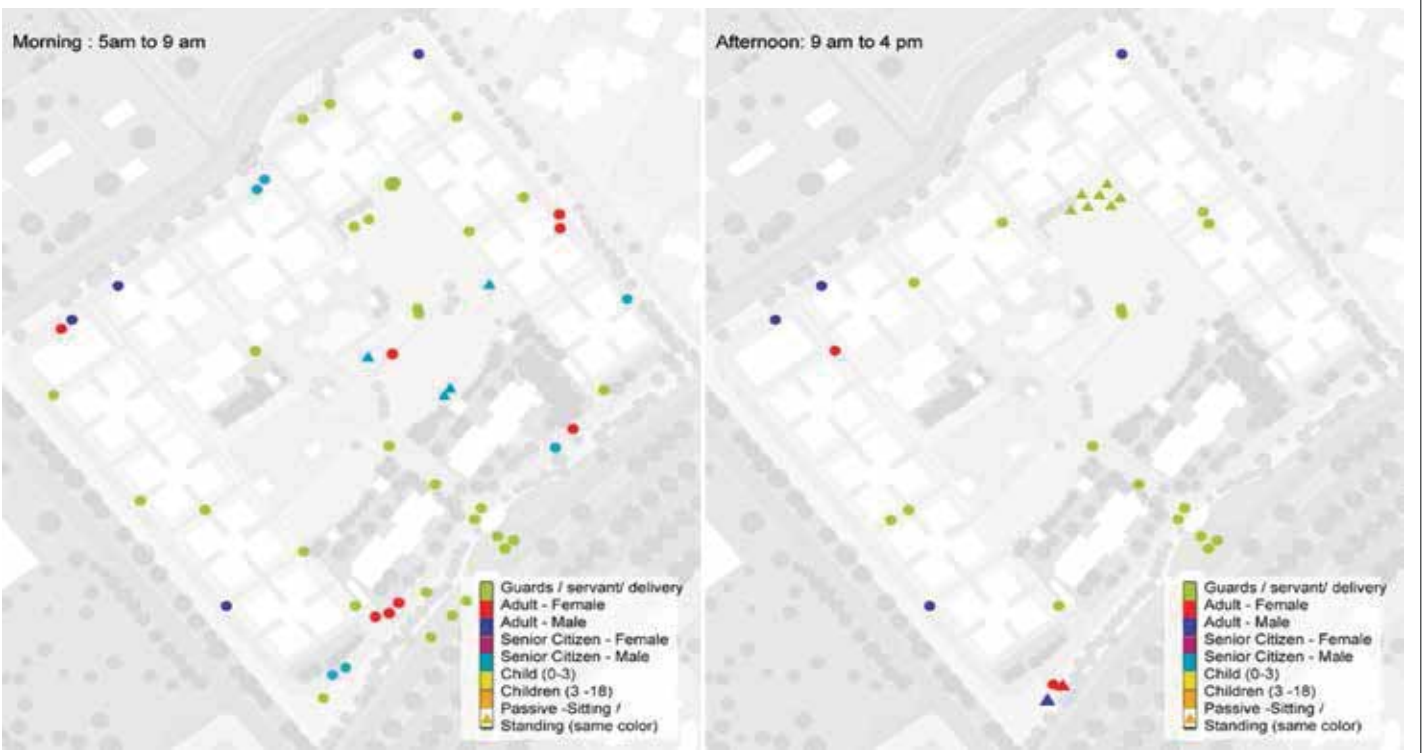


Figure 8: Activity distribution map for morning and afternoon
Source: Author

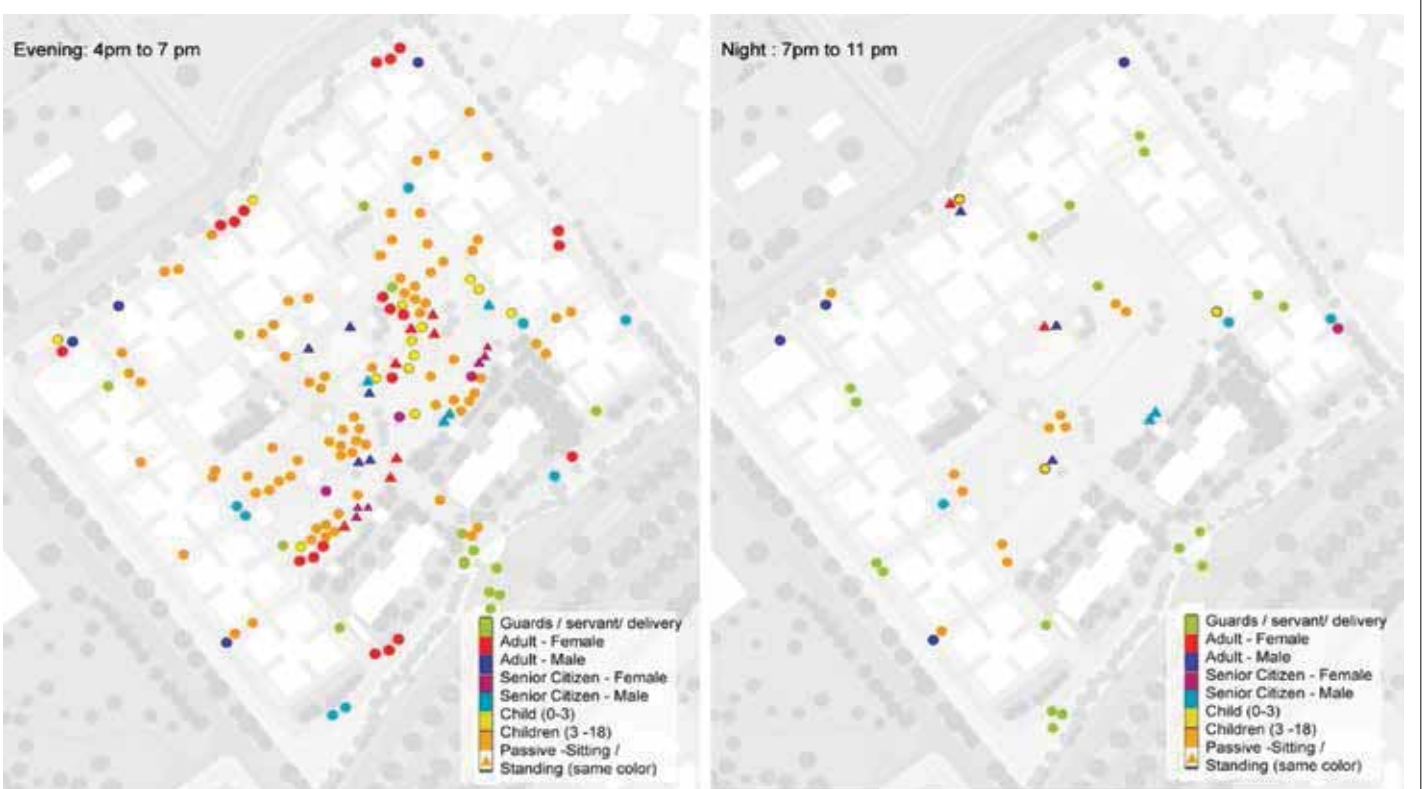


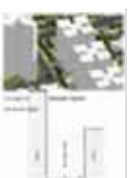
Figure 9: Activity distribution map for evening and afternoon
Source: Author

a) Morning [5:00 to 9:00 am]
b) Afternoon: [9:00 am to 4:00 pm]
c) Evening: [4:00 pm to 7:00 pm]
d) Night: [7:00 pm to 12:00 pm]

5. Results

The information has been analysed to record the pattern of user-comfort relation with respect to the physical properties of the site- surface materials, spatial enclosure, orientation and outdoor furniture.

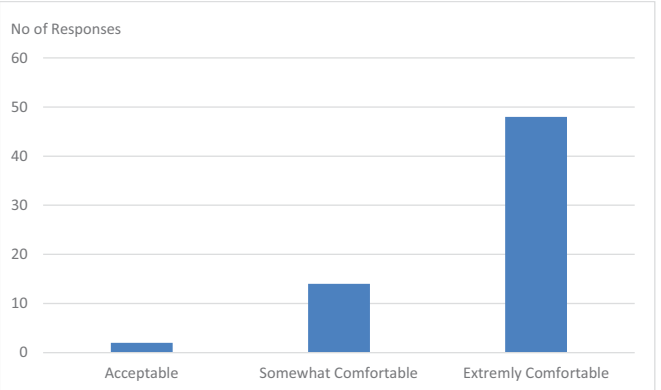
Table 2 : Synthesis matrix - user distribution and spatial relation (Source: Author)

Location	Paving material	Aspect ratio and Section	Orientation (Shade)					Human Activity and User Group				
			6_9	9_16	12_15	16-19	19_23	6_9	9_16	12_15	16_19	19_23
 *Lawn*	Central green lawn and path, concrete with stone	 0.3						iiii	v	v	ii	i
 *Stepped court*	Dark grey reflective Granite stone	 0.3						v	v	v	ii	ii
 *Pathway*	Exposed Grit paving with kota stone bands, interlocking pavers on edge	 3 to 0.3						iv	iii	iii	iii	ii
 *Road*	Interlocking pavers and grass pavers	 3 to 13						iv	iii	iii	iii	iii
 *Buidling Entrance*	Exposed Grit paving with kota bands and Kota Stone transitional plaza	 15						iii	iii	iii	iii	iii
			0 to 5	5 to 18	18 to 60	60 +	Nil					
			i	ii	iii	iv	v					
			High	Med	Low	Very low	Nil					
			High	Med	Low	Very low	Nil					

This is understood by recording the user activity distribution and then the information is synthesised in the synthesis matrix shown in Table 2, which shows user distribution and spatial relation.

The results from the questionnaire survey of 65 users

Table 3 Result of Thermal Comfort perception from the user survey of 65 respondents.
Source: Author



of mixed age and gender, taken during the month of October (air temperature 28 degrees C) and evening hours suggested that the majority of users were extremely comfortable in the spaces they occupied.

The synthesis of user activity distribution, user perception survey and micro-climatic data gave following results on user-comfort preferences is as follows:

a) Location: Senior-citizens had fixed locations every day and they had the highest perception of comfort in terms of materials, shade, visibility, sound, hindrances etc. Women aged between 20 and 40 years were identified in smaller groups and in locations with a greater degree of enclosure and chose hidden spaces at corners. Children were most experimental in terms of space choices and they preferred to explore new areas daily. Young children were also seen to be attracted to the spaces with changing levels, the stepped central plaza, club house area with ramp and swimming pool, slides and swings were used in beyond obvious play activities. The designated walking track was used only during the morning and late night for intended purpose.

b) Enclosure: Younger children prefer large open spaces. In contrast with this, senior-citizens, teenagers and young women prefer corners with higher enclosure.

c) Materials: Senior citizens prefer soft surfaces for active and passive movement; the preference of children depends on the kind of play activity they are performing. Hard-paved surfaces were preferred for active recreation and play.

6. Conclusion

The study finds that the designed spaces were performing many diverse activities depending on the time of the day and user needs.

The number of users and their duration of stay in these outdoor spaces were clearly related with the thermal, visual, and tactile qualities of the surface materials and user perception of space was closely linked to the user perception of thermal comfort. Additionally, the individual subjective aspects such as closeness to the known people, visibility of children, amount of noise, physical hindrances etc. also determined the choice of user locations (see Table 3). There is a strong sense of adaptation of space

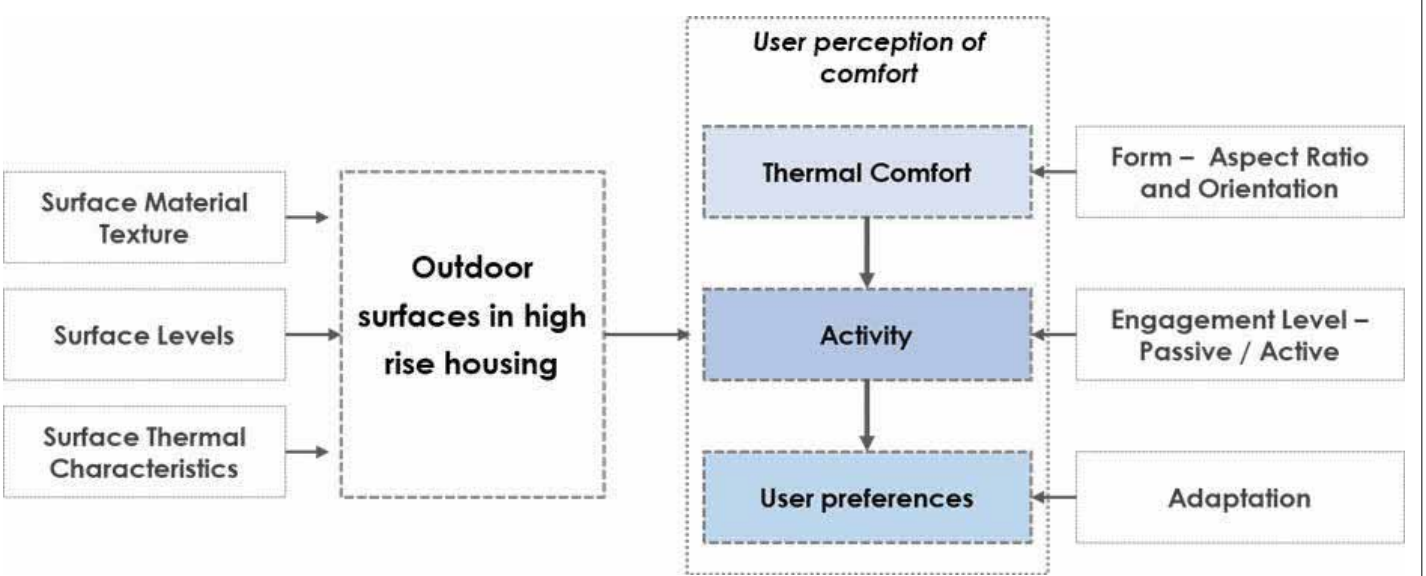


Figure 10: Proposed relation between thermal comfort, activity and user preferences.
Source: Author

and activity by the user, to achieve desired degree of comfort and shows user preferences. The Figure 10 explains the proposed relationship between Thermal comfort, Activity and User preferences.

In conclusion this research identifies a three-tier causal relationship between the spatial design with thermal comfort and further with the usability of a public space.

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Architecture as an Expression of Democracy

The Dr. B. R. Ambedkar Telangana State Secretariat, Hyderabad

By Dr. Ponni M. Concessao

Chennai-based architect Ponni M. Concessao has made history as the first woman architect in India to design a State Secretariat. Her path-breaking achievement is embodied in the new Dr. B. R. Ambedkar Telangana State Secretariat. This modern secretariat is an impressive ten lakh square feet building rising two hundred sixty-five feet high. It is taller than the Qutab Minar in Delhi, the Taj Mahal in Agra and the iconic Charminar in Hyderabad, overlooking the picturesque Hussain Sagar Lake. This architectural marvel seamlessly combines modern facilities with breathtaking design elements.

Three years ago, Telangana's Chief Minister K. Chandrashekar Rao invited architects from across India to submit designs for the new State Secretariat. Ponni's design was selected, and she, along with her husband Oscar G. Concessao, embarked on this ambitious project with impossible timelines. Despite the challenges posed by the COVID-19 pandemic, the couple's extensive global experience in architecture allowed them to complete the project in just twenty-six months.

Ponni's design for the State Secretariat reflects Telangana's grandeur and the aspirations of its people. By blending the best of Eastern and Western architectural traditions, she aimed to create a structure that pays homage to the Hyderabadi heritage. The Secretariat has been awarded the prestigious Green Gold rating by the IGBC, demonstrating its commitment to sustainability. All building materials were sourced locally, except for the exquisite sandstone from Rajasthan, and cutting-edge materials were utilised throughout the project.

The Planning concept for the New Telangana State Secretariat designed by Architects Ponni & Oscar + Rahul is based on Vaastu and contextual architecture. Architecture as an expression of democracy reflecting

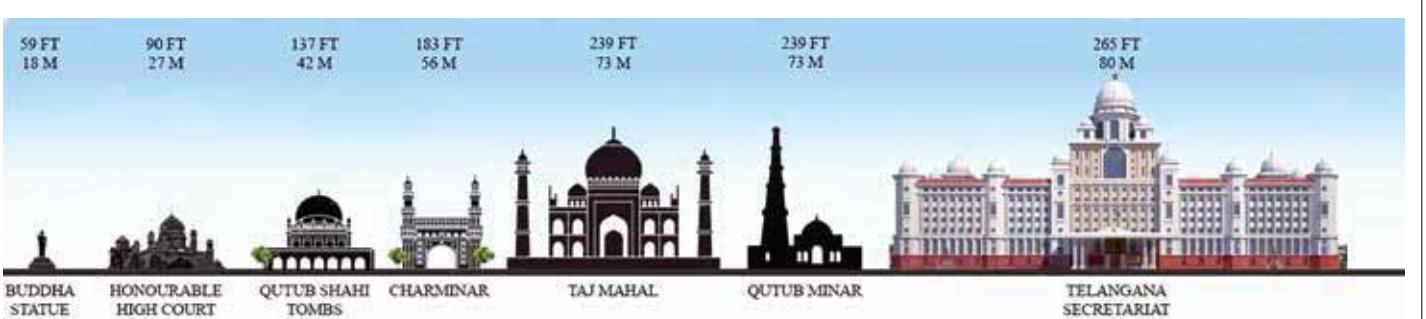

Fig.1: Height Comparison

Fig. 2: Front View of the Telangana State Secretariat

the aspirations of the people and the history of Telangana was the basis of the design philosophy of the building. It is vital for the state's population to have an emotional connection with the building and this was successfully implemented.

Not only was the building a symbol of pride for the people of Telangana, but it eventually became a global icon showcasing the grand heritage and achievements of the state with its dynamic future. The overall design philosophy and the exterior architectural character and style are the fusion and synthesis of the diverse cultures and heritage of the dynamic history of Telangana.

The overall axial planning and design details are from the various temples and palaces of Telangana. Specifically, the Neelakanteshwara temple, the Sita Ramachandra Swamy temple, the Lakshmi Narasimha temple at Yadadrigutta and the Wanarpathy palace. The twin column design vocabulary in the facade is inspired by the Telangana Thalli taken from the State's emblem and is in fact the gateway of an ancient fort in Warangal. The combination of different materials and the flooring design motifs came from the Ramappa temple in Warangal which today is a UNESCO world heritage site.

Exterior and Interior Materials

Several material combinations are being used for the exterior facades of the Secretariat. The exterior podium cladding is in red sandstone and the central tower is with beige Dholpur sandstone cladding which has beautiful ornate arches with sandstone lattice works. The beige colour psychology is reliable, dependable, flexible and the white colour of the masonry signifies purity, new beginnings and integrity.

The elevations of the building are finished with glass-reinforced concrete. The design details include fluted columns with Corinthian and Ionic capitals, along with classical spindle balustrades. The external window with double glazing is very energy efficient and low E glass forms part of the fenestration design parameters. The grand entry staircase is a combination of Dholpur beige sandstone and Agra red sandstone with decorative railings.

The main entrance door which is the largest in any Secretariat in India is beautifully carved in classical design with metal inlay work emulating the traditional Bidri work of Telangana. Interior finishes of the entire Secretariat have elegant interior designs with several finishing materials such as marble, granite,

vitrified tiles, veneer wood panelling, metal acoustic wall panelling, energy-efficient plumbing fixtures and faucets.

The interior design is eclectic, based on Indian and French neo-classical styles. The conference hall has rich wood panelling with elaborate feature ceilings and matching tables. Suitable acoustic panelling has been done along with state-of-the-art audio and video systems.

Salient Features

The plan is designed in a rectilinear fashion with respect to the site. The building has eleven floors and the total building area is approximately ten lakh square feet. The building has a grand imposing entrance with fifteen feet high entry podium with a three-storey arrival grand portico which is globally the largest for a Secretariat.

The grand entrance is a two-storey entrance atrium which is the centre of the building overlooking the large two and a half acre landscaped central courtyard. The twelve feet wide corridor acts like a heat exchanger bringing in cool air from the courtyard and expelling the hot air from the interior office spaces. These green spaces help in natural lighting and ventilation thereby reducing the carbon footprint of the building complex. The room heights vary from fourteen to sixteen feet making the interiors naturally cool.

Fig. 3: Side View of the Telangana State Secretariat

The basic principles of planning are Hindu heritage architecture with a synthesis of all other styles of architecture that are native to Hyderabad. The electrical, mechanical, plumbing and HVAC systems are all Green-rated with the latest cutting-edge technology. Sustainability, COVID-proofing the building using Green building architectural norms, anti-microbial building products, futuristic materials and technology are the hallmarks of the design. Gender and social equity are built into the design by providing an equal number of toilets for women and men, a crèche for working mothers and provisions

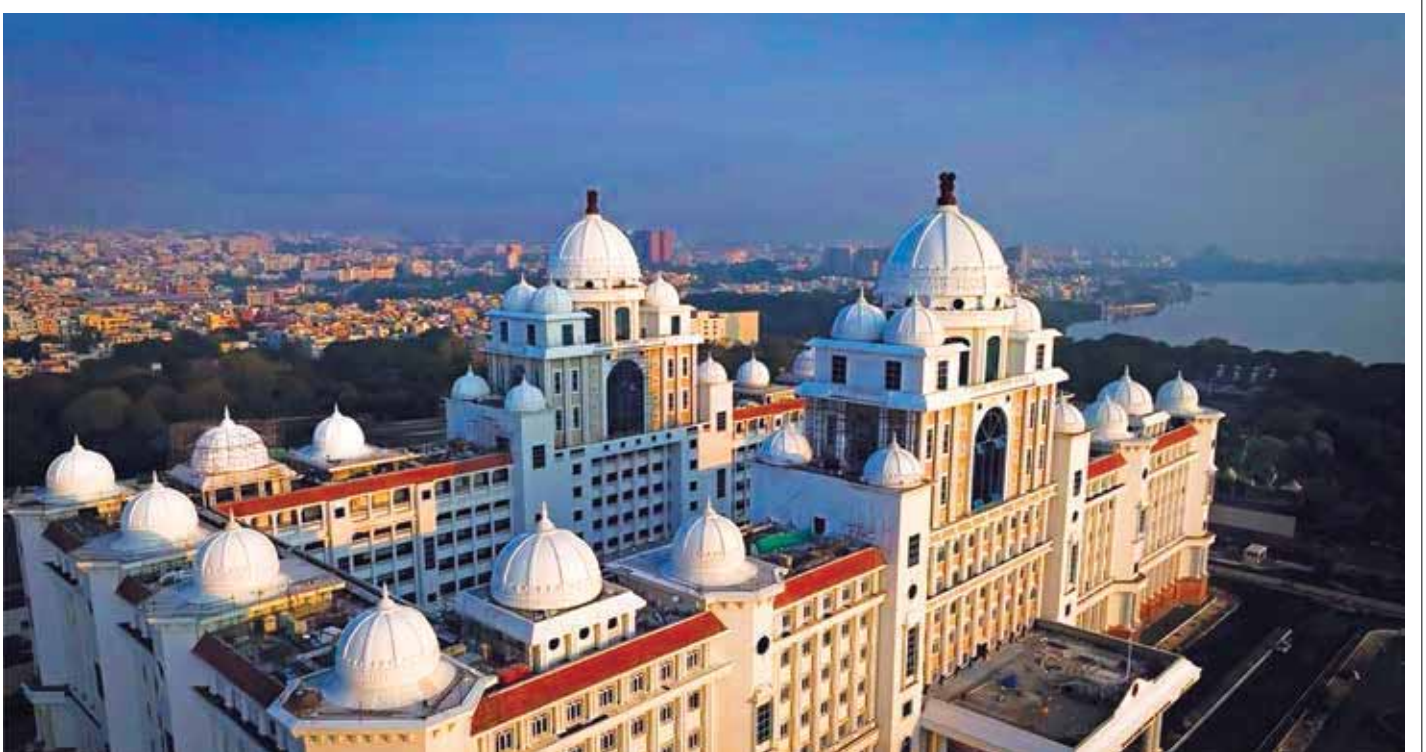

Fig.4: Aerial View of the Domes

Fig.5: The Main Grand Entry

Fig.6: Interior View of the Chief Minister's Cabin

have been made for interfaith worship by virtue of building a Temple, a Mosque and a Church in the Secretariat campus.

This is the only secretariat in the world to have thirty-four domes and two dome tower complexes. The domes are made of structural steel, finished with concrete shotcreting and a decorative GRC skin. The emotional moment of completion came with the installation of the bronze Ashoka capital weighing four tonnes on a five feet high pedestal.

The new Secretariat has bullet-proof windows in the Chief Minister's office, several categorised lounges, a VIP dining room and a stunning Sky Lounge with glass windows that offer a spectacular aerial view of the city, including the iconic Hussain Sagar Lake. The sprawling structure has twenty-four elevators, six hundred and thirty-five rooms, thirty conference halls and has the capacity to accommodate parking for five hundred and sixty-four cars. The entry door of the Telangana State secretariat is referred to as the Bahubali doors which are twenty-four feet in height and made of teakwood.

Efficient Circulation and Accessibility

The main entry is located towards the East side and there is a separate entrance for the Chief Minister. The Chief Minister's floor is on the sixth floor and it has been designed with Vaasthu compliance for the Chief Minister's Chambers, Cabinet meeting hall, Chief Secretary, Advisors, Personal Secretaries, Support staff, VIP waiting areas and a separate secured entry and drop-off for the Chief Minister.

The remaining floors have been planned for Ministers Chambers, various departments, support staff, conference rooms and the General Administrative department. The lower floors accommodate large meeting halls, archives, VVIPs, dignitaries waiting, large reception, VIP waiting areas, police surveillance, Intelligent Building Management Systems (IBMS) Record rooms, stores, etc.

The organisation of function, sequences and spaces within the spaces are connected through twelve feet wide corridors. The upper floors accommodate the Banquet hall, Dining hall, Ceremonial hall and the Sky Lounge which is situated below the two large domes from where we can get a three-sixty degree beautiful

Fig.7: Interior View of the Chief Minister's Conference Room

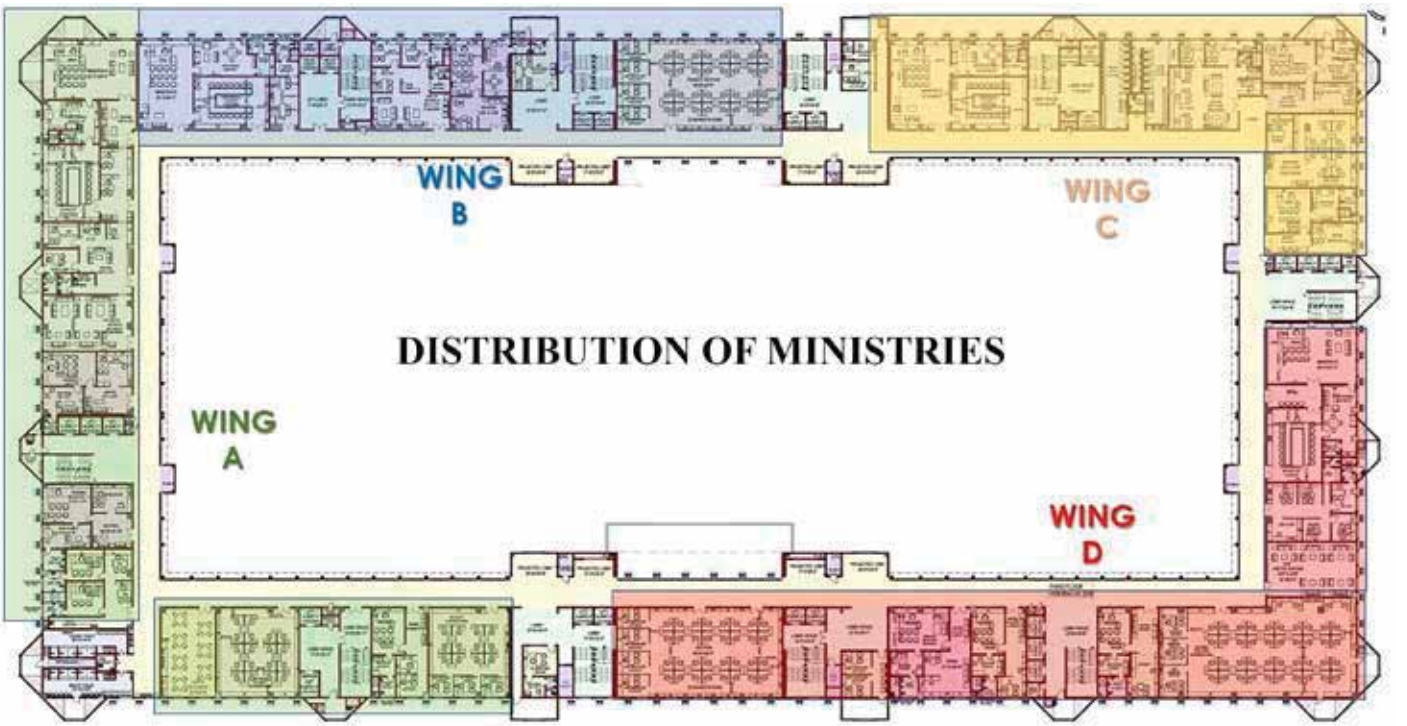

Fig.8: Floor Plan Zoning of the Telangana State Secretariat

Fig.9: Corridor view of the Telangana State Secretariat

Fig.10: IGBC Gold Rated Green Building

panoramic view of Hyderabad City. The Telangana State Secretariat has a total of thirty-four domes, which is a symphony of domes and a photographer's delight. The courtyard in the building is a great booster for the flow of natural air and ventilation. The services such as stairs, CM lifts, Minister Lifts, visitor lifts, fire lifts and physically challenged ramps are easily accessible from stairs and service ramps.

The scale and proportion of the building give a feel of monumentality and classical symmetry. The pillars and facade pilasters are tastefully decorated and ornamented. The distribution of entrances, cores, service cores and toilets is designed as per Vaasthu Shastra. Alongside design for all lifts, fire staircases and utility rooms have been planned.

IGBC Gold Rating

The building has smart systems such as smart lighting controls like timers, automated switches, dimming controls and energy-efficient equipment. Cutting-edge security and surveillance technology are adopted for the Telangana Secretariat.

Ponni's approach to architecture is rooted in contextual design, where she incorporates local culture and traditions to create a building that resonates with the community. Ponni M. Concessao's groundbreaking design for the Telangana State Secretariat marks a historic moment in Indian architecture. Her fusion of contextual design, visionary leadership and unwavering dedication has resulted in an extraordinary achievement. The State Secretariat stands as a testament to her talent and serves as an inspiration for future generations in the field of architecture.

All images courtesy: Author

Dr. Ms. Ponni M. Concessao is the Principal Architect & Founder of Ponni & Oscar + Rahul Architects, Chennai. Dr. Ponni M. Concessao did her B. Arch from the National Institute of Technology (NIT), Tiruchirapalli in 1987 and later did her M. Arch. from Cornell University in 1989. She completed her Advanced Professional Studies at Harvard University in 1992. She has won more than 188 International, National and State awards for architecture and interiors.
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ARTICLE

Chunargarh: The Timeless Tales

By Dr. Nirmita Mehrotra and Kabir Mehrotra

Fig. 1: Ganges River turns towards Varanasi
Source: https://www.telegraphindia.com/my-kolkata/places/explore-chunar-in-up-a-must-visit-for-history-and-heritage-lovers/cid/1991083

Fig. 2: District Map of Mirzapur
Source: https://www.mapsofindia.com/maps/uttarpradesh/districts/mirzapur.htm

Hindi Literature remembers Chunar Fort as 'Tilsmi Qila' of Chandrakant by Devki Nandan Khatri. But many of us do not know about this forgotten legendary heritage which still stands tall, facing ravages of time and holding stories of chunar sandstone, pottery, handloom, carpets and untold stories of dynasties rise and fall.

In the lap of Vidhyanchal Ranges, Chunargarh is a small town located in Mirzapur district of Uttar Pradesh. The history of many dynasties imprinted in the heritage of this town, gives a thrilling excitement to the visitors. It is 42 km away from Mirzapur and 273 km from the state capital Lucknow. Chunar Fort was constructed in 1029 by King Sahadeo, with later additions by Sher Khan in 1532, Sher Shah Suri in 1538 and Akbar in 1575. The city exists in a triangular form with River Ganga to its left and River Jirgo to its right. Here today the primary mode of earning livelihood is agriculture and agro-based economy.

Mirzapur was one of the largest districts of Uttar Pradesh till Sonabhadra district was separated from Mirzapur in 1989. It is famous for Carpet weaving industries together with works of brass ware and stoneware. Historical events like Kajali and Ojhala fairs, handicrafts and stoneware, and Shaktipeeth of Vindhyavasini make this place a popular destination from the religious aspect as well. The Chunar Fort is also known as Chandrakanta's Chunargarh and Charanadri.

Chunargarh

As per the Puranas, the oldest name of Chunar was Charanadri, as Lord Vishnu in his first incarnation as Vaman in the dynasty of Great King Bali in the age of Satyug took his first step at Chunargarh (refer Fig. 3). According to archaeological findings, the earliest part of the fort dates back to 56th century BC when Lord Vishnu (Baman God) put his foot while covering three worlds in the role of Vaman. The Chunar tehseel is located on the right banks of the Ganga and stands on a rocky outcrop of Kaimur hills, which happens to be an extension of the Vindhya Range.

The fort has its share of legends and history. In 1791 the fort came under British rule. Today a large chunk of the fort is under UP tourism. It functions as a police

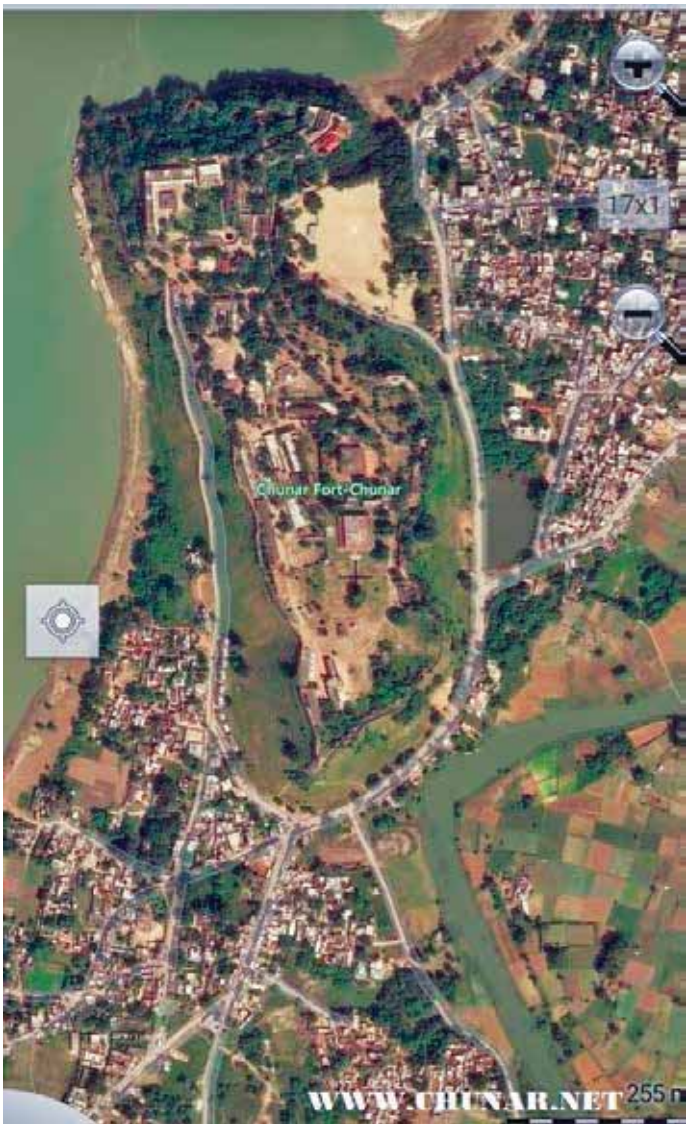

Fig. 3: Satellite view of Chunar Fort, Charanadri showing the Footprint of Lord Vishnu in his first incarnation
Source: www.chunar.net

Fig. 4: Fort of Chunar
Source: https://www.tripadvisor.in/AttractionProductReview-g297685-d15184567-Chunar_fort_river_tour_in_Varanasi-Varanasi_Varanasi_District_Uttar_Pradesh.html

training school and is inaccessible to tourists. At present the fort has the following structures worth seeing - Sonva Mandap, Raja Bhartihari Samadhi, and Bavan Khamba. Sonva Mandap was built in 1538 with a Bawadi (ablution tank) connected to the River Ganga for Princess Sonawa of Nepal.

Significance of Mirzapur

Mirzapur is filled with the divine energy of Vindhyachal, Ashtabhuja Devi and Kalikhoh, and a rich cultural heritage of music and literature. Not many people know that Indian Standard Time (IST) was calculated on the basis of 82.5° E longitude, from a clock tower in Mirzapur. The famous Ghanta Ghar of Mirzapur is located in the office premise of municipal corporation. It was constructed in the year 1891, with a 1000 kg alloy bell hanging from the tall structure. The sandstone of Kaimur hill, where Chunar fort is located, was transported to the Gangetic plains for the construction of havelis, forts and statues. Even the Ashok Stambh is made from Chunar sandstone.

Chunar glaze pottery has also received a Geographical Indication (GI) tag. Geographical Indication (GI) tags are an important tool for promoting and protecting traditional products from specific regions. Now red clay chunar pottery is getting replaced by Khurja Pottery.Chunar glaze pottery is characterised by its striking glaze and intricate designs, which are often inspired by natural colours. The pottery is made using a variety of techniques, including throwing, coiling and moulding. Once the pottery has been shaped, it is dried in the sun and then fired in a kiln.

Numerous famous waterfalls of UP state like the Wyndham Falls, Sirsi Falls, Lakhaniyadari and Tanda Falls (refer to Fig. 10) are located in Mirzapur amid the hills of Vindhyachal region. At the Lakhaniyadari waterfalls, water falls from a height of about 150 m into a pool. Waterfalls along with flora and fauna make it a popular destination among adventure trekkers.

Early History

The Chunar Fort is associated with many legends, one of which is the story of King Bali and the appearance of God in the form of a Brahmin who left his footmark on the hill of Chunar Fort known as 'Charanadri'. Another legend is related to King Vikramaditya of Ujjain, who built a house for his brother Bharthari near the rock face of Chunar. Samadhi of Raja Bhartari Nath is still located in Chunar fort.

Medieval History

During the medieval period, Mirzapur became an important centre of trade and commerce. The city

Fig. 5: Sonar Mandwa
Source: https://en.wikipedia.org/wiki/Chunar_Fort

Fig. 6: Chunar glaze pottery
Source: https://www.pexels.com/photo/coloured-pattern-pottery- 13575099/

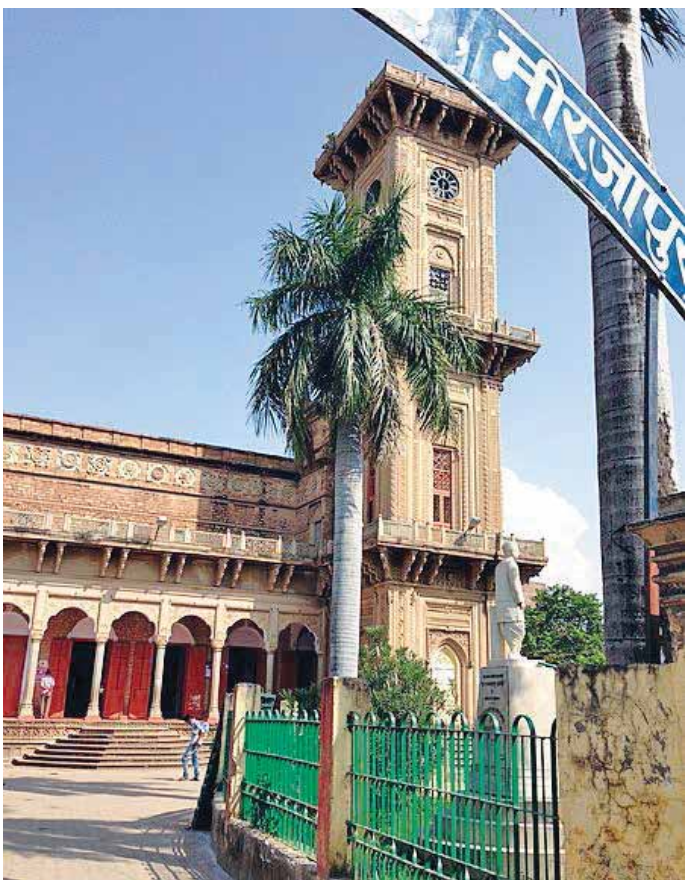

Fig. 7: Ghantaghar at 82.5 E degree
Source: https://en.m.wikipedia.org/wiki/File:Mirzapur_Ghanta_ghar.jpg

was located at the confluence of two major rivers, the Ganges and the Vindhya, making it an ideal business location. Various dynasties ruled it, including the Mauryas, Guptas and Mughals.

Mughal History

The earliest known inhabitants of Mirzapur were the Kol tribe. They were a group of hunter-gatherers who lived in the region's forests. In the 6th century BC, the Kols were conquered by the Mauryan Empire, who built several forts and temples in Mirzapur.

British History

Changing hands with the Suris and the Mughals, the fort fell under British control in 1791. The East India Company started taking taxes from boats plying along the river. For many years it was used by the British as an ammunition depot military hub, cemetery and prison. When expanding railways took over the trade through rivers, the Chunar Fort lost its importance which once played a pivotal role in Indian History.

Annexure 1: Chronological Timeline

Time Line	Dynasties
5-6th BC	Puransa
6thBC	Mauryan Empire
3rd BC	Shungas Empire
2nd BC	Kushnas Empire for 200 years
1st Century AD	Guptas Empire for 400 years
6th Century AD	Huns for 50 years
7th Century AD	Pala Empire for 300 years
10th Century AD	Sena Empire
12th Century AD	Delhi Sultanate
12-17th Century	Mughal Empire
18th Century	Marathas & British Empire
1801-1947	East India Company

Source: Authors

Looking forward

One of the prominent trading centres of the 17th and 18th centuries, Chunar in Mirzapur started to decline after the Railways started in Allahabad in 1864. This Shaktipeeth of Vindyavasini has been blessed with abundant resources of nature and has seen glory at its peak when Chunargarh was a proud

Fig. 8: Intricate work of Ghanta ghar
Source: https://en.m.wikipedia.org/wiki/File:Mirzapur_Ghanta_ghar.jpg

Fig. 10: Sirsi waterfall
Source: www.varanasitourism.in

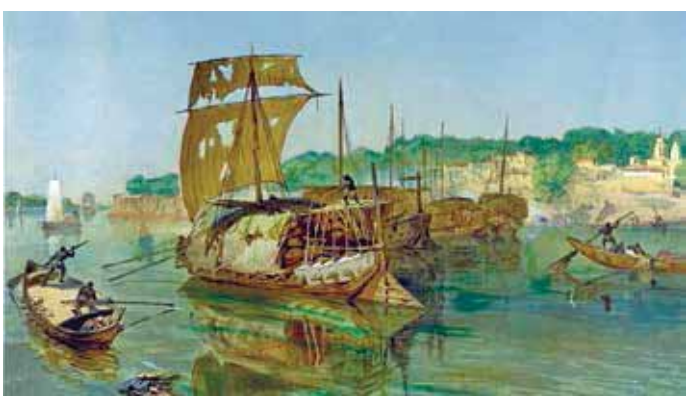

Fig.9: Transport of Chunar Sandstone by boat
Source: British Museum Library

privilege and honour for the ruler of every dynasty. But with time it grew as a local trading centre and a naxalite-hit area. At present much of the quality of life parameters are missing here amidst slums, traffic jams, lack of urban services and inadequate tourist infrastructure. Today much attention and effort are required to revive the glory of Chunargarh and elevate the living conditions in this historical city and make it a popular world-class tourist destination.

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All Images Courtesy: Authors

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Implementing Artificial Intelligence in Urban Development: Opportunities and Challenges

By Ar. Souktik Bhattacherjee and Dr. Jayita Guha Niyogi

Humans have evolved from cave dwellers to modern human beings who carry the whole world at their fingertips. Over time, the emphasis placed on our exigencies has transitioned from primal physiological needs to the pursuit of self-actualisation (West, 2022). While approaching self-development, the tendency is always to push the boundaries of knowledge and efficiency. A revolutionary paradigm change first occurred when humans learned to do agriculture, followed by the development of steam engines, and finally the development of computers. Late 20th century witnessed the development of computation capabilities through the advancement of hardware and the rise of Artificial Intelligence (AI) and hence the early part of 21st century is witnessing a full-fledged application of AI across all major industries. The application of AI in the domain of architecture transcends conventional boundaries, ushering in unprecedented avenues for advancement while adeptly tackling paramount urban challenges, thus fostering a trajectory towards a sustainable future.

The initial concept of "Artificial Intelligence" was developed by Professor J. McCarthy, Professor M. L. Minsky, Professors H. Simon and A. Newell, C. E. Shannon, N. Rochester and other scholars in 1956 at Dartmouth College in the US (Crevier, 1993). AI was conceptualised as the faculty of machines to comprehend, cogitate and assimilate knowledge in a manner akin to homo sapiens, signifying the potentiality of employing computational systems to emulate human intellect (Pan, 2016). In tandem with the expeditious maturation of computational prowess, the pervasive influence of AI has permeated every realm reliant on computational frameworks, while the advent of the internet has propelled its penetration to encompass virtually every denizen of this planet.

Architecture, the art or practice of designing and constructing buildings, is a vast market with a valuation of USD 359.98 billion in 2022 (Architectural Services Market Size & Share Report 2030, 2017). The global landscape of architectural practice has witnessed a swift and profound shift in paradigms after the introduction of 2D drafting tools in computers in 1963, followed by the emergence and maturation of 3D modeling tools in the 1980s. With the mass usage of 3D modelling software, the industry witnessed the rise of Building Information Modelling (BIM) tools like Autodesk Revit and Tekla Structures, and algorithm-based design tools like Grasshopper, Cobalt, and Dynamo (Bhattacherjee, 2021). Algorithmic-driven design tools have laid the groundwork for the application and integration of various AI and Machine Learning (ML) methodologies, facilitated by plugins such as Galapagos, Octopus, Silvereye, and Lunchbox, among others, within the framework of Grasshopper (see figure 1). A plethora of additional AI-driven tools have swiftly permeated the architectural domain, enabling architects to leverage innovative functionalities such as text-to-image generation utilising tools like Midjourney and Dall-E, text-to-3D model transformation facilitated

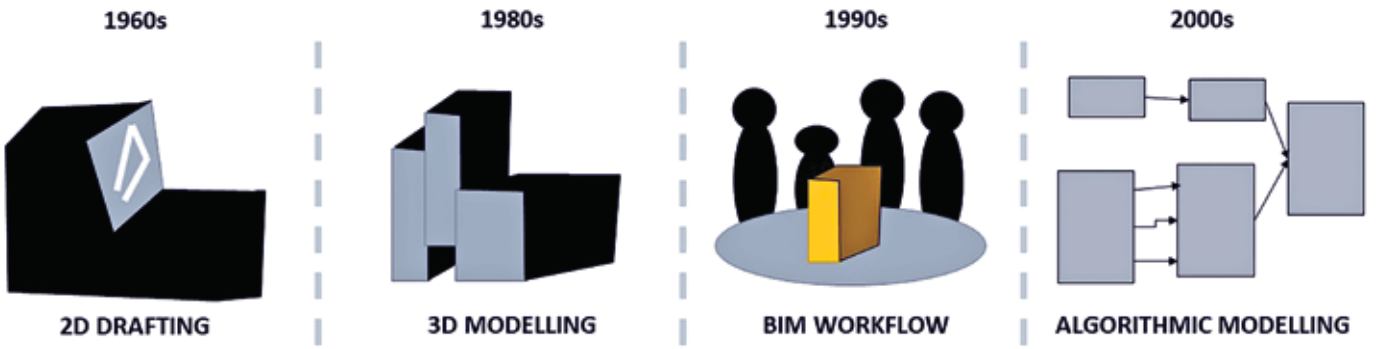

Figure 1: Evolution of software in architectural practice
Source: Author

by DreamFusion, Alpha3D, Spline AI and text-to-environment generation through the employment of tools like Skybox, among others. These AI-based tools are not only limited to designers but also are useful for contractors, project managers, maintenance workers, etc. Thus, AI has largely impacted the industry, with professionals in each domain using these tools independently.

As per Ecological Threat Report (ETR), by the year 2050, 70% of the world's population will live in cities, up from 54% in 2020. The report pointed out that South Asian cities like Dhaka, Lahore, Kolkata, and Delhi are facing the harshest challenges like high projected population growth rates, poor sanitation, lack of infrastructure, high crime rates, and substantial ecological threats (IEP, 2022). The root of these problems can be observed from the past two decades with unplanned urbanisation which has hit the South Asian urban areas (Ijjasz-Vasquez and Ellis, 2016). Various esteemed organisations, including UN-Habitat, the World Bank, the Asian Development Bank (ADB), and the Cities Alliance, are meticulously scrutinising urbanisation data while actively engaging in multifarious initiatives aimed at fostering the advancement of South Asian nations.

Singapore is leading the South-East Asian region in AI experimentation across multiple industries, as per a report by McKinsey Global Institute. It could be observed that AI's application is done in health care and medical research, education, public safety, sports analytics, media broadcasting, etc. The use of AI is broadly in the domains involving data collection and aggregation, algorithms and computer processing (Chitturu et al., 2017). Here is a list of areas where AI can be used in different sectors that directly affect our built environment, along with the challenges that may arise during implementation:

1. Architecture

Application of AI:
The site analysis and survey phase utilise image recognition technology to gather crucial data which can then be represented in either 2D or 3D formats. In the design stage, various advanced tools such as text-to-image generators, sketches-to-rendered image generators and image-to-3D model generators are employed alongside structural optimisation algorithms and interactive chatbot systems to tailor designs according to clients' preferences and demands. During construction and fabrication, semi-automated 3D printers or swarm robotics are employed for building construction with different fabrication techniques utilised for various materials to fabricate complex shapes as required (Ariwala, 2022; Robotics Online Marketing Team, 2020).

Challenges:
In the site analysis and survey phase, human cross-checking of collected data is essential to rectify inaccuracies and improve the AI model's performance. In the design stage, reliance on pre-existing datasets can limit designers' creativity and lead to a tendency to favour AI-generated solutions for convenience, potentially stifling innovation. Regarding construction and fabrication, not all materials may be suitable for 3D printing or robotic use, emphasising the importance of collaboration between construction workers and robots to ensure safety, resource optimisation, project efficiency, and the incorporation of sustainable practices.

2. Urban Design and Planning

Application of AI:
In the survey and documentation phase, urban sites are comprehensively understood through public surveys and opinions gathered via digital platforms

Figure 2: Possible areas of application of AI in an architectural project
Source: Author

or social media data collection with recommendation systems facilitating targeted surveys based on individuals' data. Additionally, drone imagery or satellite data aids in site documentation and surveys. In identifying urban issues, pattern recognition algorithms analyse collected data to pinpoint potential problems or anomalies, bolstered by informative maps for a thorough understanding, facilitating data-driven decision-making. Simulation of design solutions follows, enabling problem identification and optimisation, with results directly informing AI model improvements.

Challenges:
Ethical data collection practices are emphasised in the survey and documentation phase, requiring human involvement to detect and rectify biases, inaccuracies and ethical concerns. In identifying urban issues, decisions undergo meticulous scrutiny by domain specialists and stakeholders to ensure effective implementation. Regarding simulation, advancements in computational capabilities enhance the accuracy of results, with ongoing expert monitoring to ensure relevance and reliability.

The other sectors which impact the built environment are waste management, electricity distribution, water distribution, disaster management, public health monitoring, urban crimes, infrastructure maintenance and education & training. The implementation of AI in all these sectors can be broadly classified into four parts i.e. data collection (survey & documentation), data cleaning and feature extraction, data analysis (AI modelling) and data interpretation (implementation and maintenance) (see figure 2). While AI implementation can be integrated into various aspects of the sector, it remains crucial to verify the outcomes generated by crosschecking them with experts.

The major problems and issues in South Asian urban areas caused due to urbanisation are overcrowding in urban areas, an increase in demand for housing, an increase in unemployment rates etc. The crux of these problems can be categorised into seven major areas i.e. high population growth rates, poor sanitation, lack of infrastructure, high crime rates, substantial ecological threats and higher levels of air pollution (IEP, 2022). To address these challenges, the utilisation of AI and Internet of Things (IoT) technologies can assist in effectively analysing urban data, leading to optimal and viable outcomes. A key aspect is the development of a regional architect's dataset, which captures the distinctive characteristics and preferences specific to the region. The areas through which artificial intelligence could be utilised in solving urban issues are as follows (see figure 3):

1. Using predictive algorithms

- AI can be employed to forecast forthcoming trends, encompassing aspects like population growth, traffic patterns and resource consumption.

- It can also be utilised to predict regions that necessitate maintenance and focused attention for monitoring and upkeep.
- It could predict natural disasters like floods and earthquakes so that people are prepared and the impact is minimised.
- The economic growth of a region and job creation can also be predicted with AI.

2. Performing optimisation

- With an AI-driven traffic management system, the traffic flow could be optimised, congestion could be reduced and efficiency of transportation could be enhanced.
- The waste collection routes and recycling process could be optimised to enhance the efficiency of waste management systems and introduce sustainable management practices.
- The energy consumption could be optimised in a home, reducing the energy consumption.
- The water distribution routes could be optimised as per demand from a locality, thus ensuring efficient water management.

3. Using pattern recognition algorithm

- AI can be harnessed to analyse land use patterns and propose sustainable urban layouts conducive to development.
- Public health data can be analysed using AI algorithms to identify patterns and facilitate informed actions aimed at enhancing public health outcomes.

4. Monitoring and management

- The air quality could be monitored and necessary steps could be taken to improve air quality and identify the source of air pollution.
- Noise pollution could also be mitigated by monitoring of noise levels.
- AI-driven surveillance systems could be utilised to enhance public safety and reduce crimes.

It can be observed that AI-driven systems have the potential to bring about substantial transformations in the workflow at an urban scale, ultimately enhancing the quality of life with minimal exertion. However, a concern that arises among the public is the ethical handling and utilisation of data in AI-driven systems. The data utilised to improve the built environment must be taken with consent from the masses for which education revolving around the use of AI at the urban scale must be provided. The data collected must be made secure from individuals with malicious intent or directed towards political gain. Urban development authorities must address concerns pertaining to the scope of data collection, the user cohorts accessing such data and the governance thereof.

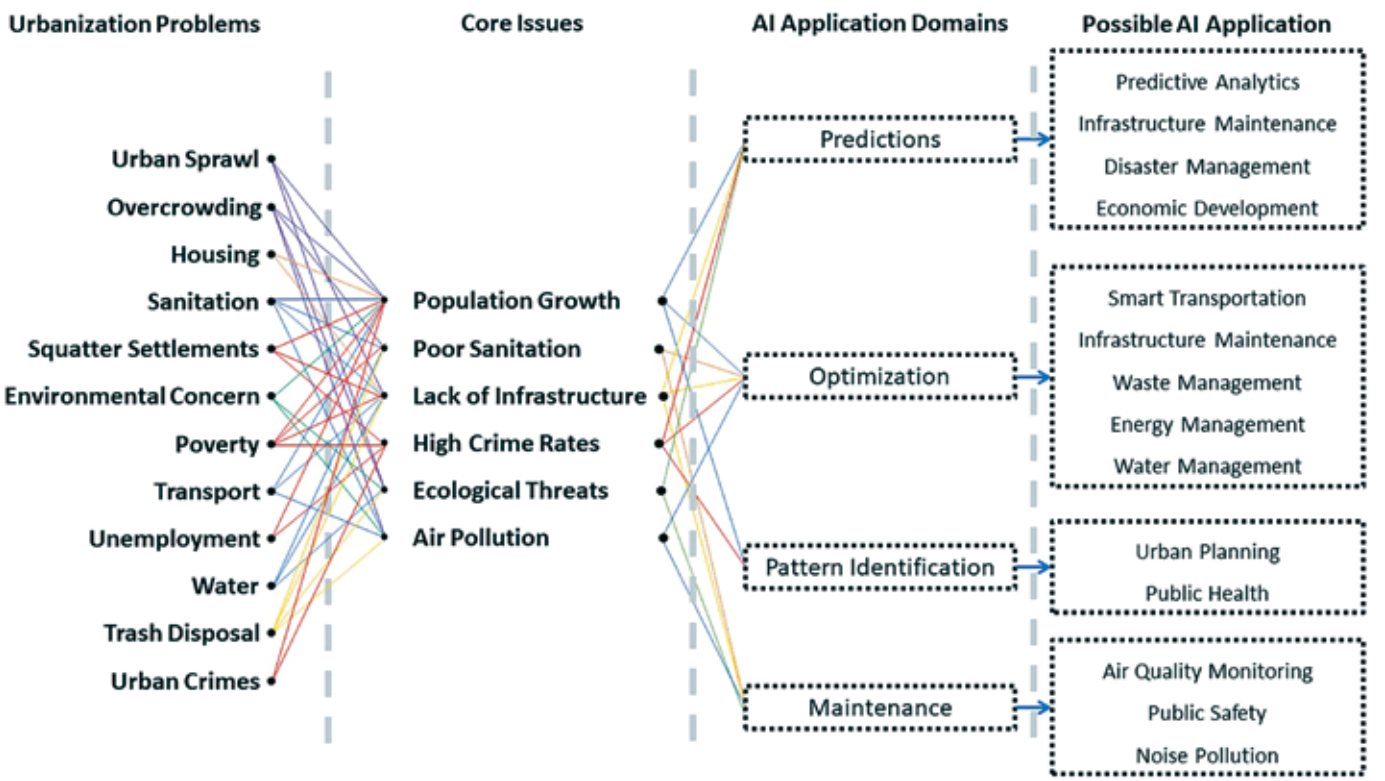

Figure 3: Possible areas of application of AI from urbanisation problems of South Asia
Source: Author

The application of AI in the development of the built environment fundamentally represents an efficacious and contemporary tool within the architect's repertoire (see Figure 4). Given the diverse sectors in which AI systems can enhance the built environment, the concerns about job displacement from AI across multiple industries have heightened. Considering this, architects should undergo training in AI-based technologies and actively seek opportunities to expand the horizons of their practice by integrating these technologies into their workflow. Nevertheless, it is vital to bear in mind that while AI tools play a role in constructing the built environment, it is ultimately the architect's intention and vision that steer the design process.

AI could be introduced and utilised to develop the built environment efficiently in the following manner:

1. **Education**- Students pursuing architecture and other related fields should be provided with avenues to explore and develop AI algorithms as well as learn how to effectively implement them. Creating opportunities for students to engage in live AI projects will enable them to gain valuable experience. Moreover, students can contribute by assisting in data collection, database preparation and the development of hardware and algorithms for AI projects. Such opportunities will also empower students to engage in a wide array of sectors that demand multidisciplinary knowledge.
2. **Common digital interface**- It is imperative to establish a unified digital interface for citizens to access various city services including public transportation availability, Global Positioning System (GPS) tracking, waste management system, water distribution and more. Such an application could also serve as a communal platform for residents to forge connections, join clubs, organise events, and register complaints with regional administrative offices.
3. **Regional policy framework development**- A comprehensive policy framework should be formulated to regulate the utilisation of data and the implementation of AI systems at the urban scale. This policy would seek to foster and financially support the advancement of AI-driven systems, establish regulations governing data collection practices and safeguard individuals' digital rights.
4. **Enhance public participation**- To ensure the efficient deployment of AI, the model necessitates refinement through the

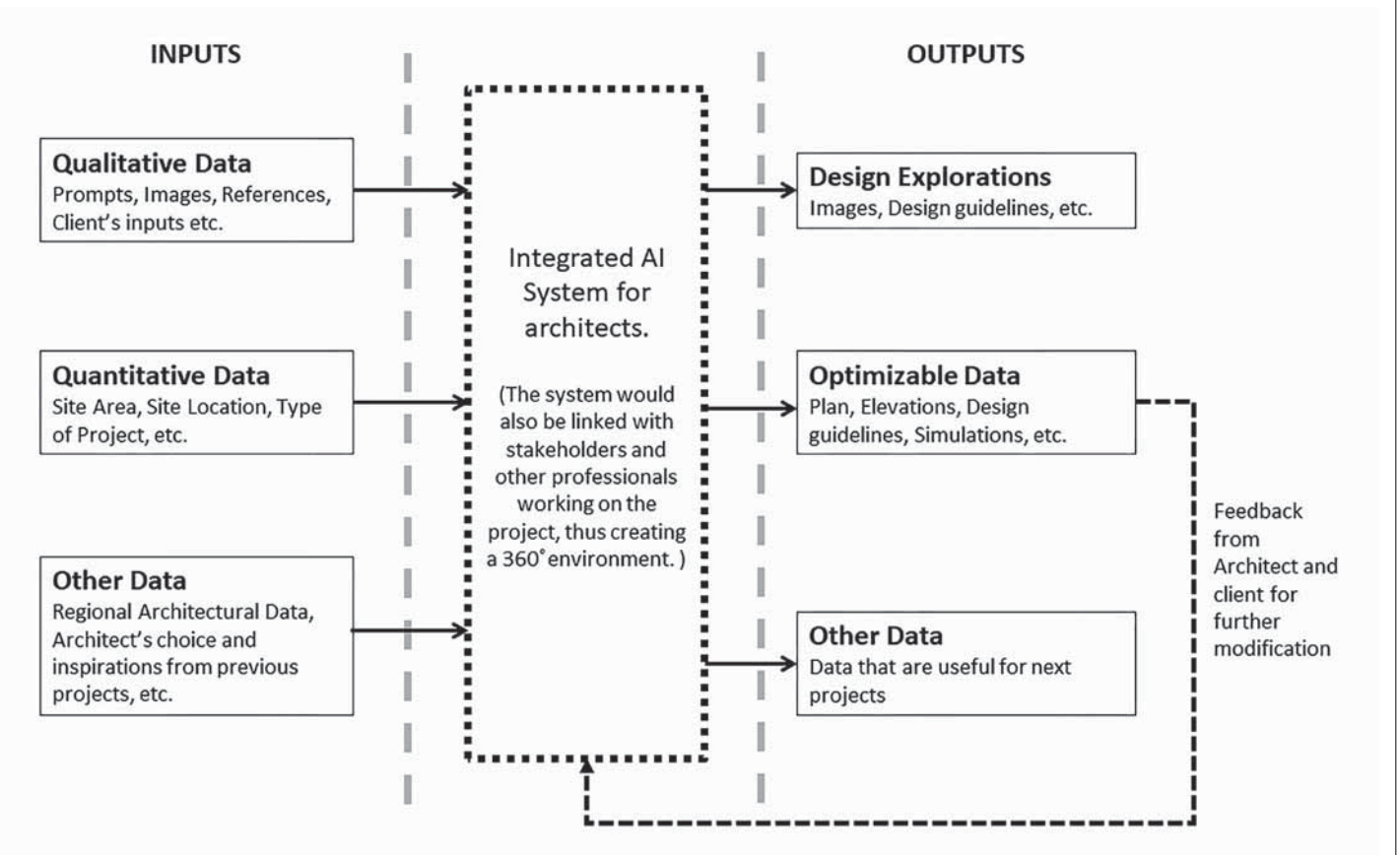

Figure 4: Framework of Integrated AI systems for architects
Source: Author

incorporation of public feedback and data. It is imperative to conduct AI awareness campaigns and publicly showcase AI-driven city services, fostering opportunities for public engagement and soliciting valuable opinions.

While AI remains the prevailing buzzword of the early 21st century, it is essential to recognise that our digital landscape owes much of its existence to AI. However, it is imperative to uphold the fundamental right of the public to comprehend the utilisation of their data for the purpose of enhancing their experiences. With the evolution of computational capabilities, AI systems hold the potential to exceed the human brain's capabilities, thus transforming the basic priorities of human beings (Blais, 2014). The rapid proliferation of AI-driven technologies presents a significant opportunity for architects to incorporate AI into their workflows. Likewise, administrative bodies must adopt proactive measures to foster and regulate the adoption of AI technologies at the urban scale.

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Garden Trails
Sikandar Bagh of Lucknow

By Ar. Juhi Prasad Singh

The botanical garden in Lucknow, known for its botanical research and plant conservation programs, is a garden which is more than 150 years old. The Awadhi ruler, *Badshah Wajid Ali Shah*, had built it for his *begum's Sikandar Mahal* calling it *Sikandar Bagh*. The entrance or gateway to this old garden was from the eastern part which is no longer part of the garden. The gateway to the *Sikandar Bagh* or *Secundra Bagh* complex features reliefs of a pair of fish over an archway which was the symbol of the Nawabs and is topped with two *chattris* or decorative pavilions. A crested wall, a dilapidated mosque, a *savandara*, a *burj*, a *parkota* and corner bastions are some of the elements of the built spaces of the garden and in no way is the history of the garden less colourful than its flowers. The only remaining gateway of the *bagh* is beautifully preserved and the work on it closely resembles the *chikankari* embroidery of Lucknow in many ways.

It took almost a year to build this splendid garden. The work was completed at a cost of five lakh rupees approximately, at that time. The garden had been laid inside a fortified wall and a road was built to connect the garden to the waterfront of the River Gomti. Spread over 4.5 acre, the garden was always abundant in fruit and flowers and that legacy has continued today, even as a botanical garden. Walls made of *lakhauri* bricks decorated with plaster mouldings enclosed this garden. The summer house was a pavilion for performances of *ras-lila* and *Kathak*, music and poetic *mehfils* which made *Sikandar Bagh* became a place of culture. The remnant structures and parts of the garden are testament of the cosmopolitan lineage of the city and its patronage of art and culture. Influences of European and Chinese architecture are also seen in the garden with its pagodas and pediments. The fish motif, called the *Mahi Maratib* is like a badge of honour and is an important part of *Sikandar Bagh*.

The garden has seen many phases of history. During the First War of Independence, the *Bagh* was used as one of many strongholds of *sepoy* mutineers during their siege of the British Residency in Lucknow. In 1953, this garden was taken over by the *Council of Scientific and Industrial Research* (CSIR), New Delhi and in October 1978 it was renamed as the *National Botanical Research Institute* (NBRI). Spreads over

Illustration of flowers commonly found in gardens of Lucknow and Sikandar Bagh

Source: Author, Within the Gardens We Walk by Landscape Environment and Advancement Foundation [LEAF]

a large area, it consists of various tropical and sub-tropical plant species, comprising 5,000 taxa, representing 212 families and a rich genetic treasure with the collection of trees, shrubs and herbs of medicinal, ornamental, economic, aromatic and of rare importance, hailing from indigenous to exotic sources. Thus started a new phase in the history of the royal *Bagh* where it became the botanic garden of the *Council of Scientific and Industrial Research* (CSIR)- *National Botanical Research Institute* (NBRI).

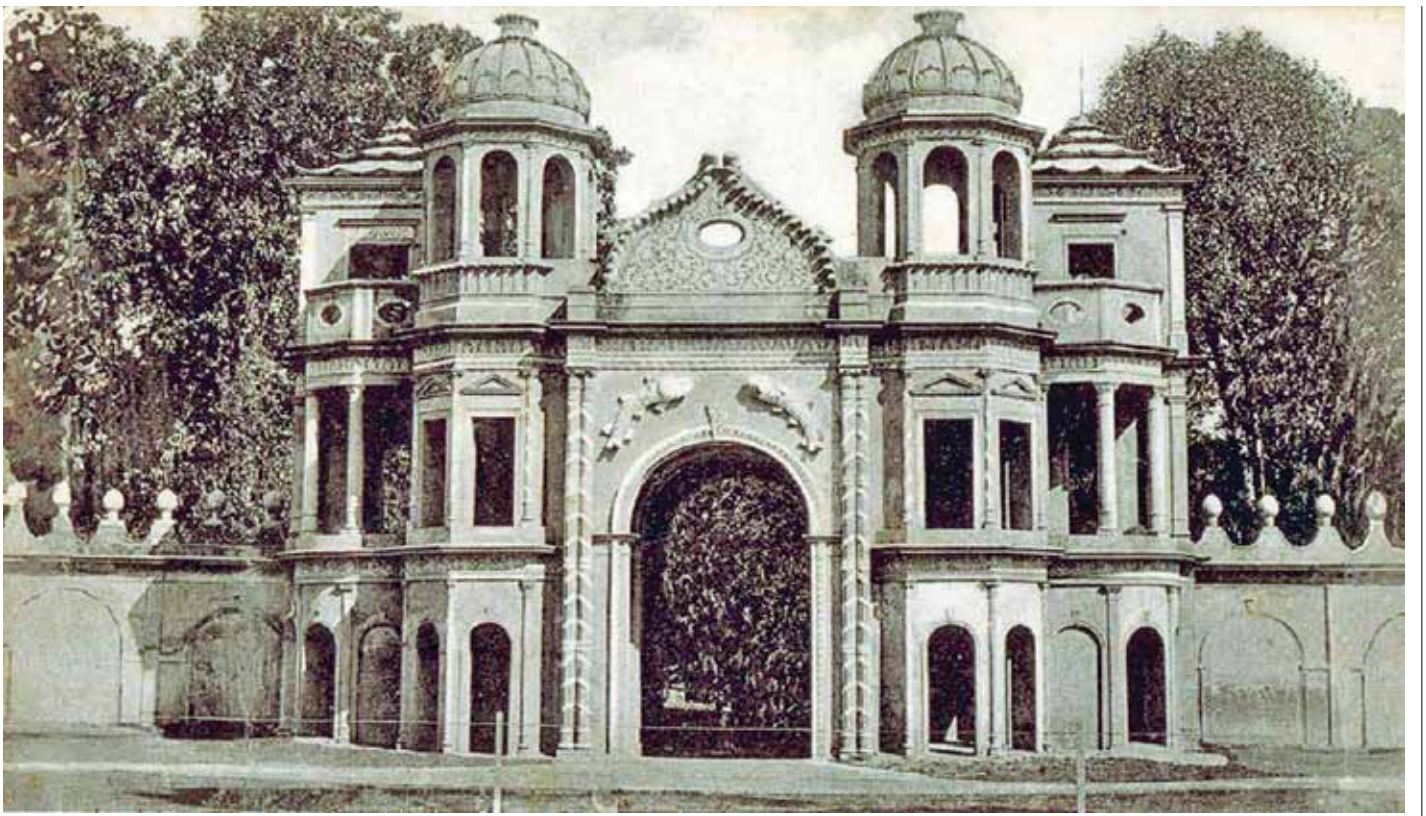
Lucknow is my hometown. With my personal experience I can state that Lucknow is a city of gardens. The city has managed to make a place for small gardens, backyard productive landscapes, *bagicha* at a residential scale and also at the urban scale of neighbourhood parks, streetscapes, parks, as well as botanical gardens at the larger scale of the city. In winters, many residents of the city like to plant flowering seasonal plants and are interested in gardening. Fruit trees like guava, mango, etc. have always been part of neighbourhoods wherever possible. The imagery of Lucknow is inseparably linked with gardens, parks and green open spaces.

Gardens are so important in the identity of the urban landscape of Lucknow that there are many places in the city which have the suffix *bagh* meaning 'garden' attached to their name. It shows the significance of gardens in the landscape of Lucknow like *Alam Bagh, Kaiser Bagh, Sikandar Bagh,* etc. Also, the etymology of names of many parts are dedicated to the flora growing dominantly in that area. For instance, Hussainabad area was formerly known as *Jamuniya Bagh* as the area was covered in *jamun* trees. *Sikander Bagh* which was the royal garden of the Nawabs of Lucknow is now the *National Botanical Research Institute*.

Sikandar Bagh is one of the oldest and historical botanic gardens in India and known for its immense contribution towards plant conservation, horticulture and sustainable utilization of plant resources. In my memory and knowledge, it is a living repository of 5000 taxa/ cultivars of various native and exotic plant groups. It is also a great place for visitors and city residents to learn and appreciate the beauty of nature through various plant and flower shows that take place there. It is truly a wondrous experience to be able to see so many varieties of plants and flowers even in the fast-growing urban landscape. The Botanic Garden has an excellent germplasm collection of ornamental crops viz., cultivars of bougainvilleas, gladiolus, chrysanthemums, canna, roses and many more which have always caught my interest. There is also the 'touch and smell' garden for the differently-abled with Braille system in this Botanic Garden for universal participation and has adequate infrastructural facilities for propagation, such as nurseries, experimental plots, propagation unit, mist chambers and drip irrigation facilities.

This discussion about *Sikandar Bagh* and my experience with various gardens in Lucknow leads me to the point of understanding the significance of gardens and especially botanical gardens in a city. Gardens are as old as human development and it is human nature to cultivate plants for a variety of purposes. Botanical gardens or botanic gardens were developed for the collection, cultivation, preservation and display of a range of flora. In India,

Chrysanthemum flower show at Sikandar Bagh, Lucknow, 2023
Source: Author



Gateway of Sikandar Bagh, Lucknow
Source: Gallery of British Library

botanic gardens have been part of the landscape as early as 546 BCE, for intensive survey of medicinal plants in Magadh. Botanical gardens are important places of methodical study and exploration of the flora of the region and are not important only to those interested in their study but also to visitors here. Many botanical gardens house libraries, research labs, glasshouses, herbariums, collections of prints, paintings and photographs of specimens. Thus it becomes more than a garden: it becomes an institute.

In current times, when the state of the global environment has changed more rapidly than ever, it is becoming more significant to build spaces like botanical gardens in cities to encourage exploration of the study of flora. Botanical gardens can play a significant role in ecological restoration and have the potential to become centres for active citizen engagement to fill the gap between people and nature.

Unlike earlier, when botanical gardens were looked at as places where plants are grown, labelled and catalogued, there is a shift in the purpose of botanical gardens in the urban landscape across the world. They serve for the rescue of plant biodiversity, provide educational programs to citizens, create places of relief and recreation from city life and develop cultures of flora and even productive landscape appreciation among people in general. There are various cities in the world and India who have given a lot of importance to building gardens and botanical gardens within the urban landscape. This has great effect on urban ecology and well-being of people. A city is a living organism and in addition, maintenance of green infrastructure like *Sikandar Bagh* should be central to its urban planning for a sustainable future.

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STUDENT WORK

Proposed 430 Bedded Hospital in New Chandigarh

By Jaya Verma and Ar. Vivek Sehgal

Introduction

Designing a hospital involves meticulous planning and consideration of various factors to ensure the facility meets the needs of patients, staff, and the community it serves. The aim is to create a functional and efficient layout that prioritises patient care and safety. This includes designing spacious and well-equipped patient rooms, specialised areas for surgeries, imaging, and diagnostic services, as well as support spaces such as administrative offices, staff lounges, and storage areas.

Attention is also given to creating a welcoming and calming environment to promote healing and comfort. Incorporating natural light, soothing colors, and green spaces can contribute to a positive patient experience.

About the site

A 400+30 (emergency) bedded hospital (which falls under Category D) is proposed on a 28.15 acre site in Medicity Phase 1 and 2, New Chandigarh. The site is surrounded by reserved land parcels for medical college cum hospital, commercial areas and public areas. A medical college and residential accommodation i.e. hostels are also required to fulfill the functionality of the project for which 14 acre site land parcel has been spared and the remaining 14 acre site has been designed for the hospital.

Concept and Ideology

The concept of hospital design revolves around creating a healing environment that promotes patient well-being. To provide such an environment, a low-rise multi-courtyard typology has been chosen.

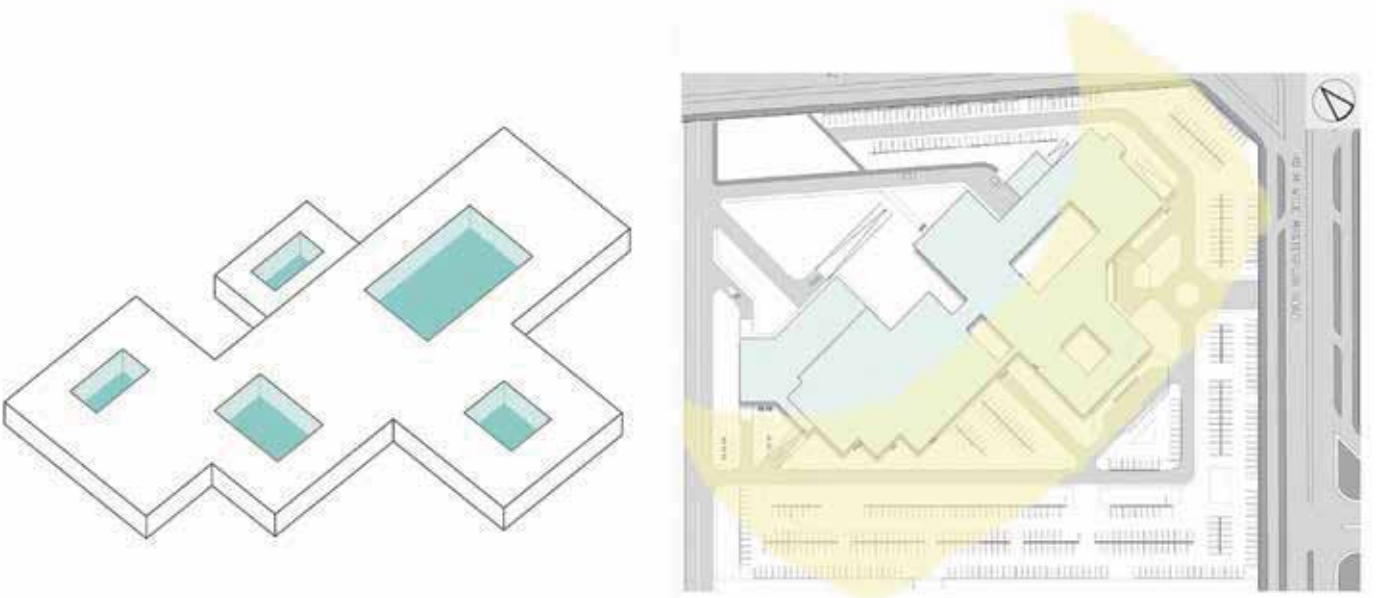

Figure 1: Conceptual form showing low-rise multi-courtyard typology along with the optimum orientation of the building block on site.

Multi-courtyard planning - This allows the creation of separate spaces with access to natural light and fresh air for different purposes such as recreation or rehabilitation.

Climate Responsiveness Orientation - Orienting the block along the east-west axis making the longer facades facing north and south direction to achieve glare-free daylight.

Spatial Distribution

Understanding the interdepartmental relationships is crucial in hospital design. This involves creating a 'stack diagram' to illustrate the distribution of facilities across different floors and ensure seamless connectivity between departments i.e. Administrative, Emergency, OPD (Out-Patient Department), Diagnostics and IPD (In-Patient Department).

The Emergency Department, which operates round the clock, requires its own dedicated entry/exit and should be strategically located near the Diagnostic Department.

The Out-Patient Department (OPD), operational primarily during daylight hours, should be planned on the ground floor for ease of access.

Direct connectivity between the Operation Theatre (OT) complex, Emergency Department and Intensive Care Units like MICU, NICU, SICU, BICU, CCU, etc, is essential for efficient patient care.

The Intermediate care areas like wards, private rooms, isolation rooms, etc, should be separated from high-traffic zones like the OPD and Emergency Department, ideally with its own entry/exit points.

The Central Sterile Services Department (CSSD) should be positioned near to therapeutic services like Operating rooms and Labour rooms, while services such as laundry and the dietary department should have direct access to the IPD.

Site Planning of the hospital

The site is accessible from two adjacent 45 m wide roads. Major entry/exit has been provided for OPD and IPD departments with segregated entries for VIPs, staff and the public. Moreover, a separate entry/exit has been planned for the emergency department for conflict-free circulation of ambulance and public vehicles.

Parking has been planned on the surface as well as in two basements. Segregated parcels of surface parking have been provided for various user groups. Moreover, 42% of green areas are proposed on-site.

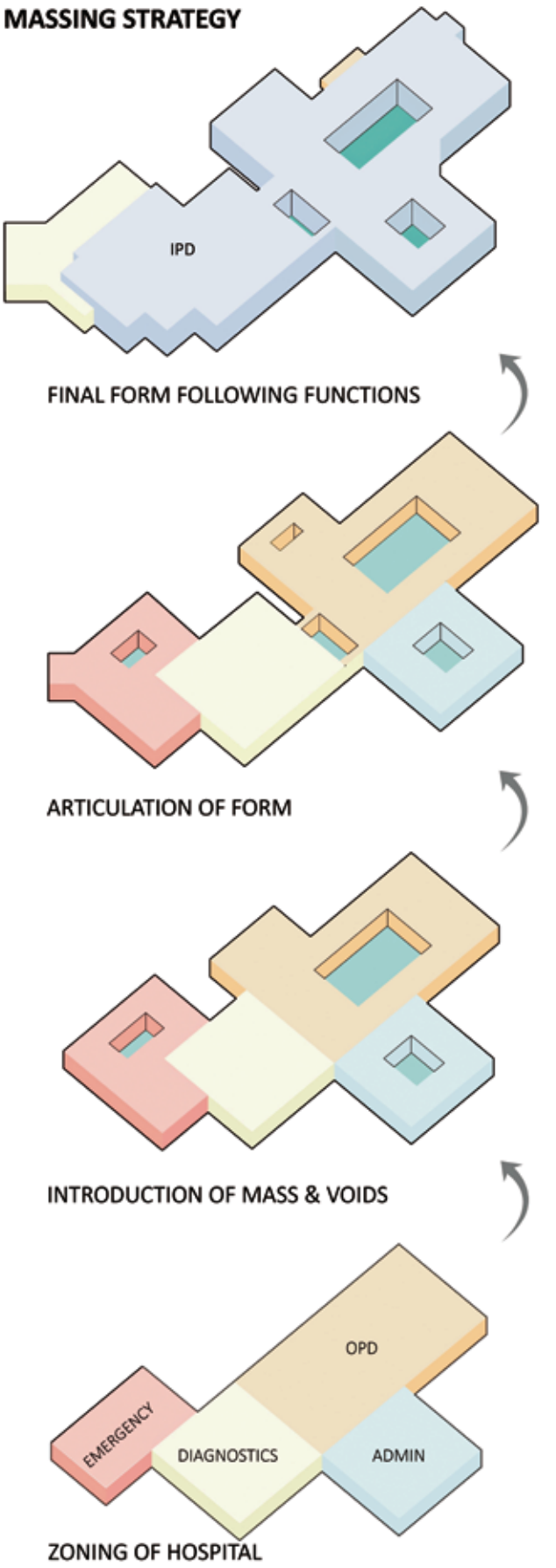

Figure 2: Illustration showing massing strategy

Table 1: Area statement of the project (Source: Author)

Area Statement			
S.No.	**Item**	**Acres**	**Sq. Meters**
1	Plot Area	28.1500	113918.82
2	Permissible Ground Coverage @ 40%	11.2600	45567.53
3	Proposed Ground Coverage	2.7706	11212.05 (21.8%)
4	Permissible Built-up Area @ 2.25 F.A.R.		128158.68
5	Proposed Built-up Area.		43964.60
6	Parking Required @2 ECS/100sqm *Total FAR		ECS=2564

Figure 3: Site plan

Floor Planning of the hospital

Ground floor plan It involves an emergency block accessible from a separate entry towards the north. All the administrative spaces are planned near the OPD block and pharmacy. Moreover, the diagnostics department and blood bank are positioned mid-way between the emergency and OPD departments.

Spaces and ramps have been planned around the central courtyards. Vertical circulation cores have been provided within an appropriate range.

Figure 4: View of internal courtyard to improve livability and well-being of patients

Figure 5: Ground floor plan

First floor plan

It involves the OT complex, Gynaecology/Obstetrics department and Intensive care services which are planned according to the functionality of space, keeping in mind the circulation of patients, doctors, staff and others.

Figure 6: First floor plan

Second floor plan

Intermediate Care area consists of single and double-bedded rooms positioned within reach of nurse stations and is planned according to the functionality of space, keeping in mind the comfort of patients. Moreover, the green terrace is also planned to cure patients by nature's healing.

Figure 7: Second floor plan

Basement plan

Separate entry/exit has been provided for service vehicles due to the presence of service and utility areas such as CSSD, mortuary, laundry, dietary and stores. Public entry/exit has been provided for basement parking.

Figure 8: First basement plan

Elevations & Sections-

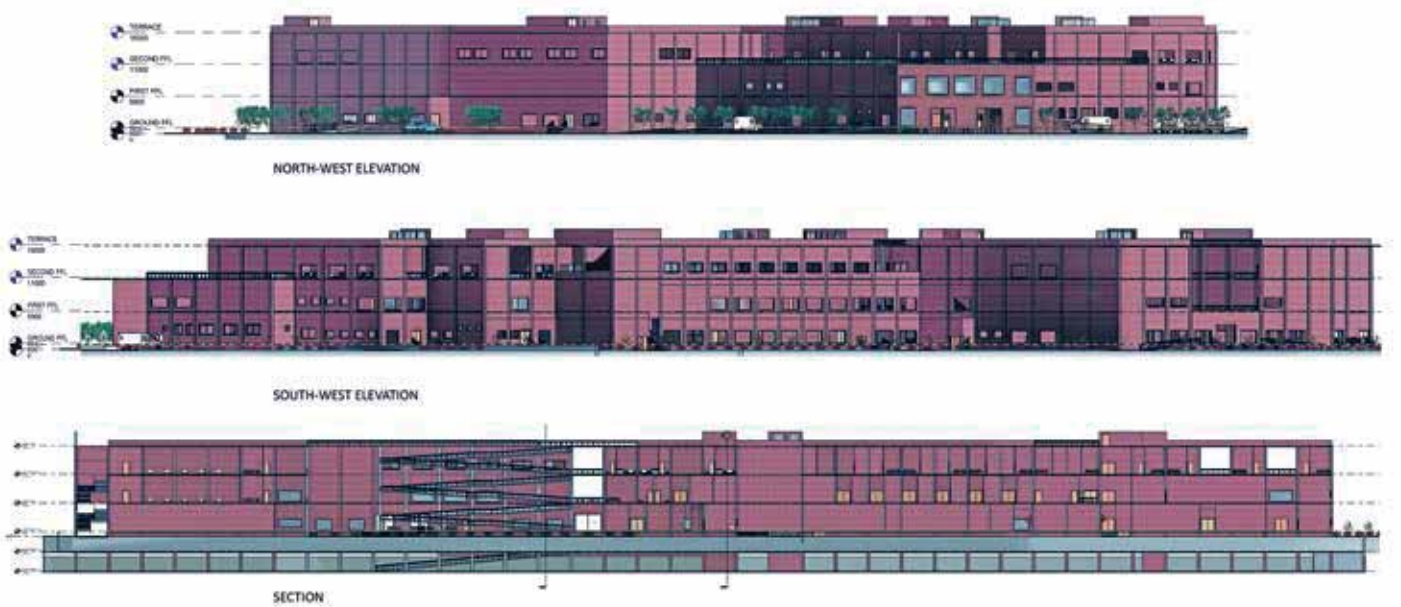

Figure 9: Elevations and Sections

Conclusion

This design approach optimizes spatial efficiency while offering numerous benefits, including enhanced patient experience, improved natural light, energy conservation due to reduced heat gains during harsh summer season and ventilation, increased green space for relaxation and healing and better connectivity between different departments.

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All images courtesy: Author

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The Acceptance of Uncertainty:
An Architectural Practice of Drawing

By Ar. Reshma Mary Mathew and Ar. Lijo John Mathew

"This is a search in the obscurity and darkness of uncertainty, in which a subjective certainty is gradually achieved through the laborious process of the search itself."

Juhani Pallasmaa

Introduction

The above-written excerpt is from Juhani Pallasmaa's book, "The Thinking Hand: Existential and Embodied Wisdom in Architecture" in which he beautifully articulates the value of hesitation and one's acceptance of the unknown in a creative endeavour. Pallasmaa (2015) writes that the implication of 'risk' in a creative state is the uncertainty of advancing on untrodden paths, "a condition of haptic immersion where the hand explores, searches and touches semi-independently". He further evidences this hypothesis with the works of architects like Reima Pietilä, Alvar Aalto, Renzo Piano and so on and puts forth a question on the primacy of the drawing. One must wonder if the drawing comes first or the idea does or if the idea or image is slowly revealed in a non-linear process of drawing. He quotes Reima Pietilä and his metaphorical comparison of the architectural process with that of hunting and fishing— "you cannot be certain what you are going to catch or if you will catch anything at all." Similarly, in Alvar Aalto's design philosophy, "a focused consciousness needs to be momentarily relaxed and replaced by an embodied and unconscious mode of mental scanning." In all of the above-mentioned architects' works, what stands apart is the seminal role of the absent-minded hand and its seemingly unconscious and aimless act of play in sketching. But Pallasmaa believes that drawing, far from being an aimless activity, is a deeply engaged and embodied exercise of thinking through making that gives rise to the image or the idea. He equates the 'craft' of architecture that is most often synonymous with the process of building, with the creative labour of thinking:

"Creative thinking is work, labour, in the proper meaning of the word, rather than merely an unexpected and effortless flash of insight…work is usually a sweaty and messy business. I personally like to see the traces, stains and dirt of my work, the layering of erased lines, errors and failures, the repeated retracings on the drawings, and the collage of corrections, additions, and eliminations on the page that I am writing, for as long as I am developing an idea." (Pallasmaa, 2015)

This element of undecidedness, a search in the obscurity of one's thoughts and their visual translation into lines, geometries and graphical renderings is the true "work" of architecture. Architecture is not always the search for rational and logical solutions to problems but a means to reveal feelings of the inner mental state, recording of the external world and to evoke human experiential and existential values. Pallasmaa believes that a sincere architect rather than finding solutions must strive to accumulate uncertainties in order to continuously spark one's curiosity and achieve more than anticipated from any design process. Such an exercise, he claims, is an embodied and tactile journey. It is a journey that does not culminate with the act of building and the built is simply the subjective clarity arrived at a moment, ephemeral and temporal at best – a moment in space and time. The idea far outlives the building and is perpetual in nature.

Figure 1: The Continuous Monument: New York, project 1969
Source: Superstudio, Gian Piero Frassinelli, Alessandro Magris, Roberto Magris, Adolfo Natalini, Cristiano Toraldo di Francia, Alessandro Poli

The Architectural Labour

Perhaps this notion is better described with the oeuvre of the Italian Radical Architecture collective, Superstudio, and their infamous 'refusal to work and participate in architectural design' (Elfine, 2016). At a time when the International Movement was still at its peak, Superstudio attempted to claim some form of creative autonomy and sovereignty by seceding from architectural production. One of the most polemical statements put forth by Adolfo Natalini, founder of Superstudio, at London's Architectural Association in 1971 was as follows:

"If design is merely an inducement to consume, then we must reject design; if architecture is merely the codifying of the bourgeois models of ownership and society, then we must reject architecture; if architecture and town planning [are] merely the formalization of present unjust social divisions, then we must reject town planning and its cities [...] until all design activities are aimed towards meeting primary needs. Until then, design must disappear. **We can live without architecture**." (Ross K. Elfline, 2016)

However, for anyone familiar with Superstudio's contributions to the architectural discourse, it is evident that "they did not attempt an exodus from architecture and design but specifically from the act of building". They abstained from building their proposed edifices (which were, more often than not, of impractically monumental proportions) and instead, directed their work into subverted, ideological pursuits (Elfine, 2016). Architectural production took on the meaning of problem-finding rather than problem-solving. They simply replaced the assumed output of an architectural pursuit with other products and left us with a plethora of drawings, images, objects, films, magazine spreads, and museum exhibition displays that provoke modern sensibilities and remain just as relevant today as when they were envisioned. Superstudio's work managed to question the systems of knowledge that help us understand the organisation of the world around us. The rebelliously leftist orientations of Superstudio's philosophy that coincided with Italy's leftist movement and their shared goals with Italy's factory workers withholding their labour remained steadfast in their practice. Architectural historians and theorists even speculate the timeless and visionary nature of Superstudio's work and how they seemed to almost predict the condition and eventualities of the contemporary world. For what is the Continuous Monument if not a metaphor for an infinitely and endlessly connected universal, generic world of the internet that we inhabit today?

Heavily criticised during its time, Superstudio's work was often reduced to a pointless, romantic, and naive provocation, going so far as to even question the validity of attaching the moniker of 'architect' to someone who does not engage in the assumed architectural production synonymous only

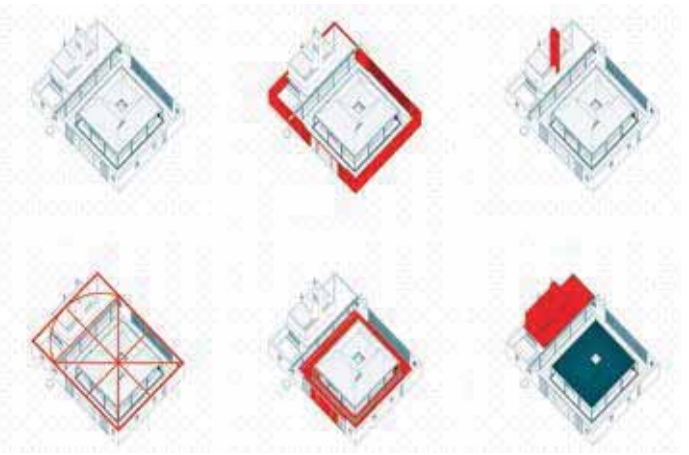

Figure 2: Geometric study and spatial systems of Kappi Madom, 2018
Source: Author

with building. It makes us wonder, what counts as architectural labour? Is it the act of building or the built idea that truly defines architectural practice?

There is a beautiful line in the book, "The Built Idea" by Alberto Campo Baeza:

"Without ideas, architecture is empty, vain: Architectura sine idea, vana architectura est." (Baeza, 2017)

Baeza goes on to articulate that “architecture, above and beyond the forms in which it appears before us, is an idea expressed by these forms…it is the built idea. Forms are destroyed over time, but ideas remain and are eternal.” Baeza presents another definition of architectural ‘labour’ and equates it with the architect’s research: the conversion of information gathered and thoughts into thinking which has its measures and dimensions. According to Baeza, the architect’s “intuition, a part of every creative act, is not blind, dim or diffuse. It is the accurate distillation of profound knowledge.” Architectural drawings are only as old as the Renaissance era, which probably marks a shift in architectural practice. The practice of architecture transformed from the time of master craftsmen and sculptors and masons erecting buildings and proving ingenuity not just in imagining monumental edifices but also engineering the building construction techniques to make it possible. It moved on to a realm of expressing ideas, thoughts, and imaginations in the form of drawing which proved to be a craft of equal prominence and transformational qualities. For now, drawings could communicate not just static ideas but varying perceptions, nuances and interpretations of thought. Architectural history expanded from just the history of built forms to a history of ideas, some built and some unbuilt, but equally provoking thought and criticality worldwide.

‘Now This is Lost’: The Relentless Presence of Absence

Our method of drawing at Cochin Creative Collective is developed in this premise, often residing in the realm of not knowing, a utopian paradise where objects, spaces, and places are irrevocably interchangeable. We believe that the true form of architectural practice is not one of absolutes but that of an endless search for the unknown. We believe that the built form is but one momentary reality of an idea and that the idea continues to live on and inform our thought. For this reason, we find it equally validating to practice our craft through the medium

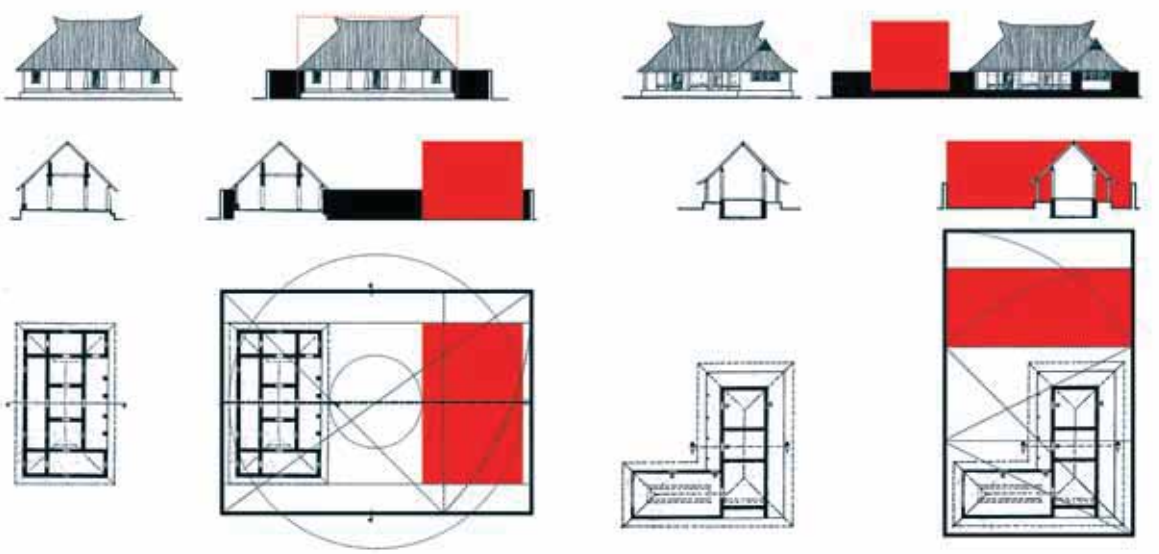

Figure 3: Geometric study of Traditional built forms of Kerala, 2018
Source: Author

of drawing. The unbuilt ideas are ever-present in an imaginary metaphysical plane; frequently re-emerging in other projects in different forms and functions. Recurring elements and ideas emerge episodically and find new meanings. From the idea of a hearth to a viewing tower, from monolithic domes to seemingly infinite colonnades.

It all started with the conception of our practice and our first and most pivotal project – the 150-year-old *Kappi Madom*, a typical agrarian Brahmin dwelling situated along the bank of the Meenachil river in Ayemanam, Kerala. Built in the traditional spatial code of the "naalukettu", this house built in 1868 was a building type commonplace in Kerala and largely prevalent until the mid-1900s among the upper echelons of society. A fitting project that brought together new world aspirations on an old world order, it had been passed down to its fourth-generation inheritors who wanted it repurposed to support their modern lifestyle and aesthetic sensibilities. To establish simultaneous validity of the past and the present, preserve the cultural nostalgia and spatial experience of the *Kappi Madom*, we kept the geometric sanctity of the core and the original structure intact and struck a formal balance between the old and the new with the introduction of architectural elements such as walls and towers. Although received with great passion, the idea never took form and after a painstaking year of drawings and conservation work on site, *Kappi Madom* was demolished to be replaced by a concrete structure. We withdrew from the project in the only form of protest entitled to us. The project and the old structure are now lost, yet its loss was trying to materialize through other means.

The absence of *Kappi Madom* slowly insinuated the melancholy of its lost architecture; both the old and the new, in various forms of drawings, artwork, and graphical renderings. We developed a typological method of studying and drawing, a set of spatial guidelines and principles of order that manifest in our projects as logical conclusions and continue to inform our design process. By drawing an analogy to Aldo Rossi's 1967 engraving "Now this is lost", also known for his melancholic stance towards architecture, *Kappi Madom* now moved to its afterlife and began to inform our thinking and drawing. Its next apparition was in the form of an artwork created in the stark, mute, melancholic, metaphysical painting style of Italian artist Giorgio De Chirico whose work influenced Aldo Rossi.

Inspired by Rossi's revival of Quatremère de Quincy's theory of typology, we developed abstract ideas and

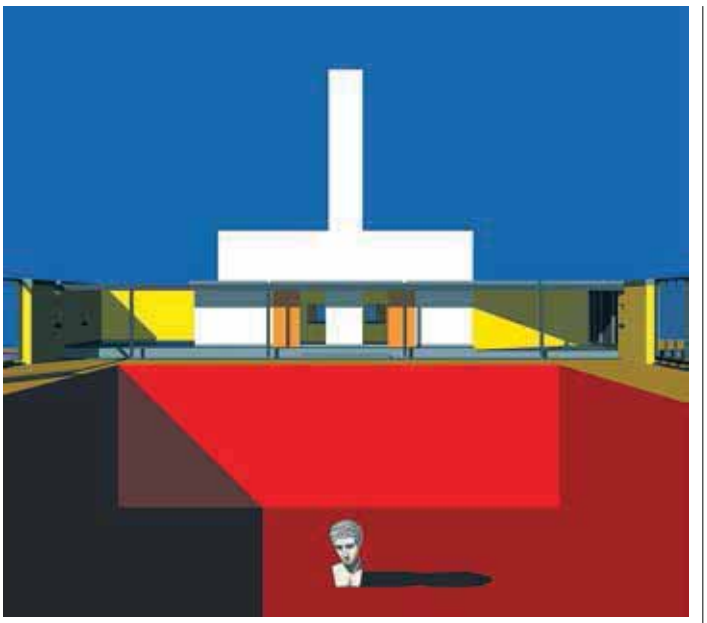

Figure 4: 'Now this is lost' Kappi Madom 1868 - 2018, 2018
Source: Author

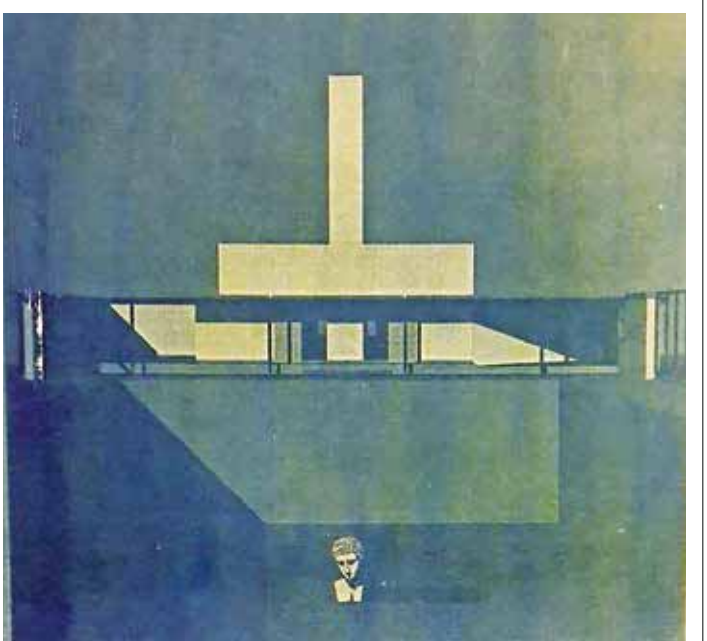

Figure 5: Experiments on cyanotype, 2020
Source: Author

types, which when taking form in architecture are not similar to each other yet make their presence felt in different projects as constants. In this way, the absence of drawn projects began to exert their existence in the present. Recurring architectural forms that emerged in consecutive projects upon their demise are juxtaposed on the metaphysical plane of the 1868 house. Architecture is then released from the burden of its context, past and to be scrutinised as pure objects, offering an unbiased analysis of its geometrical sanctity. These objects as follies recall moments spanning seven years (2016-2023) and provide evidence for a persistent study of order and formal logic.

The one fundamental truth of our practice can be summarised in these words:

Nothing that has once existed is ever lost because the past is partly experienced in the present.

Fields of Muziris: Memories, Myths, and Traces

Drawing may be relatively new to architectural practice but cartography is probably one of the earliest forms of drawings. Historians have recorded obscure and rudimentary primitive maps even before cartography emerged as a discipline. Maps may be a record of places frozen in time and place but they are also an ingenious method of narrating multiple versions of a story.

"The city does not tell its past, but contains it like the lines of a hand, written in the corners of the street, the gratings of the windows, the banisters of the steps, the antennae of the lightning rods, the poles of the flags, every segment marked in turn with scratches, indentations, scrolls." (Calvino, 2010, p. 11)

In Italo Calvino's hugely popular work, Invisible Cities, Polo is reluctant to describe Venice simply as Venice. It is left to the reader to interpret whether every city could be told about through the city of Venice or whether it is Venice itself that is narrated through indirect, abstracted, layered episodes. There is completeness in each episode and yet connections are extended to other aspects of the whole story. Each episode is described in terms of myriad relationships of various tangible and intangible elements of the city-emotion, feelings and thoughts are described using the tangibles. In other words, the author assumes a structuralist description for the definition of the non-object using the object and vice-versa:

"Memory's images, once they are fixed in words, are erased," Polo said. "Perhaps I'm afraid of losing Venice all at once, if I speak of it. Or perhaps speaking of other cities I have already lost it, little by little." (Calvino, 2010, p. 11)

The book is but a suggestion that a city consists, not of one rationalised reading, but of various imprints within itself and that it carries simultaneously, over time, space and lived experience. It is like a vessel that encompasses the sum total of its past, history, culture, and social space. Hence, the way a city is represented, be it in books or film or in cartography, carries multiple agencies of representation and the sum total of the city is never one singular totalising drawing of it. The city can be read differently each time the viewer is interchanged.

The inspiration for *Fields of Muziris*, a series of map-based drawings comes from this notion – that truth is

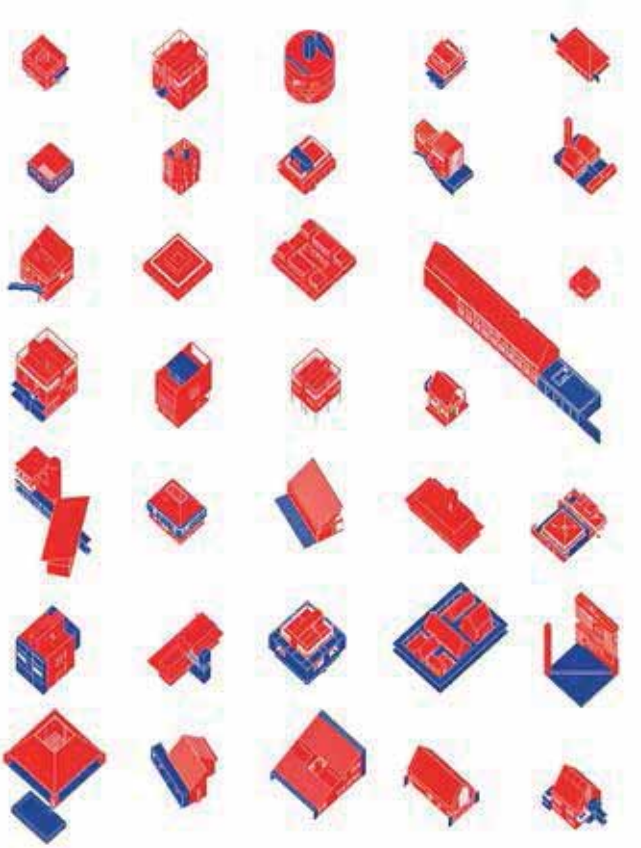

Figure 6: 'Follies', 2023
Source: Author

not always the whole story. It is plausibility that adds to the imagination. This series is a plausible[1] project on the lost landscapes of Muziris[2], the city of black gold. Fluctuating between truth, interpretation, and fabrication, this project explores the multiple mysteries hidden in this place using the imaginative and dynamic lens of traces for studying the flux of its open terrain and its 'ongoing past'. The idea of traces is inspired by the work of Jacques Derrida who went on to influence many modern practitioners of architecture of our time.

The fabled trade town Muziris, the supposed endpoint of the ancient Roman spice route and the first emporium of India[3], is a land that exists partially in history and myth. The stories that allude to this ancient port city lie in seemingly disparate fragments and are discontinuous in space and time. Excerpts from ancient trade accounts, classical literature, historical and archaeological records offer a challenging yet plausible means to piece together an image of erstwhile Muziris. However, the shape-shifting nature of this image has been rendered differently by various interest groups over time. It is continually distorted by academic, political, and cultural appropriation, leaving no opportunity to discuss a complete picture from a unified, neutral ground. Perhaps all historic places can be subjected

Figure 7: Now this is lost, ongoing series, 2023
Source: Author

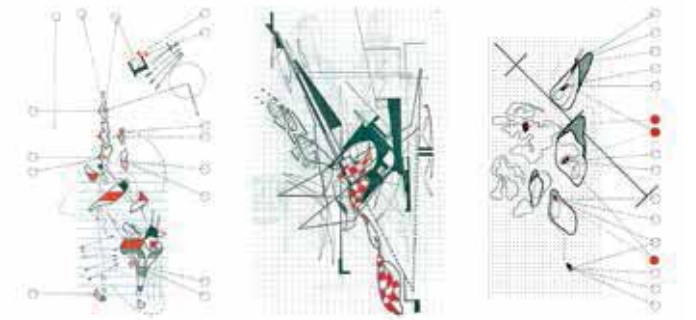

Figure 8: Fields of Muziris, ongoing drawing series, 2015 - 2024
Source: Author

to such an inquiry. But Muziris offers a particularly exciting opportunity because its history remains behind the scene - hidden under the everyday and the ordinary, unpunctuated by monuments.

The project is a deeply personal exploration of Muziris, probing into the hidden layers of "intangibles"- beliefs, social phenomena, aspirations, cultural exchanges, conflicts, contradictions, distortions, and memory that impart the fullness of the character of a city. It is by accepting that the fragments of a city exist beyond its material remains, that they can be found in other traces left by the functioning of the previous societies and the ones that continue to inhabit it. Through this, we attempt to discover a way to regard history from a distance, taking a dispassionate position and yet using personal sentiment to understand the interconnectedness of everything. Space can then be regarded as a temporal-spatial tool to practice the remembering of lost land and to elaborate an imagined landscape- one that connects multiple facets of a story. Modes of mapping will open up more perspectives, neither authoritarian nor mere documentation. The representability of memory is challenged through graphical storytelling juxtaposing multiple narratives informed by time-space references, to raise relevant questions that concern the past, present and future. The composite drawing thus arrived at will be a narrative of fragments, decontextualized in an urban landscape; a relational mapping exercise exposing a dynamic collective memory.

Fields of Muziris presents an opportunity for exploring new methods of reconstructing the past and questioning the existing paradigms in archaeology and architecture through a speculative 'blankscape'. Clues in the present become an idiosyncratic vantage point in time.

Fictional Narratives

In an attempt to move away from hyperrealistic renderings, which often become obstacles in the creative process, we continue our investigations in visual media and varied digital formats. Images run the risk of being the only physical imprint of a project. Therefore, the role of the drawing to make one's gaze more receptive to distant, multifarious environments is confronted. From chiaroscuro to oblique projections, the architecture is in constant dialogue between its intended context and imagined atmospheres. We found resonances of this ideology in Tatiana Bilbao's philosophy of collaging, sharing, and the collective. She believes that collaging not only accepts mistakes, multiplicities and possibilities but also allows the mind to evolve through the process. She rejects the use of imperialistic images or photorealistic renderings of projects and instead uses collages as a way to accumulate varying thoughts, ideas, and contributions of all participants in the design process, including the clients. The collection of drawings we have presented here spans projects, years, and contexts but stays alive in our day-to-day rigour of thinking through drawing. We experiment with different media and printing techniques like blueprints, acrylic on canvas, hand-done drawings, and computer-aided drawings.

Through a process of collage-making, actors, landscapes, and mythical beings are transported from a restrained reality to the imagined uncanny of another fictional world. Sometimes, projects are conceived in such a moment and at other times, get steered onto newer paths. The true craft of our architectural practice is this method of opening up innumerable opportunities for every project, every drawing.

Conclusion

The cornerstone of our practice is based on rejecting the search for absolute truth in architecture but instead practicing our craft through the pursuit of

Figure 9: Fields of Muziris, as exhibited at Kerala Lalithakala Academy Annual Exhibition, 2023
Source: Author

ever-growing and infinite questions, speculations, and visualisations. The rigour, discipline and craft of architecture are exercised not only through the act of building in real time and space but reimagining the project in numerous ways on a metaphysical plane. As Alberto Campo Baeza states:

"The form of built architecture has a universal quality that needs no translation, requires no more explanation than its existence. While architecture is conveyed by the universality of the built work, the logic from which it originates and later develops is all too often hidden, concealed." (Baeza et al., 2017)

It is this "hidden" knowledge that we seek; constantly, diligently.

Notes:

1. Plausible/ˈplɔːzɪb(ə)l/ adjective (of an argument or statement) seeming reasonable or probable.
   "a plausible explanation"
2. Muziris was an ancient seaport and urban centre on the Malabar Coast (modern-day Indian state of Kerala) that dates from at least the 1st century BC
3. Pliny the Elder (1st century AD) refers to Muziris in his natural history as 'Premium Emporium Indiae' or India's first emporium

Figure 10: Series of projects Built and Unbuilt, 2017 - 2024
Source: Author

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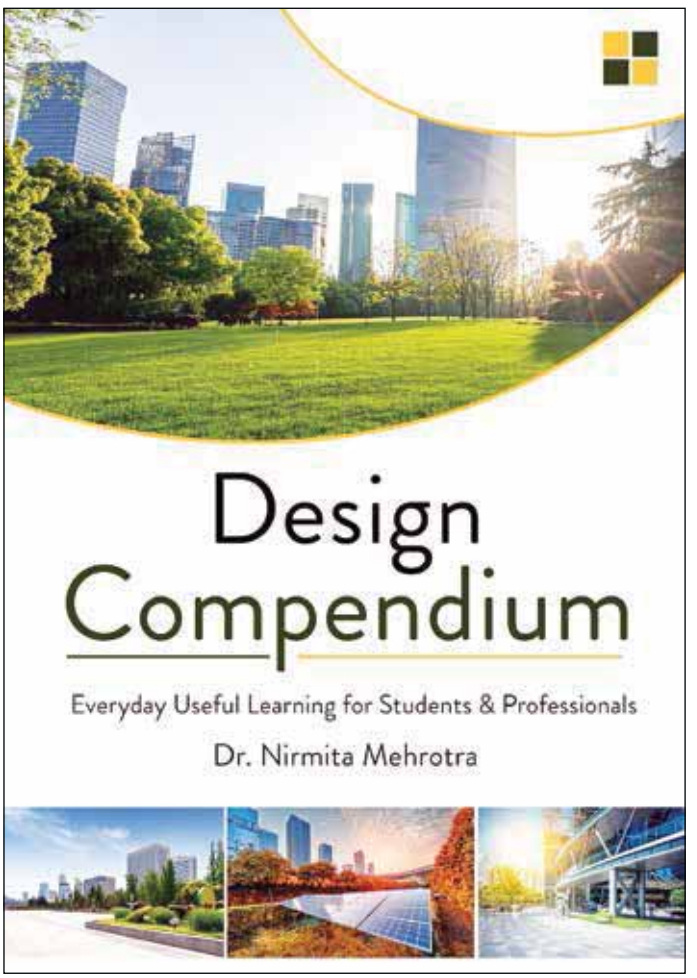
Design Compendium:

Everyday Useful Learning for Students and Professionals

Author: Dr. Nirmita Mehrotra
Reviewer: Ar. Ved Prakash Mittal



Design Compendium: book cover
Source: Author

ISBN : 978-1-63640-869-9
Genre : Research
Language : English
No. of Pages : 243
Publisher : White Falcon Publishing
Year of Publication : 2023

Design Compendium is a collection of technical articles containing design guidelines for natural serenity, environmental sustainability, safety and security in the built environment. These are the updated versions of articles published in 'Times of India' from 2006–2010. The author, being an educationist, has dwelled in areas where students and professionals often miss the essential connection between theory and practice. In this book, subjects are comprehensively covered to generate an aura of blissful learning and enrichment.

The book is planned in five sections. Section one has eight sub-sections describing reconciliation with nature. We are in the stage of reconciliation, i.e., seeking remedies and repairing relationships with nature, after deep conflict and degradation. The section begins with eco-friendly design strategies, natural textures and materials, selection of natural materials, defining edges, planning with indigenous plants, medicinal plants and other added values of nature. The sub-section 'Let Building Breathe' brings forth essential and most basic design strategies to ensure ventilation in buildings and also explains concepts of net-zero buildings, green buildings, carbon-neutral buildings and different institutions whose guidelines and codes are available for rating and certifications.

Section two deliberates about interior spaces, particularly the design strategies of using light and colours and their ability to add special values to the spaces. It has seven sub-sections, two of which elaborate on colour selection, implementation, new trends and the psycho-social impacts of colours in interiors. Sub-sections three and four are on strategies and basic codes for illumination, energy

efficient lighting systems with the use of daylight, task lights and techniques for upgrading. It also covers techniques for maximising daylight usage and their addition as a design feature. Topics on understanding multipurpose windows for energy optimisation and aesthetics simply connect the readers to the ambient richness of design platters for young budding architects; making the book a ready reckoner for reference. The last sub-section compares the traditional usage of Plaster of Paris with modern techniques of geodes and resin art decor.

Section three deliberates on the safety and security of the built environment and it has seven sub-sections. This section decodes fire safety code-based design strategies, compartmentalization, prescriptive and performance based design guidelines, evacuation planning and the design of escape routes. It aids in learning building codes for fire safety in an easier way. 'Defacto Defects' contain defects generated in the built environment through errors at the design stage, the implementation stage and the absence of adequate maintenance. Everyday useful guidelines cover the life cycle stages of buildings, which are useful for saving on long-term expenses.

Section four dwells on architectural design features that make a building resistant to seismic forces. These are based on the mechanisms of building failure and can also be applied sensitively to the strengthening of existing buildings. This connects to the principles of seismic-resistant design and its elements, seismic codes and techniques of retrofitting to upgrade the seismic strength of old and heritage buildings. Details of the building configuration and check list for the foundation, superstructure, and interiors cover the subject in a crisp and precise manner.

Section five relates to professional practice, namely green building institutions, standards of property valuation and transformation-based conservation of 'Urban Historic Fabrics'. In all, the compendium comprehensively covers wide arrays of subjects based on architectural curriculum.

This book is the outcome of twenty years' exhaustive research on different aspects of building design to harmonise with nature, green building design and technical strategies, new materials like GFRC, resin geode art, daylight harvesting, safety in extreme weather events, seismic and fire safety, crowd management and heritage revival. It was released by senior architects Ar. Ashok Goel, Ar. Anupam Mittal and Ar. Jagesh Kumar at an annual event of the UP Architects Association 'Sthapatya Shilp Smagam' at Varanasi on September 10, 2023, amid an august gathering of architects. Published by White Falcon Publishing, Chandigarh; its foreword has been written by a well-known architect and Past President of IIA, Ar. C.R. Raju and message by Prof. R.K. Sinha, Vice Chancellor, Gautam Buddha University.

Design Compendium is recommended as an essential read for students, practitioners, faculty members, researchers, enthusiasts, newcomers, and veterans in the field, as well as for those who cherish the dream of joining the fraternity.

Author

Dr. Nirmita Mehrotra (A11636) is an academician, practitioner, urban scientist, author and resilience expert. She has won many prestigious awards, including the National Award (ISTE-GSITS) for her research work. In thirty years of her professional and academic experience, she has designed public buildings across India and provided consultation for town planning projects. She is also a member of the Executive Council of the Indian Institute of Architects, UP Chapter (2023–2025).
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Reviewer

Ar. Ved Prakash Mittal (F1850) is an alumini of IIT Roorkee. He served as Chief Architect and Town Planner at GDA Ghaziabad from 1993–2003 and as Lecturer at Aligarh Muslim University from 1967 to 1979. He has been a consultant to UNDP since 2007 for the Techno Legal Regime for safety against natural hazards and given suggestive amendments to town planning during his tenure. He is a member of many prestigious national and international professional bodies.
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EVENT REPORT

IPA SUMMIT 2024

Confluence of Architect and Plumbing Fraternity

Sustainable Architecture to Build a Resilient Bharat Summit 2024 was organised by the Indian Plumbing Association (IPA) in collaboration with the Council of Architecture (CoA) and The Indian Institute of Architects (IIA) on 24 February 2024 at Hotel Sahara Star in Mumbai. The event served as a unique platform where leading professionals from the architectural community converged to address the imperative cause of building a sustainable Bharat. Prof. Abhay Vinayak Purohit, President of the Council of Architecture, was the Chief Guest and Ar. Vilas Vasant Avachat, President of The Indian Institute of Architects, presided as the Guest of Honour. Large presence of Architects added prestige to the event, emphasising the significance of collaboration between architectural and plumbing domains in fostering Sustainability.

The focus of the first panel discussion was *Sustainable Architecture to Build a Resilient Bharat*. Prominent individuals including Ar. Vilas Vasant Avachat (President, IIA), Ar. Atul Shah (Founder, Access Architects), Dr. Roshni Udyavar Yehuda (CEO, RUA Ecospaces LLP), Ar. Rahul Mehta (Founder and Principal, Rahul Mehta Architects), and Prof. Vinit Mirkar (Principal, IES College of Architecture) were the panelists. The topics of discussion covered cutting-edge architectural techniques to incorporating sustainability into designs.

The second panel discussion on *Humanising High Density: People, Nature, and Urban Spaces* included panelists, Prof. Abhay Vinayak Purohit (President, CoA), Ar. Saurabh Chatterjee (CEO and Founder-Skyline Architects), Ar. Milind Sambhare (Principal Architect, G. D. Sambhare & Co.), Ar. Abhay Bhonsale (Partner, Ingrain Architects), Mr. Dilip Sonwane (Water, Urban Infra Advisor), and Mr. Minesh Shah (Chairman, IPA Ahmedabad Chapter). They examined the complex interplay among human experiences, nature and urban spaces in high-density settings.

The cooperation atmosphere between the plumbing and architectural sectors was successfully promoted by this edition of the IPA Summit.

WESTERN REGION CONFERENCE & MAHACON '24

A Grand Architectural Extravaganza

Hosted by IIA Akola Centre

Mahacon '24, a grand event organized by IIA Maharashtra Chapter and proudly hosted by the IIA Akola Centre on 12 – 13 January 2024, emerged as a landmark gathering for architects, industry stakeholders, and enthusiasts a like. The theme, *Mirage: Imagination Creates Reality* added a layer of intrigue to the event, stimulating creativity and exploration. An Expo was also held parallel to the event. The Expo's inauguration marked the commencement of a feast for architectural aficionados. Stalls adorned with cutting-edge materials and technology became a nexus where stall owners and the construction industry converged, fostering fruitful interactions and partnerships that promised to shape the future of architecture. The inauguration of *Mahacon '24* unfolded with awe-inspiring spectacle and grandeur. The event's kick off showcased the collective spirit and commitment to excellence that defines the architectural community. It set the tone for a journey into the realms of innovation and imagination. The souvenir released during *Mahacon '24* was a testament to the brilliance of architecture. Laden with articles that delved into the intricacies of the field, it showcased remarkable works and acknowledged the sponsors whose invaluable support propelled the event to great heights.

Insightful Talks:

- The intellectual heartbeat of *Mahacon '24* was amplified by a stellar line-up of speakers, each a luminary in the field of architecture. The audience was treated to a symphony of insights and innovations as architects of unparalleled calibre took the stage.
- *Parul Zaveri* : The Oberoi Udaivilas in Udaipur stands as a perennial recipient of numerous international accolades, consistently earning over a hundred awards annually in the distinguished categories of best hotel and resort. Additionally, notable is the conservation effort devoted to Ranchhodlal Chhotalalni Haveli, situated within the inaugural UNESCO World Heritage Site of The Historic City of Ahmedabad.
- *Krishna Murthy* : delivered an insightful speech on *Methods of Digital Design & Fabrication*, offering profound insights into the contemporary approaches shaping the intersection of digital design and fabrication techniques. His presentation provided valuable perspectives on the evolving landscape of architectural technology.
- *Dean D'cruz* : *Mozaic* endeavors to offer comprehensive solutions to its clientele, delving into the possibilities of a symbiotic relationship between our clients and nature. We ardently promote sustainable practices within our design ethos, fostering a commitment to harmonious coexistence with the environment.
- *Pankaj Nande :* His discourse on *Parikrama* explored the essence that lies in the journey that starts from a single point and comes full circle, enriched with the experiences gathered. The theme underscores the importance of incorporating lessons learned along this cyclical path, embodying a holistic process of personal evolution and giving back to the society.
- *Kush Patel* : articulated the significance of establishing a manufacturing unit for modular furniture in his speech. Emphasising efficiency and customisation, he underscored how such units contribute to elevated design possibilities and streamlined production processes, fostering innovation and quality in the realm of furniture design.
- *Akshay Heranjal* gave insight into the studio committed to pushing the boundaries of

IIA Akola Centre's Enthusiastic Team

conventional thinking, meticulously deciphering unique briefs that authentically capture the spirit of their context and surroundings.

- *Jitendra Mehta* addressed the audience on the meticulous aspects of planning, designing, and executing projects of considerable scale and diverse complexities. His discourse underscored the importance of strategic approaches in navigating the challenges inherent in large-scale endeavours, highlighting the essence of thoughtful planning and effective execution for successful project outcomes.

Thesis Competition:

A platform for budding architects, the *Thesis Competition* was a highlight, attracting students from across Maharashtra. The competition not only recognised talent but also provided a stepping stone for the future architects to make their mark in the industry:

1st Winner – Tanvi Charde, SMMCA, Nagpur

2nd Winner – Madiha Raza, SMMCA, Nagpur

Art Installation Competition:

The *Art Installation Competition* blurred the lines between creativity and architecture. Students and established firms showcased their innovative prowess, creating installations that not only impressed the judges but also left an indelible mark on the event.

1st Winner – *Modupanels* by Vaishnavi Gaikwad, Dyanpeeth College of Architecture, Sambhaji Nagar.

2nd Winner – *Trapped* by Sharayu Patil & Group, Design Vision Studio, Akola

3rd Winner – *Paper Tree*, Vipin Kakade & Group, College of Engg. & Tech., Akola

Dignitaries:

The prestigious *Mahacon'24* witnessed the honourable presence of distinguished dignitaries, each a luminary in the realm of architecture. The event was graced by the esteemed Ar. Abhay Purohit, President of the Council of Architecture (COA), whose visionary leadership set the tone for the architectural landscape. Joining him was Ar. Jitendra Mehta,

Expo Inauguration

Unveiling of the Souvenir

Vice-President, IIA, a stalwart whose expertise and guidance are pivotal in shaping architectural discourse. The dynamic trio of Ar. Tushar Sogani, Ar. Sandeep Bawdekar and Ar. Sandeep Prabhu - serving as IIA Jr. Vice President, IIA Jt. Honorary Secretary and Maharashtra Chapter Chairman, respectively, brought a wealth of experience, leadership and strategic acumen to the event. The IIA Maharashtra Chapter Vice Chairman, Ar. Sunil Bhale and the IIA Akola Chapter's Convenor and Chairman, Ar. Kamlesh Kriplani and Ar. Sumit Agrawal, Convenor and Akola IP Chairman, added diverse perspectives, contributing to the event's success. Their collective presence highlighted *Mahacon '24* as a convergence point for architectural excellence, knowledge sharing and visionary leadership.

The sponsors, crucial pillars of support, were felicitated for their commendable contribution. Their partnership exemplified a shared commitment to the advancement of architecture.

Shri Swami Bricks Industries,Andura, Simpolo, Surfica, Jaquar, Everest

The festivities continued with a glamorous Gala Dinner and Sufi Night, where dignitaries, architects and their families gathered to unwind. World-class Sufi singers lent a melodic charm, transforming the night into an unforgettable celebration of camaraderie and shared passion. In a delightful nod to Makar Sankranti, a *Kite Carnival* added a vibrant and festive touch to *Mahacon '24.* Architects and attendees, united by the joy of the festival, engaged in a lively display of kites soaring against the backdrop of architectural marvels.

Renowned Speakers of Mahacon 24

Enjoyment during Gala Dinner

The choice of *The Grand Jalsa* as the event venue, sprawling over 15 acres, elevated *Mahacon '24* to unparalleled grandeur. The venue served as a fitting canvas for the artistic expressions and innovations that unfolded throughout the event.

IIA Akola Centre, as the proud host, dedicated over four months to meticulous preparation, ensuring that Mahacon'24 transcended expectations. Their dedication and attention to detail transformed the event into a seamless amalgamation of vision, creativity and execution. In conclusion, *Mahacon '24 n*ot only marked a significant milestone in the architectural calendar but also stood as a testament to the collective prowess and passion that defines the Indian architectural community. The event not only envisioned the future of architecture but also laid the foundation for a collaborative journey towards excellence.

Mahacon '24 stands as a remarkable triumph, hosting a distinguished gathering of over 500 architects, a substantial influx of students and numerous field experts. The meticulously orchestrated event showcased a seamless fusion of expertise and innovation, where every aspect reflected careful planning and unwavering effort. The palpable dedication invested in the event's organisation manifested in its flawless execution, leaving attendees in awe. The vibrant exchange of ideas, coupled with insightful discussions, underscored *Mahacon '24* not merely as a convention but as a platform where the architecture community converged to share knowledge, foster collaboration, and celebrate the achievements of the profession.

Flying High – Kite Carnival

This grand success resonates as a testament to the commitment and passion driving *Mahacon '24* to new heights in fostering dialogue and excellence within the architectural realm.

EVOLVE DESIGN Workshop

A Symphony of Creativity and Collaboration in Odisha's Architectural Landscape

The *Evolve Design* workshop was held on 3 – 4 February at the cultural hub of Kalabhoomi, organised by the IIA Odisha Chapter. The participants were over 150 students and professionals from various Odisha colleges. The guides were 25 esteemed architects from the state. It had interactive sessions and hands-on exercises through which the participants delved into architectural design and in the art and science of building.

One of the crowning jewels of *EVOLVE DESIGN* was the *Architecture and Music Fusion Workshop*. Ar. Anita Kulkarni, an architect-cum-dancer from the *El Dorado Group*, USA, demonstrated the seamless blend of the architectural principles with the rhythm of music.

At the helm of this journey was Ar. Swopnadutta Mohanty, the Chairperson of IIA Odisha Chapter along with the mentorship team comprising: Ar. Ratnamala Mishra, Ar. Tara Prasad Dhal, Ar. Debendra Parida, Ar. Sabyasachi Mohanty, Ar. Narayan Tripathy, Ar. Ruchiparna Jena, Ar. Subhakankhi Choudhury, Ar. Alok Ranjan Sahu, Ar. Minakshi Rath, Ar. Smruti Snigdha Sahani, Ar. Kirti Yogadarshini, Ar. Snehashis Tripathy, Ar. Swagat Jena, Ar. Debi Prasad Sahu, Ar. Namrata Prasad, Ar. Soumyajit Mishra, Ar. Anusuya Tripathy, Ar Yogesh Rekhani, Ar Bhakti Prasad Mohapatra, Ar Shiba Prasad Rath, Ar. Saumya Ranjan Behera and many others.

As the curtains drew to a close on *EVOLVE DESIGN*, it was not just the end of a workshop; it was the beginning of a new chapter in Odisha's architectural journey. The valedictory function was a celebration of talent, dedication, and passion, as top-performing groups were lauded, and mentors were honoured for their invaluable contributions.

Ar. Anita Kulkarni explaining the relativity of music and dance with principles of design at Kalabhoomi, Bhubaneswar.

EVENT REPORT

IIAPL 13
IIA Maharashtra Chapter
Chhatrapati Sambhavi Nagar Centre
31 January to 3 February 2024

The Indian Institute of Architects Premier League (IIAPL) is a national flagship event of IIA held every year. This is an inter-chapter sports event that includes Cricket, Badminton and Table Tennis tournaments. This 13th edition was organised by the IIA Maharashtra Chapter at Chh. Sambhajinagar centre from 31 Jan to 3 Feb 2024. During the past 12 years, there have been several innovative events and programs of sports and culture conducted by the IIA for architects across the country. Previous editions of IIAPLs have been held at Cochin, Hubali, Indore, Guwahati, Ahmedabad, Bhopal, Bangalore, Kolhapur and Chennai. Chh. Sambhajinagar is the fifth most populous urban area in Maharashtra after Mumbai, Pune, Nagpur and Nasik. It is well-known for the 17th century marvel Bibi ka Maqbara shrine, styled on the Taj Mahal, Shivaji Maharaj Museum, dedicated to the Maratha king Shivaji, which displays war weapons and a coin collection. North of the city, the Ajanta and Ellora Caves and Kailasa Temple comprise ancient, rock-cut Buddhist shrines. West of the city, battlements surround the medieval Daulatabad Fort.

Haroli, the state bird of Maharashtra was the Mascot for 13th IIAPL 2024. The yellow-footed green pigeon is a symbol of peace and perfectly embodies the spirit of IIAPL 13, where our mission was executed with unwavering commitment, peaceful resolve and boundless enthusiasm. This mascot was inaugurated at the hands of the apex member of the Maharashtra Cricket Association, Mr. Sachin Muley on 31st October 2023. The event posters of IIAPL were displayed at all major locations of the city. Print and electronic media

Inauguration

Cultural performance

gave good coverage for the event. It helped in building the image of IIA in the city. The stay arrangements for all players were done at Hotels VIITS and Ginger. An ample number of tempo travelers and cars were arranged for the player's transportation.

Inauguration: 31 January 2024

The 13th IIAPL 2024 was inaugurated at the hands of former Indian cricketer, Mr. Iqbal Siddiqui. National Sports and Cultural Committee chairman and Jr. Vice President, Ar. Jitendra Mehta, Maharashtra chapter chairman Ar. Sandeep Prabhu, Convener Ar. Sunil Bhale and Maharashtra Sports Committee Chairman Ar. Sanjay Pathe and IIA Sambhajinagar Centre Chairman, Ar. Shyam Shelar. The event started with *Ganesh Vandana* performed by students of Katthak teacher Mrs. Parvati Dutta followed by a Yoga presentation by the students. 18 team captains march past holding the team flag. National gymnastics player and Shivchatrapati awardee Ar. Sarvesh Bhale lit the torch. Ar. Sunil Bhale offered the oath of sportsmanship to all 18 captains. The event concluded with the unveiling of the trophies by the dignitaries and fireworks. Around 400 architects from all over India enjoyed the event.

Day 1: 1 February 2024

A special silver coin was designed for the toss of the cricket match. The coin was introduced in the captain's meeting by the hands of the National Sports and Cultural Committee chairman and Jr. Vice President, Ar. Jitendra Mehta. The coin was gifted to toss winning captain as a token of love. This was well appreciated by all the players.

Day one started with Cricket matches on 4 different grounds and indoor matches at the Divisional Sports Complex, Chh. Sambhajinagar. The cricket match consisted of 10 overs and each cricket team played two matches in a day. The team events consisting best of 7 matches were played in indoor sports on the first day.

The theme for the evening was cultural. All players came dressed in their traditional attire. The group presented Maharashtra culture through songs and dances. The dinner of exclusive Maharashtra cuisine was well appreciated by architects who had come from all over the country.

Day 2: 2 February 2024

Cricket matches were played till the quarter-finals.

Architects are a good sport!

Ar. Sunil Bhale leads the way

Work or play, we are invincible!

Team Maharashtra Legions Red, Sher-E-Punjab, Gujarat Gladiators and M.P. Tigers qualified for the semifinals. In indoor sports, Team Maharashtra Legions Red and Team M.P. Tigers qualified for finals in Badminton and Team Maharashtra Legions Red and Team Karnataka Kings qualified for the finals in Table Tennis.

The theme for the evening was smart casuals. Famous Bollywood singer Munavar Ali's concert rocked the evening. The players danced on the beats despite the pain/ injury incurred during the game. The dance acted as a therapy for players.

Day 3: 3 February 2024 - The Finals . . .

Cricket: The 1st semifinal was played between M.P. Tigers and Gujarat Gladiators. This was won by M.P. Tigers won. The 2nd semifinal was played between Team Maharashtra Legions Red and Sher-E-Punjab which Maharashtra Red won. In the Finals, Team Maharashtra Legions Red beat Team M.P. Tigers by 25 runs in a close encounter. An exhibition women's cricket match was played in which female architects from all chapters participated.

Results:

1. Maharashtra Legions Red

Table tennis players

2. M.P. Tigers
3. Sher-E-Punjab
4. Gujarat Gladiators
5. Kerala Tuskers
6. Karnataka Kings
7. Royal Rajasthan Riders
8. Deccan Chargers
9. Maharashtra Blue
10. U.P. Supergiants
11. Chattisgadh bulls
12. Team I.I.A.
13. Hengdang Heroes
14. Tamil Nadu Bulls
15. Kalinga Warriors
16. Andhra Falcons
17. Zhartribes
18. Bihar Bulls

Player of the Tournament: *Ar. Hitesh Gujar* (Maharashtra Legions Red)

Best Batsman: (1) *Ar. Hitesh Gujar* (Maharashtra Legions Red) (2) *Ar. Rohan Gajjar* (M.P. Tigers)

Best Bowler: *Ar. Sareen* (Sher-E-Punjab)

Best Fielder: *Ar. Piyush Duggad* (Maharashtra Legions Red)

Best Wicket Keeper: *Ar. Jitu Sharma* (Royal Rajasthan Riders)

Fair Play Award: *Kalinga Warriors*

Emerging Player: *Abhijit Sharma* (M.P. Tigers)

Indoor Sports

- ***Badminton***

Results:

- ***Table Tennis***

Results:

Badminton players

Event Name	Winner	Runner Up
I) Team Event	Maharashtra Red	Madhya Pradesh
II) Individual Events		
Men's Singles below 40	Ramees - Team Kerala	Satyajeet - Team Maharashtra
Men's Singles 40+	Sandeep - Team Karnataka	Rajiv Team - Madhya Pradesh
Men's Singles 50+	Aakash - Team Rajasthan	Laxmikant - Team Maharashtra
Women's Singles	Aishwarya - Team Maharashtra	Sanyukta - Team Maharashtra
Men's doubles 40 and 50+	Deepak and Omkar - Team Maharashtra	Laxmikant and Satyajit - Team Maharashtra
Men's Doubles 40+	Sandeep and Vinayak - Team Karnataka	Rajiv and Himanshu - Team Madhya Pradesh
Mixed Doubles	Aishwarya and Omkar - Team Maharashtra	Sanyukta and Satyajeet - Team Maharashtra
Women's Doubles	Aishwarya and Sanyukta - Team Maharashtra	Snehal and Nehal - Team Madhya Pradesh

Event Name	Winner	Runner Up
I) Team Event	Team Karnataka	Maharashtra Red
II) Individual Events		
Men's Singles below 40	Akshay - Team Karnataka	Sabyasachi - Team Odisha
Men's Singles 40+	Neelkantha - Team Gujarat	Upendra - Team Maharashtra Red
Men's Singles 50+	Manish - Team Rajasthan	Mahendra - Team Gujarat
Men's open doubles	Upendra and Abhijit - Team Maharashtra	Ashok and Surya - Team Telangana
Mixed Doubles Open	Akshay and Maitrayee - Team Karnataka	Upendra and Shilpa - Team Maharashtra Red
Ladies Singles	Maitrayee - Team Karnataka	Stuti - Team Karnataka
Ladies Doubles	Stuti and Maitrayee - Team Karnataka	Snehal and Nehal - Team Madhya Pradesh

Award Function

A grand award function of the 13th IIAPL 2024 was planned. IIA National President Ar. Vilas Avachat was the Guest of Honour; Ar. Jitendra Mehta, Jr. Vice President and Chairman, National Sports and Cultural Committee; Ar. Sandeep Bawdekar, National Jt. Hon. Secretary; Ar. Sandeep Prabhu, Maharashtra Chapter Chairman; Convener Ar. Sunil Bale; Ar. Sanjay Pathe, Maharashtra Sports Committee Chairman and Ar. Shyam Shelar, IIA Sambhajinagar Centre Chairman were the other dignitaries for the function. The National president addressed the gathering with a short and sweet speech. Around 400 architects from all over India participated in the event and displayed their talent. The entire event concluded with a commendable display of sportsmanship. IIA Uttar Pradesh Chapter came forward and to host the 14th season of IIAPL.

Organising Team

Convener: *Ar. Sunil Bhale*, also Vice-Chairman, Maharashtra Chapter, Cricket Captain

IIA Maharashtra Sports Committee Head: *Ar. Sanjay Pathe*

IIA Chhattrapati Sambhajinagar Centre Chairman: *Ar. Shyam Shelar*

Working Team: *Entire Team* of IIA Chh. Sambhajinagar Centre

IIA National President Ar. Vilas Avachat at the Award Ceremony

Appreciation from all over the country received as WhatsApp Messages

- Dr. Kranti Kumar Myenai, Andhra Pradesh: *On behalf of the AP Chapter, I thank all the organisers who have worked very hard to make this event a grand success. We had great time, great fun, delicious food, perfect transportation, decent accommodation, warm hospitality and going back with tons and tons of memories. Once again special mention to all teams/ Committees who were behind this for making a huge success. Regards, Team Andhra Pradesh*
- Ar Vatsal Joshi, Ahmedabad: *Thank you Team Maharashtra for hosting the IIAPL13. Well-groomed volunteers, great food, lovely grounds, and some good cricket. Kudos to the entire team for a successful event.*
- Ar Umashankar Kumar, Bihar: Thanks a lot Bhale sir and Raza bhai for the wonderful hospitality. A big thank you to the entire organising team for the meticulous planning and flawless execution. You made the event a huge success. Had a great time in Aurangabad…
- Avinash Patra, Chhattisgarh – Team Chhattisgarh is leaving the hotel. Thank you so much Maharashtra Chapter for hosting a wonderful successful event. Great hospitality, and tremendous efforts by the organising committee. Team Chhattisgarh Bulls really appreciate the efforts of the management team, food, grounds, and student volunteers.

Print and Electronic Media Coverage

Maharashtra Sports, Lokmat, Navrashtra and other media houses covered this great event. It was heartening to see the expansive coverage offered with words and photographs, which reached lakhs of people across Maharashtra. Interviews of National President of IIA Ar. Vilas Avachat and Maharashtra Chapter Chairman Ar. Sandeep Prabhu were also published which were highlighted and appreciated.

EVENT REPORT

IIA NATCON LUCKNOW
09-10-11 FEBRUARY 2024

IIA NATCON 2024

A GALA GATHERING

IIA NATCON 2024 was held this year from the 9th-11th of February in the culturally vibrant capital city of Uttar Pradesh, Lucknow. Here is a summary of the event which saw the Indian architectural fraternity participate and engage in inspiring and enjoyable sessions.

The recently concluded IIA NATCON 2024 in Lucknow was a resounding success. It provided a dynamic platform for architects and industry stakeholders to envision the future of architecture and urbanism in India. Through insightful panel discussions, collaborative student workshops, solo presentations and cultural exchanges, the event reinforced the commitment of the architecture community towards

Prof. Abhay Purohit, President CoA lighting the ceremonial diya at IIA NATCON 2024

creating sustainable, resilient, and inclusive built environments for generations to come.


Ar Sandeep Saraswat


Prof Abhay Purohit


Ar Vilas Avachat


Ar Jitendra Mehta


Ar Tushar Sogani


Ar Akshay Kumar Beuria

NATCON 2024 featured a diverse range of workshops, technical sessions, and interactive activities aimed at fostering professional development and networking opportunities. Heritage walks and cultural programmes offered interesting relief from the intellectually stimulating academic discussions. The welcome address was delivered by Ar. Sandeep Saraswat, Chairman, IIA UP Chapter and Convener, IIA NatCon 2024 Lucknow; followed by insightful speeches by Ar. Vilas Avachat, President, IIA; and Prof. Abhay Purohit, President, Council of Architecture (CoA) inaugurated the event and delivered a thoughtful inaugural address.

Many leading practicing architects and academicians graced the event with their presence. Prof. Christopher Benninger and Prof. Madhav Deobhakta were honoured and felicitated by the IIA. Shri. Chandrakant Sompura was awarded the IIA Honorary Fellowship for his contribution to Indian temple architecture.

Felicitation at the IIA Natcon 2024

A master architect, planner, author, academician, and institution builder Prof. Christopher Benninger was conferred with the Baburao Mhatre Gold Medal 2024. With this award, Benninger joins the league of previous recipients including B.V. Doshi, Charles Correa, Hasmukh Patel, Achyut Kanvinde, Anant Raje, Raj Rewal, Joseph Allen Stein and Laurie Baker. This accolade honours Prof. Benninger's significant contributions towards the advancement of architecture in India.

The Baburao Mhatre Gold Medal 2024 awarded to Prof. Christopher Benninger

The Madhav Achwal Gold Medal was constituted in 1988 and is awarded for a lifetime contribution to architectural education. Possibly the highest recognition given in India for academicians in the field of architecture, the award this year was bestowed on Prof. Madhav Deobhakta. An avid academician and brilliant teacher, Prof. Deobhakta holds important positions on the board of trustees of several architectural colleges and institutions across the country.

Prof. Madhav Deobhakt honoured with the Madhav Achwal Gold Medal 2024

The IIA Honorary Fellowship is given to an individual who is not necessarily a qualified architect but has contributed to the growth of the architectural profession. The IIA Council has the right to elect the Honorary Fellow. This year Shri. Chandrakant Sompura – the 'architect' of over 200 temples and most famously the Shri Ram Mandir at Ayodhya – was unanimously elected to be the recipient of the Honorary Fellowship of the IIA. Since Shri Chandrakant Sompura was not present, his fellowship was accepted by his son, Ar. Ashish Sompura.

IIA awards Honorary Fellowship to Shri Chandrakant Sompura

Solo Presentations at the IIA Natcon 2024

Presentations by Ar. Yatin Pandya, Ar. Gerard da Cunha, Ar. Siddharth Talwar, Ar. Ponni Concessao, Ar. Vandana Sehgal, and Ar. Ashish Sompura were informative and inspiring. The presentations showcased cuttingedge projects focused on sustainability, highlighting passive design strategies, renewable energy integration, and green building materials. Discussions revolved around the conservation of heritage structures and the revitalisation of historic urban areas, exploring innovative approaches to preserve cultural identity while promoting economic development.

Panel Discussions on – 'Smart Cities in India - A Myth or Reality', 'Rebuilding Cities with Roots' and 'Architectural Practice in Mofussil Towns of India' saw participation from Mr. Mukesh Mesharam, IAS, Principal Secretary, Tourism and Culture Department, Government of Uttar Pradesh, and prominent architects/academicians like Dr. Vandana Sehgal, Tushar Sogani, Kaustubh Mirajkar, Gautam Naik, Jay Kaktikar, Dr. Oscar Concessao, Devyani Dayal, Mohit Agarwal, Ritu Gulati, Dr. Subhrajit Banerji, Ar. Archana Khanna, Ar. Kurian George, Ar. Sanjay Mathur, Dr. Arun Kapur, Ar. Harbindar Pal Singh, Ar. B. Sudhir, Ar. Prashant Pal Singh, and Dr. Avitesh Vaishnavi Nayak.

Ar Ashish Sompura

Ar Gerard Da Cunha

Dr Christopher Charles Benninger

Dr Ponni M. Concessao

Ar Sidhartha Talwar

A Yatin Pandya

Dr Vandana Sehgal

Ar Archana Khanna

Panelists at the IIA NatCon 2024


Dr Vandana Sehgal


Ar Mohit Agarwal


Dr Ritu Gulati


Dr Oscar Concessao


Ar Devyani Dayal


Ar Jay Kaktikar


Dr Subhrajit Banerji


Ar Archana Khanna


Ar Kurian George


Ar Kaustubh Mirajkar


Ar Tushar Sogani


Dr Venu Shree


Dr Arun Kapur


Ar Harbindar Pal Singh


Ar B. Sudhir


Ar Gautam Naik


Ar Prashant Pal Singh


Ar G Dr Avitesh Vaishnavi Nayak

Student Workshops at the IIA NatCon 2024

The student workshop sessions were inaugurated by Shri Ashish Patel, Hon'ble Minister of Technical Education, Government of Uttar Pradesh. Participating students had the chance to engage in hands-on workshops on topics such as Wattle and Daub, Origami and Building Information Modeling (BIM), gaining practical insights into vernacular building techniques as well as emerging technologies shaping the future of architecture.

Ar. Bobbie Vijayakkar conducted the Origami workshop while Ar. Dheeraj Annapureddy, Ar. Sourabh Gujar and Ar. Anup Rangole had students queued up to learn the Wattle and Daub technique with bamboos and mud. The Building Information Modeling (BIM) workshop was conducted by Mr. Tarang Singhal.

As participants departed with newfound inspiration and camaraderie, the legacy of NATCON 2024 continues to resonate, igniting positive change in the architectural landscape of India.

NEWSLETTER FEBRUARY

IN MEMORIAM

Ar. Gokul Chandra Das
(1940 - 2024)

The architectural community of Odisha mourns the loss of a stalwart in the field, Ar. Gokul Chandra Das, former Chief Architect of the State Government, who passed away on 15 February 2024 at the age of 84.

Ar. Gokul Chandra Das, hailing from Bhanjanagar in Ganjam district, was an alumnus of Sir JJ College of Architecture. His visionary designs and meticulous planning earned him recognition at the national level. His notable achievements were the state's first 13-storey office building of the Odisha State Housing Board, and his layout design for the Indira Gandhi Rural Housing Scheme. He was deputed to the Industrial Infrastructure Development Corporation (IDCO) as CGM (Architecture), where he played a role in the prestigious Odisha Niwas project in New Delhi. Ar. Gokul Chandra Das was also known for his leadership and administrative skills., setting new benchmarks for efficiency and excellence in project execution.

In recognition of his invaluable contributions, a condolence meeting was convened at the IIA Odisha Chapter Office on 16 February 2024 to pay respect to the departed soul.

Prof. Satish Tungare
(1935 – 2024)

Prof. Satish Tungare was alumnus of the Academy of Architecture. He went to London where he qualified for RIBA and became an Associate Member (ARIBA) in 1967. He specialized in the subject of building services which he taught as a visiting lecturer until he became the Principal of the Sir J.J. College of Architecture, Mumbai from 1978 to 1995 and thereafter Principal of the IES College of Architecture from 1995 to 2000.

During this time, he also held the position of Chairperson, Board of Studies and Member, Academic Council at the Mumbai University. He also served as the Vice President, Council of Architecture (1994-1996). He has also been a Member of the Education Committee of the COA. He served in the Mumbai University as a Senate and Academic Council Member and as Chairman of the Adhoc Board of Studies for 2 decades. He was also a Member of the Boards of Studies in architecture at the Universities of Bangalore, Karnataka and Marathwada, and the Governing Councils of SPA, Delhi and CEPT, Ahmedabad. He was awarded as Best Teacher by Maharashtra State Government and the Vivekanand Award for his contribution to architecture education. He was also involved in practice having to his credit over 130 buildings.

He was Fellow of the Indian Institute of Architects. He was also Vice Chairman of the IIA Board of Examination. He was the winner of the prestigious IIA Madhav Achwal Gold Medal in 1999, for his outstanding contribution to architectural education.

IIA CHHATTISGARH CHAPTER

Preserving Raipur's Heritage: A Spark Ignited at Khulla Manch

On 12 January 2024 IIA Chhattisgarh Chapter along with *An Open End*, an e-journal, co-hosted *Khulla Manch* (Open Forum). This landmark event had the objective of preserving Raipur's cultural heritage and identity through inclusivity, fostering dialogue and collaborative efforts to safeguard the city's rich cultural heritage. It bridged the gap between the architects who shape Raipur's landscape, the pillars of governance and the city's vibrant citizenry. This diverse assemblage, including conservationists, social activists, museum curators and academicians, brought their unique perspectives to the table, enriching the discourse.

Preserving Raipur's heritage: A spark ignited at Khulla Manch

The event commenced with a warm welcome, setting the stage for a dynamic exploration of Raipur's heritage. The open forum featured prominent figures from various fields who shared their insights.

- Sashi Varvadkar emphasized the power of language and the potential for collective action in reclaiming historical sites.
- Rajendra Chandak lauded INTACH's efforts in preserving heritage-laden tourist attractions.
- Dr. Rakesh Gupta advocated the empowerment of citizens and educating the younger generation about the city's heart.
- Dr. Satyajit Sahu and Dr. Rakesh Tiwari championed the need to preserve both Raipur's architectural marvels and its unique culinary heritage.
- Ninad Bodhankar proposed innovative solutions using technology for heritage preservation.
- Prof. L.S. Nigam lamented the lack of government action and championed cultural preservation education.
- Ayush Chandravanshi delved into the origins of cultural preservation, emphasising the importance of understanding conflict.
- Dr. Abir Bandyopadhyay proposed creating public spaces near heritage sites to foster cultural memories.

Khulla Manch successfully fostered collective responsibility and dedication towards preserving Raipur's cultural legacy. The event underscored the importance of stakeholder collaboration and the transformative role of *An Open End* as a catalyst for continuous dialogue and action.

This report serves as a testament to IIA Chhattisgarh Chapter's unwavering commitment to fostering a community-driven approach to cultural heritage conservation. *Khulla Manch* serves as the first attempt, paving the way for the future of Raipur's heritage.

IIA HIMACHAL PRADESH CHAPTER

INT-EXT EXPO, Sahnewal Ludhiana

Architects in large numbers from IIA Himachal Pradesh attended the INT-EXT EXPO, a premier trade fair of North India at Ludhiana on 3 February 2024. The Team included: Ar. Sarojani Sharma, Ar. Raj Sharma, Ar. Sushil Sharma, Ar. Abhinav Koundal, Ar. Vijay Thakur, Ar. Amandeep Gupta, Ar. Sandeep Bharti, Ar Ishan Sood, Ar. Vishal, Ar. Upashna and Ar. Satish Katwal. Ar. Sarojani Sharma along with other architects from the Chapter received the memento from Ar. Pritpal Walia, Chairman, IIA Punjab Chapter as a token of honour for IIA Himachal Pradesh Chapter during the Felicitation Ceremony.

IIA Presidential Special Recognition Award for Architecture Social Responsibility (ASR) Activities 2023

IIA Himachal Pradesh Chapter received the *IIA Presidential Special Recognition Award* for carrying out various architecture social responsibility (ASR) activities during 2023. This award is a reflection of passion and dedication shown by various members of the IIA HP Chapter and shall motivate all stakeholders to create a positive move take the architecture fraternity to new heights in times to come. Ar. Nandlal Chandel, Chairman IIA Himachal Pradesh Chapter received the award on 11 February 2024 from Ar. Vilas Vasant Avachat, President, IIA at the IIA NATCON Felicitation Ceremony held at Lucknow.

Ar. Nandlal Chandel expressed joy with this achievement and acknowledged that this was possible only due to the unwavering support and collaborative spirit shown by many of the architects of Himachal Pradesh. He voiced the hope that in the future all architects shall collectively strive to bring more impactful architectural initiatives for social responsibility for all stake holders. He conveyed

Team IIA Himachal Pradesh Chapter at Ludhiana

his heartfelt thanks to all architects and other stakeholders for their contributions and commitment to raise the voice of profession and looked forward to continue delivering more such meaningful events through the Chapter's members to raise the Chapter and the architectural fraternity to new heights. This achievement is a testament to the collective efforts of the architects of Himachal Pradesh.

Merit Certificate

Ar. Sushil Sharma, from Shimla and Dr. Satish Kumar Katwal, Head School of Architecture, Kangra and Principal Govt. Polytechnic Rehan Kangra were both conferred with Merit Certificates at the IIA NATCON Felicitation Ceremony held at Lucknow on 11 February 2024. This was in recognition of their outstanding contributions to IIA Activities during 2023. Ar. Nandlal Chandel, Chairman IIA Himachal Pradesh Chapter received the Merit Certificates on their behalf due to their inability to attend the event. He has expressed the hope that both, Ar. Sushil Sharma and Ar. Satish Kumar Katwal, will continue rendering their services with the same passion and devotion and help the Chapter and architectural fraternity of Himachal Pradesh touch new heights in times to come.

IIA MAHARASHTRA CHAPTER

IIA Pune Centre

Sneh Precast IIA Inter Office Box Cricket Season 01

IIA Pune Centre organised *Sneh Precast - IIA Inter Office Box Cricket Season 01*. The tournament was held on 17 – 18 February 2024 at Vision Academy Ground, Vadgaon Budruk, Pune. 250 players from 24 architects' offices participated in the tournament. 36 league matches were played out of which 8 top teams from 4 different groups qualified for the quarter finals. 4 teams qualified for the semi-finals and the final was played between *Team Unistorm* and *VKA Classic*.

Winners and Best players of tournament are as follow:

1. Winners - *Team Unistrom*
2. Runner-up - *Team VKA - Classic*
3. Best Batsman Female - *Renuka Beniwale*
4. Best Bowler Female - *Smita Adke*
5. Best Batsman - *Prasanna Patil*
6. Best Bowler - *Bharat Telang*

The event started with a Pre-Match Meet, trophy


Box Cricket Teams at Vision Ground

and t- shirts unveiling ceremony which took place on 15th February 2024 at the Community Hall, PYC Gymkhana, Deccan, Pune. The Chief Guest was Mr. Vinayak Dravid, Apex Council Member of *Maharashtra Cricket Association*; the Guest of Honour was Ar. Sandeep Bawdekar, Jt. Hon. Secretary, IIA National Council and Adv. Kamlesh Pisal, member of Maharashtra Cricket Association in the presence of IIA Pune Centre Chairman, Ar. Vikas Achalkar and Vice Chairman, Ar. Shitesh Agarwal, Ar. Mangesh Gotal was Convenor and Ar. Vishal Jadhav was Co-Convenor of *IIA Inter-Office Box Cricket Season 01*. About 300 professionals and players participating in tournament attended the function.

The IIA Pune Centre Team consisting of: Ar. Vikas Achalkar, Chairman; Ar. Shitesh Agarwal, Vice Chairman; Ar. Mangesh Gotal, the Hon. Treasurer; Ar. Shailesh Dandane, Hon Secretary; EC Members : Ar. Hrishikesh Kulkarni, Ar. Jitendra Thakkar, Ar. Vivek Garode, Ar. Amit Khivansara, Ar. Milind Panchal, Ar. Mahesh Bangad, Ar. Surabhi Gadkari, Ar. Amol Hatkar, Ar. Rina Salvi, Ar. Vishal Jadhav, Ar. Parag Deshpande and Ar. Kapil Jain worked hard to make this event a grand success.

IIA ODISHA CHAPTER

IIA Cuttack Sub-Centre

The installation ceremony of the IIA Cuttack Sub-Centre was held at the Grand Residency with all the members, guests, dignitaries and members of the architectural fraternity. The ceremony commenced with the national anthem. The highlight of the evening was the presence of esteemed dignitaries including Ar. Swopnadutta Mohanty, Chairperson, IIA Odisha Chapter, Ar. Mousumi Nanda, Chairperson, IIA Odisha Chapter, Ar. Laxminarayan Singh, Treasurer,

IIA Odisha Chapter, Ar. Bibhudatta Sahoo, Jt. Hon. Secretary, IIA Odisha Chapter, and other Executive members.

Ar. Priyadarsi Bisoi (Chairperson) and the members of IIA Cuttack Sub-Centre along with Members of IIA Odisha Chapter- Ar. Swopnadutta Mohanty (Chairperson) and other EC Members and Cuttack Mayor Mr. Subash Chandra Singh in Installation Ceremony.

Under the dynamic leadership of Ar. Priyadarsi Bisoi, the IIA Cuttack Sub-Centre was established, symbolizing the commitment to the highest standards of professionalism and excellence in architecture. Ar. Bisoi's vision of inclusivity, innovation, and collaboration guided the establishment and growth of the sub-centre, setting a solid foundation for its future endeavours.

19 Architect Members from IIA Odisha Chapter on a tour to BAKU, Azerbaijan.

After the formalities, the stage was set for the installation of the IIA Cuttack Sub-Centre. Amidst applause and cheers, the team members took centre-stage, symbolising a commitment to uphold the highest standards of professionalism and excellence in the field.

In his inaugural address, the president of the IIA Cuttack Sub-Centre articulated a vision of inclusivity, innovation, and collaboration. He emphasised the pivotal role that the sub-centre would play in fostering dialogue, knowledge sharing, and skill development among its members. Individuals who have made significant contributions to the field of architecture were felicitated and honoured.

IIA Odisha Chapter's Journey to Baku, Azerbaijan

19 members of the IIA Odisha Chapter embarked on an architectural tour to Baku, Azerbaijan, from January 10 to 15 2024. Baku, Azerbaijan's capital, greeted the group with a fusion of tradition and modernity. The UNESCO-listed Old City, Icherisheher displayed medieval architecture, cobblestone streets and historic landmarks such as ancient mosques and palaces.

Transitioning to the modern skyline and avant-garde architecture like the Flame Towers and the Heydar Aliyev Center, designed by Zaha Hadid, symbolized the city's innovation and design excellence. The architectural tour to Baku was more than a mere sightseeing excursion. It reinforced the importance of cultural exchange, architectural appreciation and lifelong learning within the architectural community. As the tour concluded, the architects returned home enriched and inspired.

IIA PUNJAB CHAPTER

IIA Punjab Chapter recently organized a series of successful events that showcased the vibrancy and innovation within the architectural community. These included discussions on emerging trends to celebrating the achievements of outstanding professionals.

IIA Punjab State Conference LEMNISCATE 2024

The IIA Punjab State Conference was a significant highlight, where architects and enthusiasts gathered to delve into the intricacies of various topics of interest. Renowned architect Krishna Murthy delivered the keynote presentation on the subject of parametric design. A panel discussion ensued among the members of the Council of Architecture (COA), including Ar. Kapil Setia, Ar. Tarun Garg and Dr. K.K. Asthana. Ar. Harveen Bhandhari provided an academic perspective, while moderator Ar. Pritpal Singh Ahluwalia, Chairman IIA Punjab Chapter posed thought-provoking questions that sparked insightful conversations.

Panel Discussion on Women in Architecture

Another notable event was the panel discussion that focused on the challenges faced by women architects in the modern era. The panelists, hailing from diverse architectural backgrounds, shared their experiences and perspectives. Ar. Namirita Kalsi from Delhi, Ar. Shweta Khosla, Ar. Shubam Poply, Ar. Amrit Panwar, and Ar. Prabhjot Kaur offered valuable insights, shedding light on the unique

hurdles and opportunities that women encounter in the architectural profession.

Panel discussion on Role of Council of Architecture

Council of Architecture Camp

The COA Camp organized by IIA Punjab Chapter provided a platform for over 150 architects to address various administrative issues related to documentation and certification. The on-the-spot submission of documents for digital certificates was particularly beneficial, streamlining the process for the attendees. This Camp was organized with the association of the *Architect Welfare Committee* under Ar. Rajneesh Walia and Ar. Balbir Bagga, IIA Ludhiana Centre Chairman. Ar Rajan Tangri, the Hon. Jt. Secretary took the lead in promoting architects towards become members of IIA.

IIA PUNJAB's Magazine NORTH POINT

IIA Punjab Chapter will soon have its own magazine cum newsletter with Ar Harveen Bhandhari as its Editor-in-Chief who explained the prospective contents and design of publication which will be named as *North Point*.

Exhibition INTEX EXPO at Ludhiana

The members of IIA Punjab Chapter endorsed the *Intex Expo* in Ludhiana, drawing architects and construction professionals. The event also attracted numerous other visitors, highlighting its broad appeal in the industry.

Acknowledgments

The event also honoured architects Ar. L.R. Gupta, Patiala and Ar. Rajan Sareen, Ludhiana for their significant contributions to the field of architecture. A cash Award of Rs. 21,000 was given to Sh. Arshdeep Singh for his winning entry for the December 2023 cover page of JIIA, and trophies for two special mentions: Ar. Navneet Saini and Ar. Chirag Jalota. Ar. Manmohan Khanna, Chairman, IIA Chandigarh, Ar. R. K. Bansal also graced the event.

Ar. Pritpal Singh Ahluwalia Chairman IIA Punjab Chapter stated that the success of these events would not have been possible without the dedication and leadership of individuals such as Ar. Rajan Tangri, Hon. Secretary, Ar. Dinesh Agatha, Vice Chairman, Ar. Rajinder Kaur Brara Executive Member, Ar. Indu Arora, Executive Member, Ar. Balbir Bagga, Chairman Ludhiana Centre, Ar. Akanksha Sharma who played pivotal roles in organizing and managing the various activities. Other who played lead role to make the events successful is Ar. Arjundeep, Ar. Kanav Khosla, Ar. Anchal Gupta, Ar.Varunesh Kumar, Ar.Baljit Singh.

IIA Punjab Cricket Team Triumph

The IIA Punjab Cricket Team secured the third position in the IIAPL (Indian Institute of Architects Premier League), showcasing their sporting prowess alongside their architectural acumen. Ar. Niranjan heads the Sports Committee.

IIA Punjab Members with Awards along with National office bearers at NATCON Lucknow

IIA Punjab Members awarded at the National Conference at Lucknow

At the National Conference, held at Lucknow, IIA Punjab team members were awarded: Ar. Pritpal Singh Ahluwalia, Chairman, was awarded the *Presidential Award* for organising the National Council *Meet and Design Symphony*. Ar.Rajinder Sandhu was specially-recognised, for Social Outreach for his services in flood-affected areas, while Ar. Indu Arora and Ar. Sanjay Kumar received certificates for their contributions to IIA Punjab. Additionally, the Kapurthala-Hoshiarpur Sub-Centre was recognized for *The Best Growth* in both percentage and number of members.

These recent events hosted by IIA Punjab underscored the commitment of the architectural community to knowledge-sharing, professional development and the celebration of excellence. The diverse range of topics covered, and the active participation from architects across Punjab exemplified the spirit of the architectural fraternity.

IIA Annual Awards 2023

Awards	Awardees	Remark
IIA Baburao Mhatre Gold Medal	Prof. Christopher Charles Benninger	
IIA Madhav Achwal Gold Medal	Prof. Madhav Deobhakta	
Honarary Fellowship of IIA	Mr. Chandrakant Sompura	
IIA Best Chapter Award	IIA Odisha Chapter	Winner
	IIA Maharashtra Chapter	1st Runner up
	IIA Chhattisgarh Chapter	2nd Runner up
IIA Best Centre Award	IIA Pune Centre	Winner
	IIA Vishakhapatnam Centre	1st Runner up
	IIA Kollam Centre	2nd Runner up
IIA Outstanding Member of the Year Award	Ar. Sanjeev Bumb	Winner
	Ar. Vikas Dubey	Winner
IIA Best News letter Award - Chapter	IIA Karnataka Chapter	Winner
IIA Best News letter Award - Centre	IIA Indore Centre	Winner
	IIA Kollam Centre	Winner
IIA Award for Chapter Membership Growth 2023 (in %)	IIA Jammu & Kashmir	
IIA Award for Centre Membership Growth 2023 (in %)	IIA Yavatmal Centre	
IIA Award for Sub Centre Membership Growth 2023 (in % & Nos.)	IIA Kapurthala Hoshiarpur Sub Centre	
IIA Award for Chapter Membership Growth 2023 (in Nos.)	IIA Maharashtra Chapter	
IIA Award for Centre Membership Growth 2023 (in Nos.)	IIA Pune Centre	
Presidential Special Recognition Awards		
Presidential Special Recognition Award for ASR Activities	Ar. Nandlal Chandel	
Presidential Special Recognition Award for Social Outreach	Ar. Rajinder Singh Sandhu	
Presidential Special Recognition Award for Contribution to Literature in Architecture	Ar. Surinder Pal Singh Bahga	
Presidential Special Recognition Award for Extending IIA Activities in International Circle	Ar. C Najeeb	
IIA Presidential Special Recognition Award for Organisation and Conduct of IIA Leadership Conclave 2023	Ar. Swopnadutta Mohanty	
IIA Presidential Special Recognition Award for Organisation and Conduct of Rajasthan Architecture Festival 2023	Ar. Tushar Sogani	
IIA Presidential Special Recognition Award for Organisation and Conduct of Design Symphony 2023	Ar. Ahluwalia Pritpal Singh	
IIA Presidential Special Recognition Award for Organisation and Conduct of IIA Golf Tournament in 2024	Ar. Vikas Dubey	
IIA Presidential Special Recognition Award for Organisation and Conduct of IIAPL in 2024	Ar. Sunil Bhale	
IIA Presidential Special Recognition Award for Organisation and Conduct of Western Regional Conference and MAHACON in 2024	Ar. Kamlesh Hiralal Satyadevi Kruplani	
Presidential Special Recognition award for Outstanding Member	Ar. Vatsal Chaitanya Joshi	
Presidential Special Recognition award for Outstanding Member	Ar. G Rajaa	
Presidential Special Recognition award for Outstanding Member	Ar. Sunil Bhale	
Presidential Special Recognition award for Outstanding Member	Ar. Abhishek Sharma	

Certificate of Merit Awards		
Andhra Pradesh Chapter	Ar. K Subba Rao	F12771
Andhra Pradesh Chapter	Ar. P V Phani Raju	F13198
Bihar Chapter	Ar. Umashankar Kumar	A18642
Bihar Chapter	Ar. Priyadarshini Pandey	A20197
Chhattisgarh Chapter	Ar. Amit Purwar	A17593
Chhattisgarh Chapter	Ar. Mohnish Anand Sahu	A20221
Haryana Chapter	Ar. Jaspal Sarowa	A16014
Haryana Chapter	Ar. Lalit Sukhija	A21177
Haryana Chapter	Ar. Gyanender Grewal	A23915
Himachal Pradesh	Dr. Satish Katwal	A24205
Himachal Pradesh	Ar. Sushil Sharma	F11551
Jammu & Kashmir Chapter	Ar. Manu Rajput	A20724
Jammu & Kashmir Chapter	Ar. Sandeepu Dhar	A20887
Jharkhand Chapter	Ar. Arun Kumar	A07451
Jharkhand Chapter	Ar. Anila Smriti Surin	A21287
Karnataka Chapter	Ar. Kuldeep Yashwantrao Hangirgekar	F15616
Karnataka Chapter	Ar. Anoopkumar A Gupta	A15267
Karnataka Chapter	Ar. Rama Raju G	A16385
Karnataka Chapter	Ar. Sudheendra G K	A16068
Kerala Chapter	Ar. Archana R	A18589
Kerala Chapter	Ar. Sheeha Hameed	A26474
Kerala Chapter	Ar. Sujith Kumar R S	F16071
Kerala Chapter	Ar. Joseph Chandy	A17619
Madhya Pradesh Chapter	Ar. Manoj Shrimal	A17954
Madhya Pradesh Chapter	Ar. Gunjan Badjatya	A21768
Maharastra Chapter	Ar. Swapnil Pargaonkar	A16042
Maharastra Chapter	Ar. Keshav Chikodi	A13515
Maharastra Chapter	Ar. Harshad Bhatia	A06923
Maharastra Chapter	Ar. Leela Krishna Murthy	A13982
Maharastra Chapter	Ar. Kishor Rewatkar	A07124
Maharastra Chapter	Ar. Rohan Jadhav	A15628
Maharastra Chapter	Ar. Mangesh Gotal	A21350
Maharastra Chapter	Ar. Sangeeta Kuvalekar	F16732
Maharastra Chapter	Ar. Anil Jagwani	A16041
Maharastra Chapter	Ar. Sunil Vichare	A09493
Northern Chapter	Ar. Harish Tripathi	F12677
Northern Chapter	Ar. Suditya Sinha	A18545
Northern Chapter	Ar. Mohit Manchanda	A23751
Northern Chapter	Ar. Sharad Kumar Chopra	F08942
Odisha Chapter	Ar. Yogesh Rekhani	A21865
Odisha Chapter	Ar. Saumya Ranjan Behera	A20213
Punjab Chapter	Ar. Indu Arora	A10975
Punjab Chapter	Ar. Sanjay Kumar	A24064
Rajasthan Chapter	Ar. Astha Tholia	A20868
Rajasthan Chapter	Ar. Prachi Shringi	A25556
Rajasthan Chapter	Ar. Ruchira Bhanawat	A22891
Uttarakhand Chapter	Ar. Ritesh Kumar	A23066
Uttarakhand Chapter	Ar. Kanav Kumar Agarwal	A23073

IIA MERITORIOUS AWARD

Ms. Deepa Raju , Kerala.
Registration No. IV-170283
IIA Examination (Scheme-2014)
(2017 - 2023)

Mr. Arun Saini, Punjab
Registration No. IV-170277
IIA Examination (Scheme-2014)
(2017- 2023)

IIA Meritorious Award was initiated in the year 2012 by the IIA Board of Examination for the Students of IIA Examination who clear all the IIA course of examinations in the first attempt. It is presented by the IIA President in a National event of IIA. The said award comprises of a Certificate of Merit along with a cash prize of Rs. 10,000/-.

This year The IIA Meritorious Award will be presented to Ms. Deepa Raju from Kerala and Mr. Arun Saini from Punjab. Both have passed all Parts of IIA Examination (Scheme-2014), held from 2017 to 2023, in the first attempt in first division.We all at IIA, congratulate Ms. Deepa Raju and Mr. Arun Saini for their consistency and commitment in getting this Meritorious award. We wish her a bright future.

IIA Medals
Best Outgoing Students 2023

Sr. No.	Name	Place	Nomination
1	Alsalama Institute of Architecture	Malappuram, Kerala	Sreeraj E P
2	Academy of Architecture	Mumbai, Maharashtra	Krish Mewawala
3	School of Architecture, Vellore Institute of Technology (VIT),	Vellore, Tamil Nadu	Pritha Mary Jacob
4	BMS College of Architecture	Bengaluru, Karnataka	Vishruthi S
5	National Institute of Technology	Rourkela, Odisha	Muskan Singhania
6	Women's Education Society's Smt. Manoramabai Mundle College of Architecture	Nagpur, Maharashtra	Tanvi Charde
7	G.S. Mandal's Marathwada Institute of Technology	Aurangabad, Maharashtra	Ishika Jain
8	VIVA School of Architecture	Virar, Maharashtra	Maitreyee Hemant Sawant

9	School of Environment & Architecture (SEA)	Mumbai, Maharashtra	Rishabh Chhajer
10	Mohamed Sathak A.J. Academy of Architecture	Chennai, Tamil Nadu	Bharath S
11	Vyavasay Vidya Pratishthan's Indubhai Parekh School of Architecture	Rajkot, Gujarat	Deep Jitendrabhai Solanki
12	Bharati Vidyapeeth College of Architecture	Navi Mumbai, Maharashtra	Chinmayee Kharche
13	College of Architecture, Sardar Vallabhbhai Patel Institute of Technology	Vasad, Gujarat	Simran Maheshwari
14	SCMS School of Architecture	Ernakulam, Kerala	Lakshmi Sunilkumar
15	Department of Architecture & Planning, Indian Institute of Engineering Science and Technology	Shibpur, West Bengal	Urbi Jana
16	Department of Architecture, Jawaharlal Nehru Engineering College	Aurangabad, Maharashtra	Sanskar B Wadekar
17	D.C. Patel School of Architecture, Arvindbhai Patel Institute of Environmental Design	Vallabh Vidyanagar, Gujarat	Aagam Pareshkumar Shah
18	Nehru College of Architecture	Palakkad, Kerala	Sanfiya H
19	School of Architecture & Design, Manipal University	Jaipur, Rajasthan	Surabhi Sinha
20	Karnatak Law Society's Gogte Institute of Technology, Department of Architecture	Belagavi, Karnataka	Aashish Lalwani
21	Rajiv Gandhi Govt. Engineering College	Kangra, Himachal Pradesh	Himanshu Chauhan
22	NITTE Institute of Architecture	Mangalore, Karnataka	Apoorva Caroline Ammanna
23	Department of Architecture & Planning, Birla Institute of Technology	Mesra, Jharkhand	Deeptam Das
24	Kongu School of Architecture	Perundurai, Tamil Nadu	Shiva Dharshini A S
25	R V College of Architecture	Bengaluru, Karnataka	Namrata Dewanjee
26	K. S. School of Architecture	Bengaluru, Karnataka	Varsha M
27	Vivekanand Education Society's College of Architecture (VESCOA)	Mumbai, Maharashtra	Ritika Lalan
28	MIT School of Architecture, MIT ADT University	Pune, Maharashtra	Aditi Dhavle
29	MEASI Academy of Architecture	Chennai, Tamil Nadu	Dhruva Vittal
30	Acharya's NRV School of Architecture	Bengaluru, Karnataka	Sandesh C
31	BKPS College of Architecture	Pune, Maharashtra	Isha Nitesh Rane
32	IES College of Architecture	Mumbai, Maharashtra	Pooja Rajput
33	Manipal School of Architecture and Planning, Manipal Academy of Higher Education	Manipal, Karnataka	Nikita Rathish
34	Dayananda Sagar College of Architecture	Bengaluru, Karnataka	Mohd Shahbaaz
35	School of Architecture & Interior Design, SRM Institute of Science and Technology	Kattankulathur, Tamil Nadu	Srinidhii Ganesamoorthy
36	Piloo Mody College of Architecture (PMCA)	Cuttack, Odisha	Jagdish Samal

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17	Ar. Neelam Thakur	Punjab	A27963
18	Ar. Ekta Tomar	Punjab	A27964
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65	Ar. Megharaj K B	Kerala	A28011
66	Ar. Sujata Elizabeth Isaac	Kerala	A28012
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68	Ar. Zarine Hoshang Jamshedji	Maharashtra	A28014
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70	Ar. Harsh Gajjar	Gujarat	A28016
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74	Ar. Mohd. Azhar C	Karnataka	A28020
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93	Ar. Prajakta Sambhaji Honagekar	Karnataka	A28039
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123	Ar. Sonu Mohanty	Odisha	A28069
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126	Ar. Kannuri Srinivasa Rao	Andhra Pradesh	A28072
127	Ar. Faizan Hussain P	Kerala	A28073
128	Ms. Richa Bakshi	Jammu & Kashmir	A28074
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165	Ar. Mounis Sharif Jalla	Jammu & Kashmir	A28111
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167	Ar. Pakalapati Sindhu Lahari	Andhra Pradesh	A28113
168	Ar. Mabinesh M	Kerala	A28114
169	Ar. Athul T Narayanan	Kerala	A28115
170	Ar. Tasaduq Shah	Jammu & Kashmir	A28116
171	Ar. Devika K C	Kerala	A28117
172	Ar. Shree Nath	Northern	A28118
173	Ar. Subhalaxmi Sahu	Odisha	A28119
174	Ar. Vishnu Prakash R	Tamil Nadu	A28120
175	Ar. Iqbal Singh	Punjab	A28121
176	Ar. Vidya S	Tamil Nadu	A28122
177	Ar. Manoj Kumar	West Bengal	A28123
178	Ar. Rohit Singh	Rajasthan	A28124
179	Ar. Arun Kumar P	Tamil Nadu	A28125
180	Ar. Dhivya R	Tamil Nadu	A28126
181	Ar. Rukhsar Rashid	Jammu & Kashmir	A28127
182	Ar. Narendra Madhav Parpudi	Maharashtra	A28128
183	Ar. Albert Jose	Kerala	A28129
184	Ar. Lakkamraju Lakshmi Narayana Varma	Andhra Pradesh	A28130
185	Ar. Vishnu Priyan R	Tamil Nadu	A28131
186	Ar. Yogita Jagdish Yedekar	Maharashtra	A28132
187	Ar. Kashyap Ashwinbhai Parsana	Gujarat	A28133
188	Ar. Manoj Arun Gunjal	Maharashtra	A28134
189	Ar. Naresh S	Tamil Nadu	A28135
190	Ar. Saqib Nazir	Jammu & Kashmir	A28136
191	Ar. Mujeeb Naseer Bhat	Jammu & Kashmir	A28137
192	Ar. Jigyas Bora	Assam	A28138
193	Ar. Vigneswaran K	Tamil Nadu	A28139
194	Ar. Santhan Athmanam S S	Tamil Nadu	A28140
195	Ar. Nagulapalli Gnana Pradeep	Andhra Pradesh	A28141
196	Ar. Rohan Dutta	Assam	A28142
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198	Ar. Shahran Rashid	Jammu & Kashmir	A28144
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200	Ar. Noora Kamal	Kerala	A28146
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202	Ar. Naufan K	Kerala	A28148
203	Ar. Sarvesh Kumar Sahu	Madhya Pradesh	A28149
204	Ar. Mudragada Aravind	Andhra Pradesh	A28150
205	Ar. Chaitra S	Karnataka	A28151
206	Ar. Parinita Hati	West Bengal	A28152
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208	Ar. Priyanka J	Kerala	A28154
209	Ar. Shahid Showkat	Jammu & Kashmir	A28155

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211	Ar. Mayank Chaudhary	Rajasthan	A28157
212	Ar. Shivani C S	Kerala	A28158
213	Ar. Jerome Benhur K.	Tamil Nadu	A28159
214	Ar. Ankit Sharma	Madhya Pradesh	A28160
215	Ar. Sadaf Aafreen A Waheed Nayak	Maharashtra	A28161
216	Ar. Udhaya Rajan N	Tamil Nadu	A28162
217	Ar. Aromal R I	Kerala	A28163
218	Ar. Chirag	Punjab	A28164
219	Ar. Gokula Murali K N	Tamil Nadu	A28165
220	Ar. Manish Pradhan	Odisha	A28166
221	Ar. Suhas Hanmant Nalawade	Maharashtra	A28167
222	Ar. Raj Kumar R S	Tamil Nadu	A28168
223	Ar. Wasim Showkat	Jammu & Kashmir	A28169
224	Ar. Suganya S	Tamil Nadu	A28170
225	Ar. Premkumar Yashwantlal Pardhi	Maharashtra	A28171
226	Ar. Pooja Nitin Bihani	West Bengal	A28172
227	Ar. Hirenkumar Pravinbhai Bhingaradiya	Gujarat	A28173
228	Ar. Devendra Kumar Singh	Uttarakhand	A28174
229	Ar. Rajavelu R	Tamil Nadu	A28175
230	Ar. Yatindra Yashwant Patil	Maharashtra	A28176
231	Ar. Vijay Arun Kharade	Maharashtra	A28177
232	Ar. Sudheendra Naik K I	Kerala	A28178
233	Ar. Sarath Satheesh	Kerala	A28179
234	Ar. Jefin Jose	Kerala	A28180
235	Ar. Areen Abdulla Sabiha Attari	Maharashtra	A28181
236	Ar. Sanjay B P	Kerala	A28182
237	Ar. Murshid Khan	Madhya Pradesh	A28183
238	Ar. Anamika Anil	Kerala	A28184
239	Ar. Prathamesh Dattatray Musale	Maharashtra	A28185
240	Ar. Ronit Tukaram Pawar	Maharashtra	A28186
241	Ar. Krunal Ajaykumar Patel	Gujarat	A28187
242	Ar. Emil Jean	Kerala	A28188
243	Ar. Priyansh Vyas	Rajasthan	A28189
244	Ar. Rajeesh Thayyil	Kerala	A28190
245	Ar. Shilpa T	Kerala	A28191
246	Ar. Mohd. Rashideen Saifi	Uttar Pradesh	A28192
247	Ar. Yerra Charitha	Andhra Pradesh	A28193
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250	Ms. Anam Shaheen	Uttar Pradesh	A28196
251	Ar. Sachin Gajanan Mangla Taktode	Maharashtra	A28197
252	Ar. Harshwardhan	Rajasthan	A28198
253	Ar. Rohit Sharma	West Bengal	A28199
254	Ar. Rafnas P M	Kerala	A28200
255	Ar. Bhaskari Devi	Assam	A28201
256	Ar. Ameena Shahul	Kerala	A28202
257	Ar. Aswin Rajeev	Kerala	A28203
258	Ar. Souktik Bhattacherjee	West Bengal	A28204
259	Ar. Biplob Das	Assam	A28205
260	Ar. Rajaniganth D	Tamil Nadu	A28206
261	Ar. Ayush Dinesh Agrawal	Maharashtra	A28207
262	Ar. Kritika Agarwal	Rajasthan	A28208
263	Ar. Vijayarajan R	Tamil Nadu	A28209
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