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International Design Challenge

# INSECTITECTURE I

## Residences Inspired by Insect Colonies

First Edition

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### INTRODUCTION

Archiol invites architects, designers, and students from around the world to participate in our latest architecture design competition, "Insectitecture - Residences Inspired by Insect Colonies." This innovative competition challenges participants to delve into the natural world and draw inspiration from the complex and efficient structures created by insect colonies.

Insects, with their remarkable ability to construct intricate and sustainable habitats, offer a wealth of architectural wisdom that can be harnessed to address contemporary design challenges. From the towering termite mounds to the precise hexagonal cells of a beehive, insect colonies demonstrate extraordinary engineering prowess, environmental harmony, and social organization. These natural marvels have evolved over millions of years, showcasing solutions that are not only functional but also sustainable and resilient.

Participants are encouraged to study these fascinating organisms and their habitats, analyzing how insects solve spatial, structural, and environmental problems. The goal is to translate these natural principles into innovative residential designs that push the boundaries of conventional architecture. By mimicking the strategies employed by insects, designers can create homes that are not only aesthetically pleasing but also highly efficient and environmentally friendly.

This competition is an opportunity to blend science and creativity, challenging traditional notions of architecture and opening up new possibilities for sustainable living. Whether you draw inspiration from the communal nests of ants, the intricate webs of spiders, or the adaptive structures of bees and wasps, the possibilities are limitless. Your design should reflect the essence of biomimicry, where nature's genius is emulated to solve human problems.

Join us in this exciting journey to explore the intersection of nature and architecture. Let the ingenuity of insect colonies inspire you to create groundbreaking residential designs that are both innovative and sustainable. Redefine the future of living spaces with "Insectitecture"!

## **OBJECTIVE**

The objective of this competition is to design a residence that draws inspiration from the complex forms, structures, and social organization of insect colonies. This entails a deep exploration of how insects build their habitats, interact within their colonies, and adapt to their environment, translating these observations into innovative and functional residential architecture for humans. Participants are encouraged to delve into the architectural principles found in nature, particularly those exhibited by insects such as ants, bees, termites, and other social insects.

### **Key Points to Explore:**

#### **Complex Forms:**

Investigate the intricate geometries and patterns found in insect nests, hives, and mounds. Consider how these natural forms can influence the design of human residences, focusing on both aesthetic and functional aspects.

Analyze the spatial organization within insect colonies, such as the division of areas for different purposes (e.g., living, storage, and nurseries), and how these can inspire efficient use of space in residential design.

#### **Structural Ingenuity:**

Study the construction techniques of insects, which often involve using locally sourced materials and creating structures that are both strong and adaptable. Explore how these methods can be applied to sustainable building practices in human architecture.

Examine the structural efficiency of insect colonies, where even the smallest elements serve a purpose, contributing to the overall stability and functionality of the habitat.

#### **Social Organization:**

Observe the social dynamics within insect colonies, where cooperation and role differentiation are key to the colony's success. Reflect on how these principles can inform the design of communal living spaces that foster interaction, collaboration, and a sense of community among residents.

Consider how the hierarchical and decentralized organization of insect colonies can inspire flexible and adaptable residential layouts that cater to various family structures and living arrangements.

#### **Environmental Adaptation:**

Explore how insect colonies adapt to their environment, including temperature regulation, ventilation, and moisture control. Incorporate these adaptive strategies into residential design to create homes that are responsive to their surroundings and enhance occupants' comfort and well-being.

Investigate the sustainability of insect habitats, which often involve minimal waste and efficient resource use. Apply these principles to design eco-friendly residences that minimize environmental impact.

#### **Biomimicry in Design:**

Embrace the concept of biomimicry, where nature's solutions to complex problems are emulated in human design. Investigate specific insect-inspired innovations, such as the ventilation systems in termite mounds or the hexagonal efficiency of bee hives, and integrate these into your residential designs.

Aim to create designs that not only replicate the physical forms of insect habitats but also embody the underlying principles that make these structures so effective and sustainable.

By drawing inspiration from the natural world, particularly the remarkable architecture of insect colonies, this competition seeks to push the boundaries of conventional residential design. Participants are encouraged to think creatively and critically, merging nature's wisdom with human ingenuity to create homes that are innovative, functional, and sustainable.

## SITE

Participants are given the creative freedom to choose their own site location for this competition. The selected site should enhance the overall concept and design, reflecting the contextual adaptation of insect-inspired architecture.

### **Consider the following when choosing your site:**

**Contextual Relevance:** How does the site influence the design? Consider how the environment, climate, and surrounding landscape will impact and enhance the concept.

**Accessibility:** Ensure the site is accessible for potential inhabitants, considering transportation and connectivity.

**Environment and Sustainability:** How can the site selection contribute to sustainable living? Think about natural resources, existing ecosystems, and potential for renewable energy use.

**Cultural and Social Impact:** Reflect on the cultural and social context of the chosen site. How will the design integrate and impact the local community?

Participants should provide a brief rationale for their site selection in the project statement, explaining how the chosen location supports the overall design concept and objectives.

## PROJECT PROPOSAL REQUIREMENT

Submissions should include the following:

- Architectural drawings and plans (floor plans, elevations, sections, and site plans).
- A design concept statement explaining the creative vision, inspiration.
- Detailed descriptions of the Design.
- Sustainability features and a statement on environmental impact.
- Cost estimate and construction timeline (optional).
- High-quality visualizations or renderings.

## AWARDS

- Top 3: Certificate + Interview + Publication (Archiol) + score card with inputs
- Honourable mention: Certificate + Publication.
- Shortlisted: Certificate.

## TIMELINE

- Competition Announcement: **10<sup>th</sup> August 2024**
- Registration Opens: **10<sup>th</sup> August 2024**
- Registration Deadline: **10<sup>th</sup> August 2025**
- Submission Deadline: **20<sup>th</sup> August 2025**
- Result Announcement: **20<sup>th</sup> October 2025**

## REGISTRATION FEES

REG.	TIMELINE	INTERNATIONAL FEES (USD)	INDIAN FEES (INR)
AR 01	10 <sup>TH</sup> AUG 2024 – 10 <sup>TH</sup> SEP 2024	10	500
AR 02	11 <sup>TH</sup> SEPT 2024 – 10 <sup>TH</sup> OCT 2024	15	600
AR 03	11 <sup>TH</sup> OCT 2024 – 10 <sup>TH</sup> NOV 2024	20	700
SR 01	11 <sup>TH</sup> NOV 2024 – 10 <sup>TH</sup> DEC 2024	25	800
SR 02	11 <sup>TH</sup> DEC 2024 – 10 <sup>TH</sup> JAN 2025	30	900
SR 03	11 <sup>TH</sup> JAN 2025 – 10 <sup>TH</sup> FEB 2025	35	1000
SR 04	11 <sup>TH</sup> FEB 2025 – 10 <sup>TH</sup> MAR 2025	40	1100
SR 05	11 <sup>TH</sup> MAR 2025 – 10 <sup>TH</sup> APR 2025	45	1200
LR 01	11 <sup>TH</sup> APR 2025 – 10 <sup>TH</sup> MAY 2025	50	1300
LR 02	11 <sup>TH</sup> MAY 2025 – 10 <sup>TH</sup> JUN 2025	55	1400
LR 03	11 <sup>TH</sup> JUN 2025 – 10 <sup>TH</sup> JUL 2025	60	1500
LR 04	11 <sup>TH</sup> JULY 2025 – 10 <sup>TH</sup> AUG 2025	65	1600

## DISCOUNTS

- Architecture Students group
  - min. 5 participants from the same institution: 10% off on standard (SR) & late (LR) registration fee.
  - min. 15 participants from the same institution: 20% off on standard (SR) & late (LR) registration fee.

## SUBMISSION REQUIREMENTS

Participants are required to submit the following materials:

- Design sheets (2 -5) jpeg. / jpg. Format. (dimension: 30cm x 30cm, file size: 25mb)
- Design description with a title (Min. 300 words) – docx. / docs. Format

## SUBMISSION GUIDELINES

### Presentation Board Numbering:

- Number your presentation boards (JPG/JPEG format) sequentially as 01, 02, 03, ensuring clarity and order in the visual representation of your design concept.

### Summary Document Naming:

- Save your design description in a document file (DOCX/DOC format) and name it "Design Description." This document should provide a concise yet comprehensive overview of your architectural concept.

### Zip Folder Creation:

- Compile all your "presentation boards" and the "Design Description" document into a single zip folder for ease of submission.

### Zip Folder Naming:

- Name your zip folder using your assigned participation code. This ensures accurate identification and association of your submission with your team or individual entry.

### Submission Platform:

- Utilize Google Drive as the submission platform. Upload the zip folder containing your presentation boards and "Design Description" document to your Google Drive account.

### Accessibility of Google Drive Link:

- Ensure that the shared Google Drive link is accessible. Inaccessibility may result in the non-consideration of your submission. Double-check permissions to guarantee seamless access for the competition organizers.

### Email Submission:

- Submit your entry by sending an email to **submit@archiol.com**. Include the shared Google Drive link in the body of the email. It is crucial to comply with this step for your submission to be valid.

#### Email Subject Format:

- In the subject line of your email, clearly state the competition name followed by your participation code. This standardized format streamlines the organization's handling of numerous submissions.

#### Email Body Content:

- The body of the email should contain the shared Google Drive link along with essential information, such as the name of the team leader. Additionally, attach the payment receipt or screenshot to verify the completion of the registration process.

### Terms and Conditions:

- By submitting your design, you agree that they are your original work.
- You grant permission for the organizers to publish your design on their website or in promotional materials related to the competition.
- Plagiarism will result in disqualification.

## JURY

We collaborate with leading architects, designers, and academicians of international repute to participate as jury members in our competitions.

## JUDGING CRITERIA

- Innovation and Creativity
- Conceptual Clarity
- Sustainability
- Functionality
- Aesthetic Quality

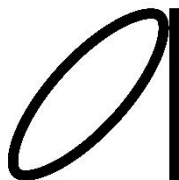
## EIGIBILITY

The competition is open to architects, designers, artists, and creative thinkers from around the world. Participants can enter as individuals or in teams (max. 4 members in one team).

## Media Partners:



## CONTACT DETAILS



ARCHIOL COMPETITIONS

[www.archiol.org](http://www.archiol.org)

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