

CURRICULUM VITAE (LONG) – SMRITI SARASWAT

EDUCATION

- (Nov. 2022) - Submitted Ph.D. (Longitudinal Research focusing on Interior Architecture, Building Crafts and Material Culture of the Himalayan State of Uttarakhand), IIT Roorkee, India
 - (2010) - Masters in Interior Architecture and Design (MIAD) from School of Interior Design, CEPT University (Centre for Environmental Planning and Technology), Ahmadabad, India (with a Letter of Merit)
 - (2008) - Bachelor of Architecture from Zakir Husain College of Engg. & Tech., Aligarh Muslim University, India
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WORK EXPERIENCE

- Assistant Professor at Department of Architecture & Planning, IIT Roorkee, India since 19th Nov. 2012 (regular position since 01 March 2014)
 - Joint Faculty, Department of Design, IIT Roorkee, India since June 2021
 - Worked as a Senior Researcher from March 2011 to Oct 2012 with Design Innovation and Craft Resource Centre, School of Interior Design, CEPT (Centre for Environment Planning and Technology) University, Ahmedabad
 - Visiting Faculty at Growmore School of Architecture, Gujarat for one year during 2011-12
 - Independent architectural practice during 2008-2012
 - Internship at DRONAH (Development & Research Organization for Nature, Arts & Heritage), Gurgaon, India during May18 - Jul18 2009
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RESEARCH INTERESTS

Architectural Heritage; Tangible and Intangible Cultural Heritage; Traditional Building Practices and Knowledge Systems; Indigenous Communities; Interior-Architecture; Craft and Technology; Material Culture and Design-Build Procedures; Creative and Cultural Industries; Skill Development; Entrepreneurship, Trans-Disciplinary Explorations and Cross-Sectoral Collaborations; Narratives; Anthropological Quests and Ethnographic Approaches in Architecture; Women Empowerment; Curriculum and Pedagogy Development; Research Methods

ACCOLADES AND AWARDS

- **2011: Received the DRONAH Educational Grant, for presenting the findings on “Stone Craft and Architectural Heritage of India: Exemplary Illustrations of Storytelling”**
- 2011: Received the Letter of Merit from CEPT University, Ahmedabad for academic excellence (Specialisation: Craft and Technology; Building Crafts)
- 2012: Invited in the prestigious ‘International Conference on Narratives’, as the moderator of the panel - “Space, Place and Travel”, during 15th - 17th Mar, 2012 in Las Vegas
- 2013-2015: Involved in initiating and establishing MoU between IIT Roorkee and Aalto University, Finland, in the capacity of IIT Roorkee representative in several delegations organized with MHRD; continue to set-up collaborations in the form of workshops; international courses; and visits
- 2015: Awarded with DAAD IIT MSP Program to RWTH Aachen, Germany during 28th February – 11th March 2015
- **2015: Received a Grant from the Sangeet Natak Academy, Ministry of Culture, under the Scheme Intangible Cultural Heritage, for the Project ‘Dharohar – Safeguarding the Traditional Craftsmanship of Almora and Pithoragarh (Uttarakhand)’ [the second phase of the project is still going on, delayed due to the pandemic]**
- **2016: Best Paper Award in the section on ‘Art, Craft and Heritage’, in the International Conference on ‘Sustainable Built Environment’, IIT Roorkee**
- 2017: Author of the Book - “Narratives in Interior-Architecture, Craft a Medium”
- 2017: Lead the team of Interior Design Students from APD, IIT Roorkee, as a faculty mentor, in FoAID New Delhi, during 22nd – 23rd Sep. 2017, and won in the silver category

- **2019:** Invited to deliver a lecture, at the launch of the series - Indian Architecture, at the RWTH University, Aachen, on 07 October, 2019
- **2019:** Co-Organised and Co-Moderated the event Bauhaus@100, curated and organised by Prof. Gaurav Raheja, at IIT Roorkee, during 5-6 April 2019
- **2019: Nominated by IIT Roorkee for the UNESCO Group Training Course on Cultural Heritage Protection in the Asia-Pacific Region**
- **2019:** Received the **Bharat Vikas Award** from the Institute of Self Reliance, Bhubaneswar for the **contribution in the field of Architectural Heritage**
- **2019: Invited Expert by the Ministry of Jal Shakti, Govt. of India, for deliberations on the National Water Museum, India**
- **2019:** Upgraded the old Workshop to the Fabrication Laboratory in the Department of Architecture and Planning, IIT Roorkee
- **2020:** Invited Expert by the National Capital Region Planning Board, Govt. of India, for the International Workshop on Heritage and Tourism; and, Safety and Security
- **2017-2021: Associated with NITTTR Chandigarh, as an Expert on Skill Development and Capacity Building of Artisans**
- **2019-2022: Research Grant “A New Passage to INDIA”, by DAAD, Germany, in collaboration with Prof. Axel Sowa, RWTH University, Aachen, focusing on material culture, heritage, building crafts and experimental architecture**
- **2022:** Invited to deliver a lecture at the RWTH Aachen University, Germany, *March 2022*
- **2022:** Awarded the ICOMOS Membership
- **Sep. 2022 – Dec. 2023: Research Grant “A New Passage to INDIA”, by DAAD, Germany, in collaboration with Prof. Axel Sowa, RWTH University, Aachen, focusing on material culture, heritage, building crafts and experimental architecture**

SELECTED INITIATIVES

- **2009-2010:** Projects focusing on **museums, conservation and heritage protection, while doing internship with Development and Research Organisation on Nature, Arts and Heritage (DRONAH), Gurgaon (India)**
- **March 2011- October 2012:** Projects and events discussing **craft & technology, building crafts, cultural heritage, design innovation and interior-architecture** during her tenure as a senior researcher at Design Innovation and Craft Resource Centre (DICRC), CEPT University, Ahmedabad, with a focus on conducting workshops, prototyping, developing monographs based on these, and creating building material inventories
- **November 2012 onward:** responsibilities as Professor In-Charge of Workshop, Exhibition, Annual Report and BOG Report, Media, Outlook Survey and Department Publicity; Faculty Advisor at both B. Arch. And M. Arch. Levels; Member of Counseling Cell, Anti-Ragging Committee, Faculty Search Committee, Dept. Administrative Committee, Dept. Academic Performance Committee and Dept. Web Development Committee; Faculty advisor for Cinematics and Light & Audio Sections of Cultural Council; Member for Anushruti – School for the Hearing Impaired and Asmita - Society for women, social initiatives at IIT Roorkee; Member of academic jury panels and research committees
- **2014-2021: Projects and events focusing on art, craft, tangible and intangible heritage, indigenous communities (especially women artisans) and narratives of Uttarakhand with IIT Roorkee and Ministry of Culture, India**
- **2014-2018:** Joint project on Model Village Development for the Juang Tribe of Odisha, funded by HUDCO
- Recently, she has got a Research Grant “A New Passage to INDIA”, sponsored by DAAD, Germany, in collaboration with Prof. Axel Sowa, RWTH University, Aachen, which focuses on material culture, building crafts and experimental architecture
- **2015-2021: Promoted the role of craftspersons, especially women artisans, in the non-traditional sectors like education and encouraged their participation in varied courses, workshops, exhibitions and events at IIT Roorkee**
- **2015-2021: Organised and conducted varied national and international workshops; training programmes; short term courses including the MHRD GIAN and NPTEL courses; trans-disciplinary academic workshops that focus on cultural heritage, creative-cultural industries, building crafts, material studies,**

craftsmanship, community centred development, transdisciplinary inter-relationships between interior architecture, craft and design, heritage conservation, UNESCO conventions on Culture, and, the need for varied interventions; set up collaborations with National and International schools and organizations; study tours and field trips in collaboration with the Archaeological Survey of India, District Industries Centre, Experts, Museums, Interior Architecture firms; competitions; discussions, dissemination and outreach

- 2012-2022: Subjects regularly taught at IIT Roorkee – Finishes, Specifications and Materials; Vernacular Architecture; History of Indian Architecture; Architectural Design Studios; Creative Hands-on Workshops; Interior Design; and, dissertations that focus on the documentation; preservation; and promotion of tangible and intangible cultural heritage, and related areas, which usually involve collaborations with institutes, individuals, industry partners, master trainers and makers, and organizations like Archaeological Survey of India (ASI), Heritage Conservation Centres spread across the country, District Industries Centre, Museums and Research Portals
- 2019: Received approval and funding of 24 Lakhs for up-grading and up-scaling the existing Workshop of the Dept. of Architecture & Planning, IIT Roorkee into a Fabrication Laboratory, under the Scheme Modernization of Under-Graduate Laboratories (MUGL)
- 2020-2022: **Advisory Role** – Currently involved as an advisor in the project – **Resilient Himalayan Homes** (P.I. Prof. Sanjay Chikermane), IIT Roorkee, in collaboration with the National Mission on Himalayan Studies, sharing experiences of working with the communities and documenting the cultural heritage of the Kumaun Region of Uttarakhand.
- 2021-2022: Initiated the proposal for setting up the **‘Interior Architecture, Material Culture and Design’ (IAMCD) Lab in the Dept. of Arch. and Plng., IIT Roorkee** (under consideration), to promote R & D and experimental designs in the related fields, nationally and internationally
- Jan. – May 2022: **Integrated studio on Vernacular Architecture (UG, PG, Ph.D. students from diverse departments at IIT Roorkee), which was aligned with the British Council sponsored Project - Low Carbon Building, for the WoW (Women of Wonder) Gender Initiative.** This project brought 25 schools and organisations from across the globe, together on a single platform. The main partners were - DST; SAADRI; IIT Roorkee; BRAC University; and, GATI. The focus of the studio (and the project) was on conceptualising and creating a low carbon building (micro-architecture), involving community stakeholders, especially women. The studio was jointly coordinated by my colleague Prof. Harshit Lakra and myself. Following is the link to a small film, explaining the project brief and the outcomes:
<https://youtu.be/TmzPUkEa0Ck>
- August 2022 – August 2025: **Partnerships@175** – Collaboration with the Graphic Era University in Dehradun, focusing on Skill Development and Capacity Development, as part of IIT Roorkee’s initiative to mentor and support nearby institutes in Uttarakhand

SELECTED PUBLICATIONS

1. Saraswat, S. “Radhasoami Samadh, Agra: Stone Crafts as medium of Narration”, in *CONTEXT: built, living and natural – Journal of the Development and Research Organisation for Nature, Arts and Heritage*. Ed. Dr. Shikha Jain, Gurgaon (India): DRONAH, Volume VIII, Issue 1, Spring/Summer 2011, pp 91-96 [Avery Index AB C7683 and ERA Index ISSN 0973-502X]
2. Kamal, A. and Saraswat, S. “Emerging Trends in Tall Building Design: Environmental Sustainability through Renewable Energy Technologies”, *International Journal of Civil Engineering and Architecture*. San Jose, USA: Horizon research Publishing, January 2014, pp. 116-120. DOI: 10.13189/cea.2014.020302
3. Saraswat, S. and Raheja, G. “Craft: A Narrative Barometer for Interior-Architecture - Specific Focus on Stone Crafts in Religious Buildings of India”, in *Smart Innovation, Systems and Technologies*, 34. Ed. A. Chakrabarti, New Delhi: Springer, 2015 [Scopus Indexed]
4. Saraswat, S. “Revival of Crafts and Social Change: Case Study on Dholka”, in *Technology and Innovation for Social Change*. Ed. Satyajit Majumdar (et. al.), New Delhi: Springer, 2015 [Scopus Indexed]

5. Saraswat, S. and Mayuresh, G. "Koti Banal Architecture of Uttarakhand: Indigenous Realities and Community Involvement", in *Smart Innovation, Systems and Technologies*, 66, Eds. A. Chakrabarti and D. Chakrabarti, Singapore: Springer, 2017 [[Scopus Indexed](#)]
6. Saraswat, S. *Interior Architecture and Narratives: Craft, a Medium*. Germany: Lap-Lambert Publishing Ltd., 2017
7. Saraswat, S. "Sustainable Craft Practices and Space-making in Tech Design Contexts", in *Makers, Crafters, Educators: Working for Social Change*. Eds. Elizabeth Garber, Lisa Hochtritt, Manisha Sharma, New York: Routledge, 2019 [[Scopus Indexed](#)]
8. Saraswat, S. "Vernacular Architecture of Uttarakhand", in *Encyclopaedia of Vernacular Architecture of the World*. Ed. Marcell Vellinga, London: Bloomsbury Visual Arts, 2023
9. Saraswat, S. Vernacular Architecture of Rajasthan and Gujarat (Ed.), *Encyclopaedia of Vernacular Architecture of the World*. Ed. Marcell Vellinga, London: Bloomsbury Visual Arts, 2023
10. Saraswat, S. "Dharohar: A National Workshop on Craft and Skill Development for Sustainable Design", in *Periodical of Institute of Indian Interior Designers (IIID) – INSITE*. Ahmedabad, India: Dec 15, pp. 40-43
11. Saraswat, S. and Raheja, G. "The Cultural-Creative Industries of Uttarakhand (India): Specific Focus on Interior Architecture and Space-Making (Building) Crafts", in *Conference Proceedings - LISD World Research Congress on Engineering, Design & Technology 2020*. University of Oxford, Oxford: 27th -28th January 2020, pp. 16-17 [[Registered with the British Library, UK](#)]
12. Saraswat, S. "Radhasoami Samadh: Exemplary Building having Multiple Narratives and Actors", Theme - SHARED HERITAGE. Multiple attributes, multiple values, multiple actors, Book of Abstracts, ICOMOS 20th General Assembly and Scientific Symposium - ICOMOS GA2020 (carried forward due to pandemic), 2022
13. Saraswat, S. "Stone: Making and Maker", *Candide - Journal for Architectural Knowledge*, No.13, 2022, ISSN 1869–6465 [[Avery Index to Architectural Periodicals](#); [IBZ](#); [RIBA Periodicals Index](#)]

BRIEF OVERVIEW OF SELECTED PROJECTS

1. Building Crafts (Space-Making Crafts), Interior-Architecture and Cultural Heritage, Sponsored by Govt. of Gujarat and Design Innovation and Craft Resource Centre (DICRC), CEPT University, Ahmedabad during March 2011- October 12
Status: Finished

Brief Description

At Design Innovation and Craft Resource Centre, CEPT University, Ahmedabad, the researcher had been involved in extensive research on the crafts in interior-architecture (space making crafts) where she had played a vital role in developing framework for space making craft workshops, research and documentation, developing craft-design prototypes and developing monographs based on these workshops. She also worked on the Space Making Crafts Inventory of Gujarat, where she did both qualitative and quantitative research to document varied materials, crafts, tools, techniques, craftspersons involved, local terminology and regional variations of these crafts within Gujarat. She contributed in research and content generation for the DICRC Web Portal, which is a craft based resource hub. She wrote many papers and articles related to these topics during this period, and also included them as important pedagogical tools during guest and visiting lectures.

2. Understanding the Significance and Role of Art in Interior-Architecture Heritage: Specific Reference to Art Works in City Palace, Udaipur Sponsored by QIP, IITR, for the duration: 2012-13
Status: Finished and Published

Brief Description

This research is based on the work done at School of Interior Design, CEPT University and Development and Research Organization for Nature, Art and Heritage (DRONAH). This research attempts to study the significance and role of art work in Interior-Architecture, with specific reference to City Palace, Udaipur. The palace is very famous for the use of

glass, mirror; various paintings; surface finishes and mosaic work. Significant amount of thematic art work (paintings) can also be seen in many other parts of this palace. The use of such art and craft in Mewar was observed from around the late 18th century through Mughal and European influence. The most prominent example of this is the *Sheesh Mahal*, or Palace of Mirrors, in the City Palace, Udaipur. As an outcome of this research, a monograph is published, which can be used as a pedagogical tool for the students and teachers of architecture. It can also be used by designers, artisans, craftspersons and professionals as well.

3. Initiative 'Dharohar' – "Documentation of Built Heritage and Space-Making Crafts of Uttarakhand" sponsored under Faculty Initiation Grant, IITR for the duration: 2013-17
Status: Completed

Brief Description

The project focused on the identification and documentation of the built heritage and building crafts (space-making crafts) of Uttarakhand. It also emphasised on working with local Communities of Uttarakhand ('diwan' community of wood masons and carpenters; 'tamta' community working in copper; 'bhotia' community working with handlooms; women artisan working in 'aepan' art) and interacting with individuals, organizations and NGOs working in the related subject. This project was an extension of the pilot study that concentrated on the documentation of the cultural heritage of Uttarakhand, supported by IIT Roorkee during 2014-2015, which culminated into a three day National Workshop – "Craft & Skill Development for Sustainable Design", organized in collaboration with UHHDC, UBFDB, DIC and Alaya Design Studio (all based in Uttarakhand). The monograph 'Sanchay' was released during this workshop and an exhibition presenting the detailed work done during the project was also put on display.

4. Project 'Dharohar' – "Safeguarding the Traditional Craftsmanship of Almora and Pithoragarh through Documentation and Workshops", sanctioned by the Ministry of Culture, under the Intangible Cultural Heritage (ICH) Scheme 2015-16. (P.I. Smriti Saraswat Co-P.I. Harshit Lakra, Ila Gupta)
Status: Phase I completed in 2018; Phase II has begun

Brief Description

The project focuses on the wooden structures and the traditional craftsmanship of the Himalayan state of Uttarakhand. The first phase of the project is over. It concentrated on developing - inventories of indigenous building materials and skills; portfolio of measured drawings and building elements; classification of building crafts; surveys, interviews and focused group discussions; field visits and route maps; visual narratives, sketches and illustrations; analysis and observations; creating a repository of the documented data, analysis and findings in the form of reports, monographs, posters, portfolios; and, disseminating through exhibitions and participatory workshops. The project activities led to networking and the creation of a steering group with people and organizations onboard working significantly in the field of cultural heritage of Uttarakhand – Prof. Yashodhar Mathpal, Prof. Anil Joshi, Prof. Shekhar Joshi, Prof. Sher Singh Pangti, Shri S.C. Nautiyal, Shri Dinesh Joshi, Professors from the G.B. Pant University, the Folk Culture Museum of Uttarakhand, The Tribal Museum of Pithoragarh, and The District Industries Centres. The second phase is going on (delayed due to pandemic).

5. The grant 'A New Passage to India', for the project "Towards an Indo German Centre for Experimental Architecture and Material Culture", funded by DAAD Germany, during Sep. 2019 – Sep. 2022, as the P.I. from India, in collaboration with Prof. Axel Sowa from the RWTH Aachen University in Germany (P.I. from Germany)

Brief Description

This project is a shared ambition to conceive a joint Centre as a platform where architects, designers, artists, craftspersons, conservationists and industrial makers can engage to create an understanding for the existing heritage and lead to synergies for innovation and heritage-led development. As part of this project, we are covering sites, which are Pan-India (including the Himalayan states of Himachal Pradesh and Uttarakhand) and Pan-Germany, specifically focusing on

Stone and Earth Materials. As an outcome, we are creating building inventories; documentary films; shared publications; designing prototypes.

6. Traditional Principles of Settlement Planning in Heritage Temple Sites of Odisha/ Erstwhile Kalinga Region, awarded under the Scheme Indian Knowledge Systems, AICTE, during Feb. 2022 – Feb. 2024 (P.I. Rabi Mohanty; Co-P.I. Smriti Saraswat, Ashaprava Mohanta, Debasis Das)
Status: Begun

Brief Description

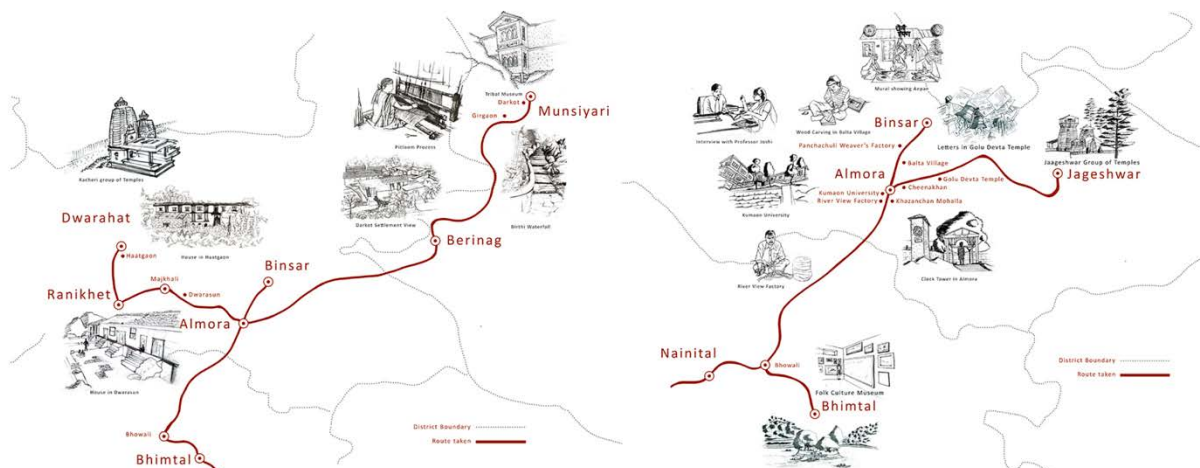
This research project aims to explore the science behind the traditional principles of settlement planning and design approaches of the ancient religious sites of the Kalinga kingdom. This research will evaluate the common and unique city planning and design approaches of different heritage sites, their historical development, existing built environment’s characteristics, challenges and reasons. It will focus on the major heritage precincts of EkamaraKshetra, BirajaKshetra and Shri Kshetra of Odisha. The main objectives are - to develop a Historiographical account of the Indian Knowledge Systems of settlement planning based on the influences and patronage of different dynasties and individuals (Regional, National and International). (especially focusing on the identified temple sites in Kalinga/ Odisha, including the important period during 5th -15th Century AD); to prepare a digital database of the identified temple sites, for creating awareness about them and disseminating the traditional principles of town (settlements) planning and design; and, to collate the information on the evolution of the identified temple sites and develop a consolidated knowledge repository on the traditional planning principles employed in these sites.

7. Joint Research on – “Model Village Development for Juang Tribe of Odhisha through Public and Private Partnership”, during 2014-17, funded by HUDCO (P.I. Harshit Lakra, Co-P.I. Smriti Saraswat)
Status: Completed

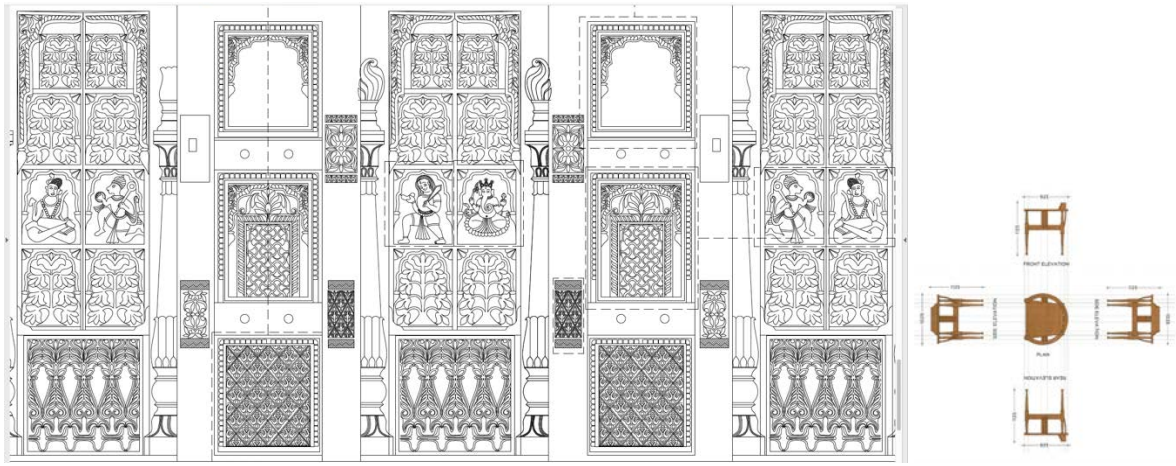
Brief Description

The Juang is one of the primitive tribe of Odisha. They are found in Odisha exclusively in Keonjhar, Dhenkanal, and Angul district. There are currently 32 villages of Juang Tribe in the region. This Tribe displays a unique culture and a social system, which is significant to conserve and promote for sustainable future. Through this research and design development study, first an intensive study is being done on the cultural and social pattern of the Juang Tribe. This is followed by detailed study of their village and housing pattern and associated potential and challenges. Final part shall involve development of the house design which addresses their socio-cultural, regional and incremental housing needs.

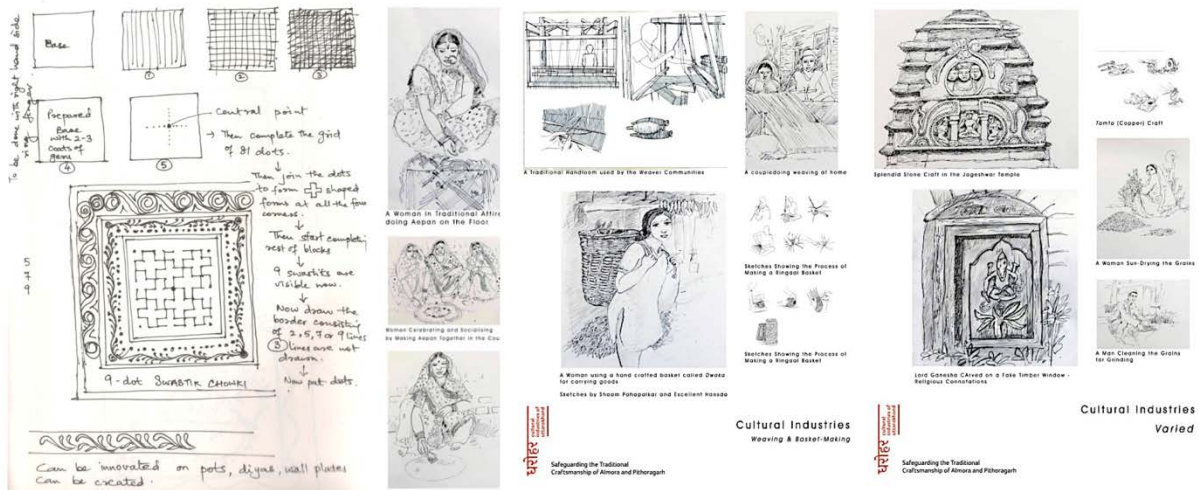
Image Gallery showing the glimpses of above projects is presented below:



Field Visits, Illustrations and Route Maps



Documenting the Architectural Heritage: Portfolio of Drawings



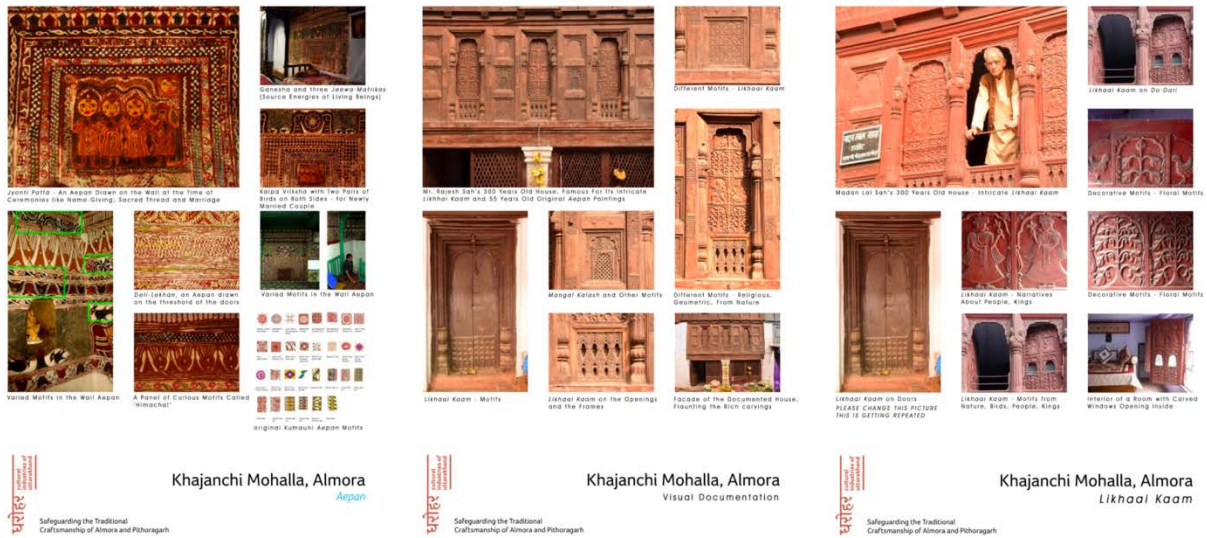
Visual and Cultural Narratives showcasing the Tangible and Intangible Cultural Heritage



Interaction Studies and Dissemination



National Workshop, Craft Bazar, Capacity Building



Visual and Cultural Narratives showcasing the Tangible and Intangible Cultural Heritage



Monographs and Booklets

Art Based Architecture of Uttarakhand: Indigenous Traditions and Community Development

Abstract: Almora District, situated in the Kumaon region of Uttarakhand, is home to unique and exquisite art and craft forms such as arpan, famta, nigool kaam, likhai kaam, lantern furniture, stone craft, wood craft, weaving and candle making. It has also nurtured several indigenous interior-architecture (a cohesive term that encompasses the outer envelope of a building as well as its interior environment) styles, which innately imbibe these art and craft forms (space-making crafts) and the principles of 'making', associated with them. Unfortunately, the traditional knowledge systems and values embedded within the art, craft and interior-architecture of this region that have been sustainably practiced by several communities, are perishing slowly. This paper focuses on documenting, preserving and revitalizing the art, craft and interior-architecture of Almora, by highlighting the wood craft (likhai kaam) and arpan art documented by the authors in the two hundred and fifty years old residences of Khajanchi Mohalla and Naughar – both in Almora; and, 3000 years old Koti Banal architecture of Dives by deductive research, this study employs a case study based approach. This is an inter-disciplinary research based on art, craft, and, interior-architecture that aims to contribute towards exploring and creating new possibilities for community participation and heritage led development in the given context.

Key words: Wood carving (likhai), Arpan art, interior-architecture,

ST01: Community, Sustainability and Heritage

POSTER TITLE: (Documenting, Preserving and Revitalizing the Art, Craft and Interior-Architecture of Almora (Uttarakhand))

Name: Dr. Garvash, Mayuresh, Rishaj
Affiliation: IIT Roorkee
Paper ID: ICOMOS183

Abstract: Almora District, situated in the Kumaon region of Uttarakhand, is home to unique and exquisite art and craft forms such as arpan, famta, nigool kaam, likhai kaam, lantern furniture, stone craft, wood craft, weaving and candle making. It has also nurtured several indigenous interior-architecture (a cohesive term that encompasses the outer envelope of a building as well as its interior environment) styles, which innately imbibe these art and craft forms (space-making crafts) and the principles of 'making', associated with them. Unfortunately, the traditional knowledge systems and values embedded within the art, craft and interior-architecture of this region that have been sustainably practiced by several communities, are perishing slowly. This paper focuses on documenting, preserving and revitalizing the art, craft and interior-architecture of Almora, by highlighting the wood craft (likhai kaam) and arpan art documented by the authors in the two hundred and fifty years old residences of Khajanchi Mohalla and Naughar – both in Almora; and, 3000 years old Koti Banal architecture of Dives by deductive research, this study employs a case study based approach. This is an inter-disciplinary research based on art, craft, and, interior-architecture that aims to contribute towards exploring and creating new possibilities for community participation and heritage led development in the given context.

Key words: Wood carving (likhai), Arpan art, interior-architecture,

Typical Elements of Space Making - Koti Banal Style of Architecture: Space-Making Crafts

- 1) Stone Slate (Pattuary) Roof
- 2) Rafter
- 3) Timber Joist
- 4) Ridge Beam
- 5) Attic Floor Planks
- 6) Attic Floor Beams
- 7) Second Floor wall/plank
- 8) Mast/Structuring
- 9) Floor Planks
- 10) Secondary Beam
- 11) Carved/Decorated Beams
- 12) Wall Beams
- 13) Stone Masonry
- 14) Timber Reinforced Stone Masonry wall
- 15) Jamb
- 16) Window Jamb
- 17) Timber Reinforced Stone Masonry wall
- 18) Plinth

Conclusion: Residential Sector in Uttarakhand offers a huge possibility to study and understand the crafts, their space-making attributes, sustainability, and, traditional knowledge systems embedded within them. After studying both Garhwal and the Kumaon regions, it was observed that the Kumaon region (especially, Almora) offers a better opportunity for interventions in the craft sector (both utilitarian and space-making). Specifically, to Arpan, this art form has ritualistic connotations, and is practiced majorly as a way of life. It needs to be understood in the context of space-making in the milieu of Interior Architecture and heritage led development, which will give it a wider scope of application and employment generation. Wood craft (likhai kaam) never seems to be out of demand and reflects on the age old practices and knowledge of practices. It needs to be integrated within the current interior architecture practices, and not just kept in museums and restricted to temples.

19th ICOMOS GENERAL ASSEMBLY AND SCIENTIFIC SYMPOSIUM
11th to 15th December 2017, New Delhi, India
www.ICOMOSGA2017.org

Symposia and Conferences

GIAN Global Initiative of Academic Networks

Interior-Architecture, Craft and Design
Focus on Inter-Disciplinary

Yanmer: Continuing Education Centre
Indian Institute of Technology Roorkee

October 03-22, 2016
09:00 AM to 05:00 PM

Textiles & Interior Architecture | Craft & Design | Architecture & Craft
Entrepreneurship | Design Research & Pedagogy | Art & Interior Architecture

Smart Innovation, Systems and Technologies 46

Amjesh Chakrabarti
Dibakuma Chakrabarti Editors

Research into Design for Communities, Volume 2
Proceedings of ICARD 2017

Springer

Art Based Architecture of Uttarakhand: Indigenous Traditions and Community Development

ICARIT

Labels: Timber roof with external finish of stone slates or contemporary RCC frame structure, reinforce stone masonry wall; Timber beam join to contemporary RCC frame structure, reinforce stone masonry wall; Timber ladder.

Role of Craft and Technology in Interior Architecture

ICARIT

Role of Craft and Technology in Interior Architecture

NIPTEL

ROLE OF CRAFT AND TECHNOLOGY IN INTERIOR ARCHITECTURE

ICARIT

ROLE OF CRAFT AND TECHNOLOGY in interior architecture

ICARIT

Enrollment Ends: 1 Aug. 2022
Exam Date: 25 Sept. 2022

Swayam—NPTEL 8 Weeks
Online Certification Course

Course Coordinator:
Prof. Smriti Saraswat

25 JUL. - 16 SEPT. 2022

ROLE OF CRAFT AND TECHNOLOGY IN INTERIOR ARCHITECTURE

This is an ICETE approved FDP Course

http://onlinecourses.nptel.ac.in/loc22_ar09/course

A NEW PASSAGE TO INDIA

DAAD Deutscher Akademischer Austauschdienst
German Academic Exchange Service

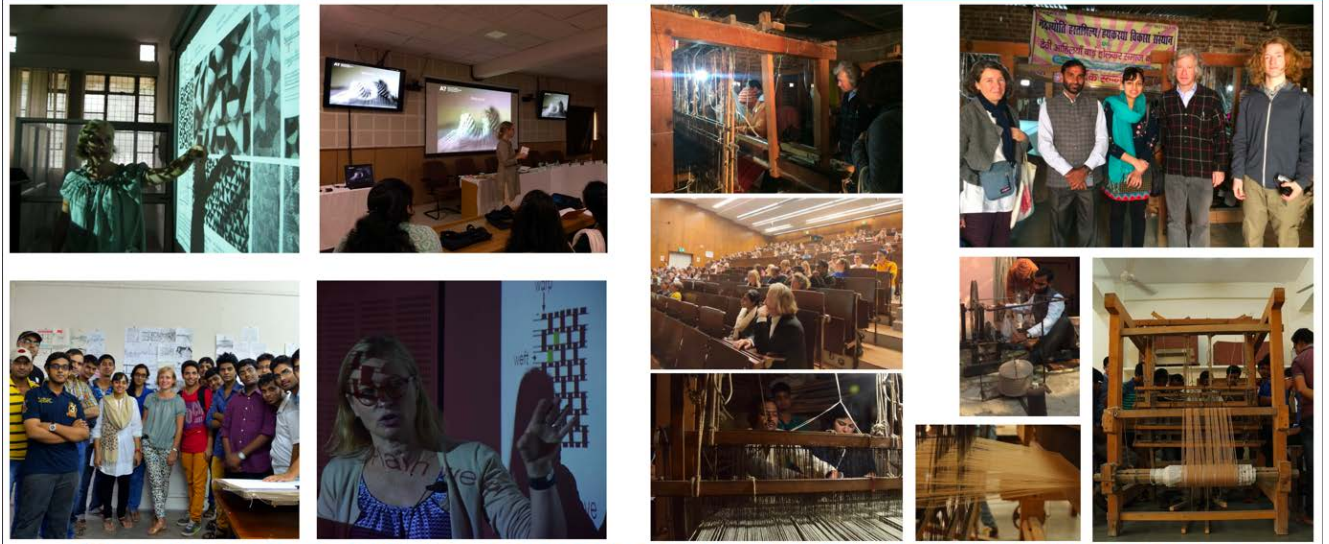
Towards an Indo-German Centre for Experimental Architecture and Material Culture (EAMC)

German Indian Higher Education Cooperation (DIHSC) 2019-2023

Partners: RWTH Aachen (Department of Architecture) and IIT Roorkee (Department of Architecture and Planning)
Project Coordinators: Prof. Axel Sova (Germany) and Smriti Saraswat (India)
Subject Field: Architecture

The Summer school took place from August 10th to 20th, 2021 in the monastery of Hoopuzee near the Dutch community of Gujran. It was organized by the Department of Architectural Theory at RWTH Aachen University under the direction of Prof. Axel Sova. 20 students experimented with natural earth techniques and built the load-bearing walls of a future garden pavilion. The event was part of the DAAD-funded university cooperation with the IIT Roorkee in India. The exchange of knowledge and experience for the further development of sustainable construction techniques with the Indian partners is to be continued in the coming semesters. The material and energy budget of building processes will be of particular importance. The Chair of Architecture Theory is in close exchange with the 'Sitting hut Limburg Landgoed'. The Dutch foundation intends to transform the monastery complex into a workshop for the future, where the building and living of tomorrow will be reflected, discussed and practiced.

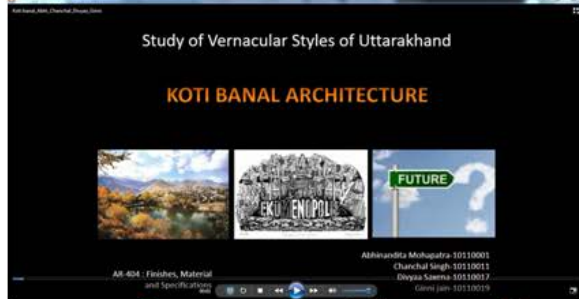
60 | A New Passage to India



International Collaborations and Field Visits



Screenshots from Documentary Films, Indo-German Collaboration, DAAD



Documentary Films Supervised, during Classes and Studios at IIT Roorkee



Fig.1: Bapagrama Stone House. Source: Pragrup



Fig.2: Plan of the house. Source: Pragrup

Bapagrama Stone House

Category: Stone Location: 12.99° N, 77.45° E
Country: India Year of Construction: 2013

Matter / Resources / Physical Properties

This is a single-storeyed, private, residential property, constructed of locally sourced stone to reflect the natural surroundings in its contemporary form.

Structural Aspects

The house is constructed of 14-feet-tall local stone slab walls, 2 feet wide and 4 inches thick. The roof structure is made of recycled timber and the cover material used is thatch. The doors and windows are constructed out of recycled timber and re-engineered wood with the floor surface created out of compacted mud.

Surfaces / Protective Coating / Decoration

Exposed interiors
The surfaces of the stone walls are unfinished and unpolished to display their natural relief. The wooden fenestrations are varnished to display the natural grains of the wood. In conjunction with the red oxide

Architectural Elements

The plan derives from an open-space concept to define the internal layout and features a vernacular-style central courtyard. The timber and thatch roof is an inverted pyramid, descending inwards into the courtyard.

Uses / Functions / Building Types

The house is proposed to be a stay allocation for visiting faculties travelling from outside to the Bapagrama School, Bangalore.

Workmanship / Tools / Technical Knowledge

The construction has primarily used the rural architectural pedagogy and vernacular knowledge of construction with local materials.

Environmental Aspects / Energy

The house has incorporated aspects of sustainable construction techniques

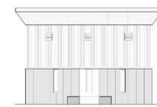


Fig.3: Front Elevation. Source: Pragrup



Fig.4: Section AA. Source: Pragrup

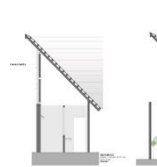


Fig.5: Sections BB and CC. Source: Pragrup

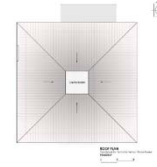


Fig.6: Roof Plan. Source: Pragrup



Fig.7: Thatching of roof. Source: Pragrup









Fig.8: Front façade. Source: Pragrup



Fig.9: Re-engineered wooden partitions. Source: Pragrup

Building elements identified

A. WINDOWS			
BAY WINDOWS ON SIDES			
STONE JALIS INSPIRED FROM RAJASTHAN STONE JALIS			Supporting stone brackets for balconies
SOURCES	CPWD	https://nimishabhatnagar.com/2014/01/28/fire-engulfed-heritage-shimla-gorton-castle-ag-office-in-picture/	
B. STONE BALCONIES WITH JALIS			
STONE WORK STONE JALIS AND STONE BRACKETS			
BALCONY WITH STONE JALI RAILING	Hexagonally shaped balcony with jali work	Rectangular balcony with stone jali an stone pier	
ARCHES			

Parshant Rehal



Fig. 4. The stone church in contrast to glass and steel
Source : Google photos



Fig. 5. Front view of the church
Source : Google photos



Fig. 6. Entrance porch with buttress
Source : Aastha Sinha



Fig. 7. Gothic archade
Source : Aastha Sinha



Fig. 8. Panorama of timber roof with mangalore tiles
Source : Google photos



Fig. 9. Panorama of roof with arch windows
Source : Google photos

Aastha Sinha -18110001

Manas Avinash -18110012

Building Inventories developed by IIT Roorkee, Indo-German Collaboration, DAAD



Fig 01: Freedom square View, Source: Amrutha, 2021



Fig 02: Site Layout, Source: Amrutha, 2021

Urban Public Space

Category: Stone

Location: 11° 15' 30" N, 75° 46' 8.2" E

Country: India

Year of Construction: 2020

Matter / Ressources / Physical Properties

–Monolith sculptures in granite and laterite stones; stands on the stretch of cultural beach along with light house.

Uses / Functions / Building Types

–This versatile urban public space serves as a stage for cultural and political events, as well as a walk-in gallery and an urban hangout

Structural Aspects

–The walls are erected in granite and laterite stones. Granite stone walls have concrete core inside for structural integrity. Granite slabs with a thickness of 100mm were tied to the reinforcement bars that extend from the foundation and properly secured with cast in place concrete.

Workmanship / Tools / Technical Knowledge

–Masonry adhesives are used to build laterite walls out of accurately cut and dressed stones with fine joints

Environmental aspects/ Energy

–Locally sourced laterite stone and granite stone are used in its natural form, thus energy efficient.

Surfaces / Protective Coating / Decoration

–The stone walls are exposed to harsh coastal weather to bring rustic charm while ageing gracefully

Building codes / Norms / Legal frameworks

–The new stage is constructed in alignment with the old stage to clear the coastal regulation zone (CRZ) norms as a new construction is permitted on the landward side of existing authorized structures;

Architectural Elements

–Upright granite and laterite walls of varying dimensions are used to carefully carve out a multi functional urban space.

Amrutha Das

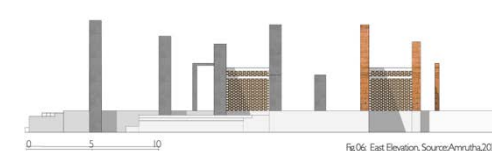


Fig 06: East Elevation, Source: Amrutha, 2021

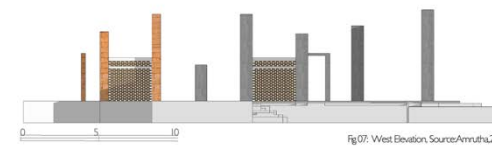


Fig 07: West Elevation, Source: Amrutha, 2021



Fig 08: View from entrance, Source: Amrutha, 2021



Fig 09: Dilapidated piers, Source: Amrutha, 2021



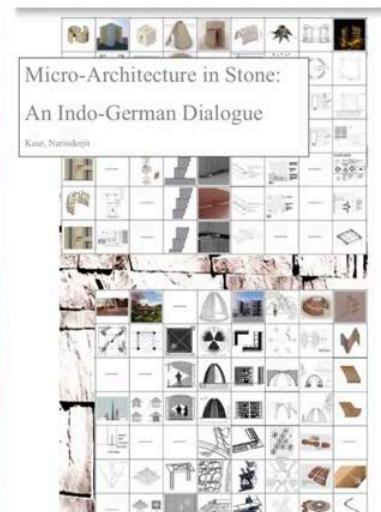
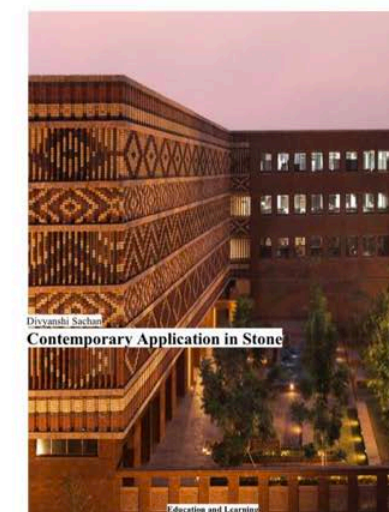
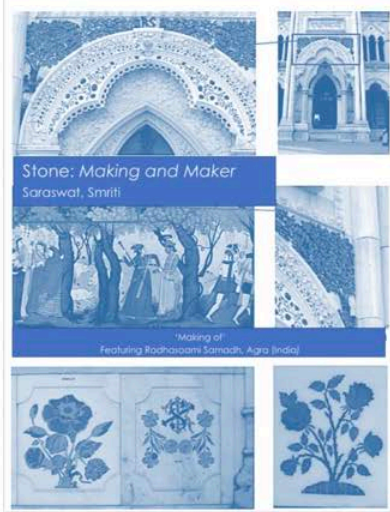
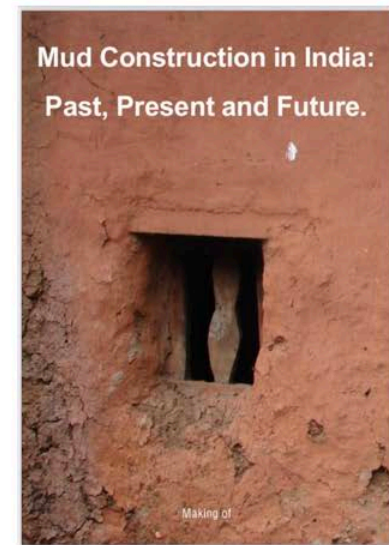
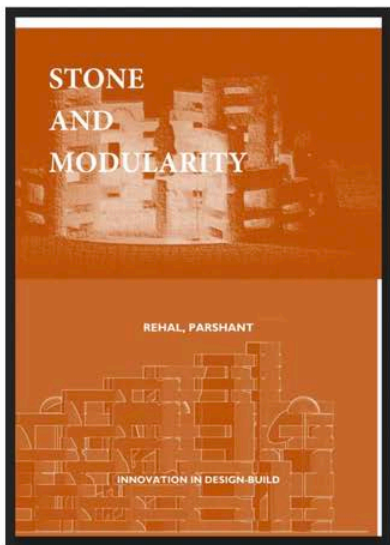
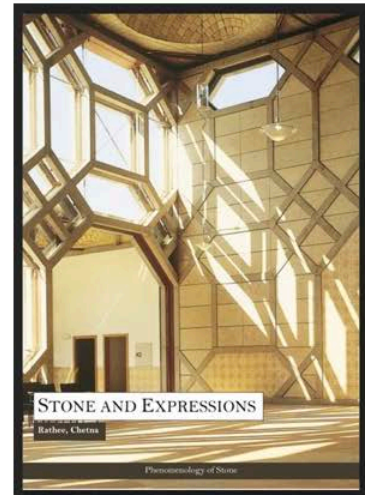
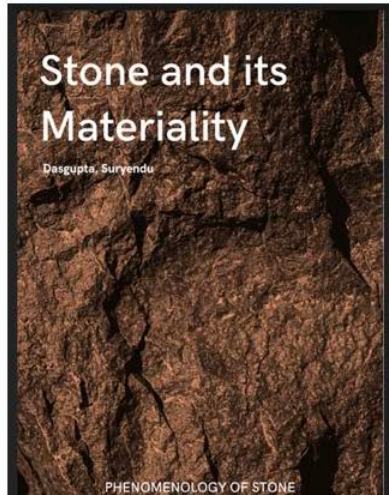
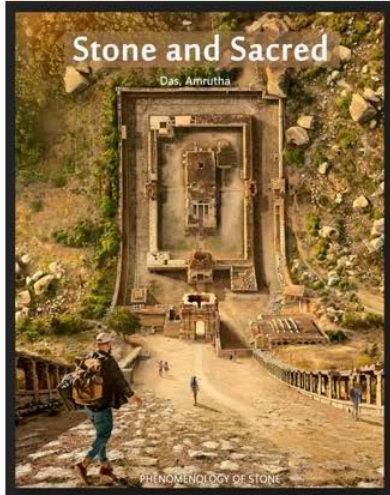
Fig 10: North Stage, Source: Amrutha, 2021



Fig 11: North Stage, Source: Amrutha, 2021

Amrutha Das

Building Inventories developed by IIT Roorkee, Indo-German Collaboration, DAAD



Essays developed by IIT Roorkee, Indo-German Collaboration, DAAD, focusing on the following Categories:
 Making of;
 Phenomenology of Stone;
 Innovation in Design-Build; and
 Education and Learning

STONES OF INDIA

Index Map



STONES OF INDIA



Stones of India - Maps, developed by IIT Roorkee, Indo-German Collaboration, DAAD

SHORT TERM COURSES ORGANISED AND CONDUCTED, FOCUSING ON CREATIVE-CULTURAL INDUSTRIES, INDIGENOUS COMMUNITIES; REGIONAL MATERIALS, ARCHITECTURAL HERITAGE AND HISTORICAL DOCUMENTATION

S. No.	Name of Course/Workshop	Focus	Duration	QIP/MHRD
1.	GIAN Course on “Interior-Architecture, Craft and Design: Focus on Inter-Disciplinarity” Course Coordinator: Smriti Saraswat Foreign Faculty: Maarit Salolainen	Inter-disciplinary Collaborations, which center on tradition and continuity; regional materials; communities	03 rd – 10 th Oct. 16	MHRD
2.	GIAN Course on “Architectural Theory: Worldviews, Conceptual Histories and Role Models” Course Coordinator: Smriti Saraswat, IIT Roorkee Foreign Faculty: Axel Sowa, RWTH University Aachen (Germany)	Few sessions focused on ancient scriptures and architectural heritage of India	20 th – 24 th Dec. 17	MHRD
3.	SWAYAM-NPTEL MOOC Course on – “Role of Craft & Technology in Interior-Architecture” (New Initiative)	Creative-Cultural Industries; tangible and intangible cultural heritage; built heritage; material culture	Aug. 2018- Oct. 2018	MHRD
4.	SWAYAM-NPTEL MOOC Course on – “Role of Craft & Technology in Interior-Architecture” (Selected as a Re-Run Course)	Creative-Cultural Industries; tangible and intangible cultural heritage; built heritage; material culture	Jul. 2019 – Sep. 2019	MHRD AICTE
5.	SWAYAM-NPTEL MOOC Course on – “Role of Craft & Technology in Interior-Architecture” (Selected as a Re-Run Course and Faculty development Program (FDP) Course)	Creative-Cultural Industries; tangible and intangible cultural heritage; built heritage; material culture	Jul. 2020 – Sep. 2020	MoE AICTE
6.	SWAYAM-NPTEL MOOC Course on – “Role of Craft & Technology in Interior-Architecture” (Selected as a Re-Run Course and Faculty development Program (FDP) Course)	Creative-Cultural Industries; tangible and intangible cultural heritage; built heritage; material culture	July 2021 - September 2021	MoE AICTE
7.	SWAYAM-NPTEL MOOC Course on – “Role of Craft & Technology in Interior-Architecture” (Selected as a Re-Run Course and Faculty development Program (FDP) Course)	Creative-Cultural Industries; tangible and intangible cultural heritage; built heritage; material culture	July 2022 - September 2022	MoE AICTE
8.	SWAYAM-NPTEL MOOC Course on – “Interior Design”	Materials; Finishes, Specifications; Interior Spaces; Design; Sensory Experiences; Lighting; Acoustics;	July 2023 - September 2023	MoE AICTE

DETAILS OF SELECTED WORKSHOPS ORGANISED AND CONDUCTED

A List of few hands-on workshops conducted and organised under varied subjects, taught at IIT Roorkee, during 2013 - 2021, which are significant for spreading awareness and knowledge of materials, conservation, built and unbuilt heritage, is listed below. These workshops are usually conceptualised in five parts:

- a) Awareness through Expert Lecture
- b) Hands-On Exposure
- c) Conceptual Development through Brainstorming
- d) Design Development
- e) Prototype Development/Application

1. **Textile Traditions of Uttarakhand [in collaboration with Navjyoti Hastshilpa Sansthan]**
2. **Participatory Workshop on Creative and Cultural Industries: Specific Focus on Uttarakhand [in collaboration with Ministry of Culture]**
3. Parametric and Generative Design Methodology
4. **Explorations in Papier Mache: Learning from the Past and Contemporary Applications in Furniture, Products and Interior Spaces**
5. **Terracotta: Transformation through Time and Technology**
6. Origami and Kirigami
7. Bamboo Workshops
8. Calligraphy
9. Colour Configurations in Interior-Architecture: Learning from Havelis of Jaipur
10. Creative Workshop on Weaving
11. Screen Printing Workshop
12. **Photography, a tool for Historical Documentation**
13. Sketching Workshop
14. Clay Workshop
15. Wood Joinery
16. Fundamentals of Construction: Focus on Roofs
17. **Vaulted Dome Construction using Mud Mortar (prototype installed in the canteen at IIT Roorkee)**
18. **Designing Micro-Architecture in Stone: Tradition and Continuity (Indo-German Collaboration)**
19. **Developing Building Inventories on Architectural Heritage of India: A Case of Aurangabad**
20. **Developing Building Inventories on Architectural Heritage of India: A Case of Orccha and Gwalior**





Hand-On Workshop on Mud Construction with Ar. Varun Thautam at IIT Roorkee

Author's name	Ashwika Wason	Sanyrki/Devgate	Aash Chetry	Yasika Takasara	Prilip Gauri	Rishi Thakran	Disha Marani/Vanghane	Chandrabhushan	Purjant Patel	Anushka Das	Rohan Kati	Purjant Agrawal	Chiranjeev Ghatikar	Govind Bhatt	Shikha Chatterjee	Deepa Kulkarni/Varun/Devgate	Aarushi/Pranav/Devgate		
material	concrete and steel	White mudbricks Mud foundation Steel joists	Sandstone, mudbricks	red stone blocks	Red Sandstone from Rajasthan	concrete, 5 colors wood paneling, steel roof panels	stone (granite, sandstone, red), metal mesh, 1 x 1 cm tiles, 1/2 cm tiles	black granite	depending on availability red stone, sandstone, marble, sandstone, red sandstone, granite	granite	white stone, wood, 1 cm tiles	White Corus mudbricks and orange brick mudbricks + stone terraces	substructure made from reinforced concrete, brick masonry, sandstone, granite, red stone terraces	granite, mudbricks, concrete, steel + stone terraces	stone and the joints in steel roof	N/A	N/A	Interiors, floor, stone, steel	
manufacturing	casted by CNC molded	Handmaking and CNC molded	CNC	stone blocks casted by CNC	CNC	casted manually by hand casted, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	stone processed by CNC, concrete, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	machine cut, hand cut CNC	hand cut + CNC	casted labor for masonry and foundation work.	CNC	White Corus mudbricks and orange brick mudbricks + stone terraces	substructure made from reinforced concrete, brick masonry, sandstone, granite, red stone terraces	granite, mudbricks, concrete, steel + stone terraces	casted by mason, CNC,	casted manually	Interiors, floor, stone, steel		
weight	225 - 45 kg	~400kg	~27.0k mudbricks, ~1.5k mudbricks	pieces 15 kg pieces 6 kg	pieces 15 kg pieces 6 kg	stone processed by CNC, concrete, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	stone processed by CNC, concrete, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	blocks 10,450kg total 12,14 kg	N/A	total 13,000 kg	24750 kg	about 88 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	
dimension	~ 36 cm x 77 cm x 20/12.5 cm ~ 10/8/2 cm	300 cm x 300 cm x 100 cm cm	260 cm x 260 cm x 100 cm cm	260 cm x 150 cm x 200 cm cm	260 cm x 150 cm x 200 cm cm	stone processed by CNC, concrete, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	stone processed by CNC, concrete, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	blocks 30 x 40 cm 10/8/2 cm	modules 4/8/8 cm x 12/12/12 cm 12/12 cm x 12/12 cm x 4/8 cm	modules 4/8/8 cm x 12/12/12 cm 12/12 cm x 12/12 cm 12/12 cm x 12/12 cm x 4/8 cm	modules 4/8/8 cm x 12/12/12 cm 12/12 cm x 12/12 cm 12/12 cm x 12/12 cm x 4/8 cm	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	
number of pieces	160 pieces	42 pieces	22 pieces	275 pieces	2 pieces + 1 if metal supports	stone processed by CNC, concrete, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	stone processed by CNC, concrete, sandstone, red stone, granite, wood panels, steel roof panels, CNC-also environment system, 1/2 cm tiles	30/75 pieces	48 pieces	48 pieces	48 pieces	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick	about 220 kg each mudbrick
technical process																			
inspiration																			
realization																			
section detail																			
junction detail																			
roofing detail																			

Indo-German Workshop on Micro Architecture in Stone

LIST OF SELECTED STUDY TOURS/ SUMMER-WINTER SCHOOLS ORGANISED

1. **2013: Study Tour to Ahmedabad with B. Arch. IV Year- Introduction to Architecture; visits to IIM-A, CEPT, NID, Stone Quarries, CNC Set-Up, Designer Studios, Architects, Heritage Walk and visit to the Old City (now UNESCO World Heritage City) [Collaborations with NID, CEPT, IIM-A, Individual Designers and Architects]**
2. **2015: Study Tour to Manali with B. Arch. II Year students – exposure to Traditional Wooden Buildings, Construction Practices and Cultural & Architectural Heritage**
3. **2016: Study Tour to Orchha, Gwalior, Agra (UNESCO World Heritage Sites) with B. Arch. II Year – Understanding and Appreciating History of Architecture (India) [Collaborations with Museums]**
4. **2016: Series of Study Tour, Workshops and Juries, to the Tihar Jail Complex in New Delhi, with B. Arch. III Year Students (joint initiative with Prof. Tina Pujara) – Understanding Prison Architecture [First ever collaboration of any Dept. of Architecture in the country, with the Tihar Jail Authorities]**
5. **2017: International Study Tour and a Joint Studio with the Chulalongkorn University, Bangkok, with M. Arch. II Year students (Jointly with Prof. Tina Pujara) - 'Urban Design for Transgender, as part of the M. Arch. Design Studio [First ever International Study Tour in the History of Dept. of Arch. & Plng., IIT Roorkee and probably the first one in the institute as well]**
6. **2017: Study tour to Doon School, Dehradun and Mondrian House, Dehradun with B. Arch. II Year students (jointly with Prof. Mahua Mukherjee and Prof. Manavvi Suneja) - part of Design Studio, focusing on School Design (Kindergarten and Junior High School); also highlighting the award-winning restoration project of the Doon School**
7. **2017: Study tour and documentation of the Solani Aqueduct, Roorkee**
8. **2018: Study Tour to Aurangabad and Mumbai (UNESCO World Heritage Sites) with B. Arch. II Year – Understanding and Appreciating History of Architecture (India) [Collaboration with the Archaeological Survey of India, Aurangabad Circle]**
 During the course, students worked rigorously on the documentation and development of building inventories, focusing on the UNESCO World Heritage Sites of the state Maharashtra, especially highlighting Aurangabad and Mumbai. These studies were done in collaboration with the Archaeological Survey of India (ASI), Aurangabad Circle.
9. **2018: Study Tour to Manipur, Mizoram (North East) with B. Arch. III Year (jointly with Prof. Harshit Lakra) – Best Studies for understanding Vernacular Architecture [Collaboration with the Govt. of Manipur]**
10. **2018: Study Tour of the British Cemetery, Roorkee [Collaboration with the local authorities]; with co-faculty; focus on the architectural heritage of the cemetery**
 This is a vast cemetery having 33725 Sq m area (3372 Hectare/7.623 Acre) with a regular compound wall, pierced with an entrance gateway having a pointed arch of the Gothic style. **The cemetery contains a number of graves including graves of general Sir Harold Williams of different designs and materials belonging to mid nineteenth century.** A part of the cemetery is still use as graveyard by Christian community of Roorkee.



Plate 01: Visual Assessment of Architectural Elements and Materials in Solani Aqueduct

Plate 02: Photo Documentation of Existing Condition of the Railing as an Element in Solani Aqueduct

Study Tour and Documentation of Solani Aqueduct, Roorkee

11. **2019:** Study Tour to Bangalore with B. Arch. III Year Students – Case Studies of Interior Spaces and visits to Interior Design Offices and Workshops [Collaboration with FRDC, Bangalore – one of the top ten Indian retail design firms, recognized globally]
During the course, the studio exercise focused on the Retail Interior Design, which is the most professionally sought-after segment within this discipline. Case Studies of Interior Spaces and visits to the celebrated Interior Design Offices were done. Real-time Workshops, discussing Human Centered Design; material innovations; interior design trend; and, on-site challenges, were done in collaboration with FRDC, Bangalore, which is one of the top ten Indian Retail Design firms, recognized globally.
12. **2019:** Coordinated the 'Summer School India' conducted by HSLU Switzerland in collaboration with the Dept. of Architecture and Planning, IIT Roorkee; in partnership with Bangalore based IN:CH architects + planners; and worked on a real-time project for the client, Sristi Foundation. The workshop and internship were conducted in Auroville (Pondicherry) and Bangalore during 5th to 27th July 2019, in which the students were involved in varied stages - brainstorming and concept development; design development; and, real time execution of a Bamboo House, for the members of the Sristi Foundation.
13. **2020:** Special Visit-cum-Workshop in Auroville in general, and Collaboration with the Auroville Earth Institute in particular, 20-23 Jan, 2020, taking the students and scholars around the architectural heritage sites in and around Auroville; learning about the earth architecture; and witnessing the way of life in Auroville.



SUMMARY OF RESEARCH GRANTS AND PROJECTS

S. No.	Title of Project	Funding Agency	Financial Outlay	Year of Start & total period	Name of P.I. and other investigators	Status
1.	Monograph 'Dharohar' – Understanding the Importance of Art in Interior-Architecture	QIP, IIT Roorkee	0.20 Lakhs	Apr 2013 1 Year	Prof. Smriti Saraswat	Completed
2.	Documenting Space-Making Crafts of Uttarakhand	IIT Roorkee (FIG)	7.5 Lakhs	May 2013 3 (+ 1) Years	Prof. Smriti Saraswat	Completed
3.	Model Village Development for <i>Juang</i> Tribe in Odisha	HUDCO	22.25 Lakhs	Mar 2014 2 (+ 1) Years	P.I. Prof. Harshit Lakra Co-P.I. Prof. Smriti Saraswat	Completed
4.	<i>Project Dharohar</i> (Pilot Study: Almora)	IIT Roorkee	1.17 Lakhs	July 2014 6 mths.	P.I. Prof. Smriti Saraswat Co-P.I. Prof. Harshit Lakra	Completed
5.	<i>Project Dharohar(Contd.)</i> - Heritage Preservation in Uttarakhand: Art and Craft Workshops, a Medium	MHRD & JSDF	02 Crores	July 2014 3 Years	P.I. Prof. Smriti Saraswat Co-P.I. Prof. Ila Gupta Prof. Gaurav Raheja Prof. Harshit Lakra	Submitted (No Communication)
6.	Heritage Conservation of Solani Aqueduct, Roorkee	MHRD	06 Crores	Feb 2015 3 Years	P.I. Prof. Pradipta Banerji Co-P.I. Prof. Harshit Lakra Prof. Pushplata Prof. Gaurav Raheja Prof. Sanjay Chikermane Prof. Smriti Saraswat Prof. Arindam Biswas	Submitted (No Communication)
7.	Empowering Rural Women Artisans of Uttarakhand through Technological Developments and Dissemination: Focus on <i>Aepan</i> Art of District Almora	DST	67.82 Lakhs	Jan 2015 2 Years	P.I. Prof. Ila Gupta Co-P.I. Prof. Smriti Saraswat	Submitted (No Communication)
8.	Safeguarding the	MOC	13 lakhs	Apr 2015	P.I. Smriti Saraswat	Approved

	Traditional Craftmanship of Almora and Pithoragarh through Documentation and Workshops (Focus on <i>Aepan</i> and <i>Likhai Kaam</i>)			3 Years (extended due to COVID)	Co-P.I. Prof. Harshit Lakra Prof. Ila Gupta	(Phase I Completed, Phase II in-Progress)
09.	3-day National Workshop – ‘Dharohar-2015’ and Monograph <i>Sanchay</i>	IIT Roorkee	5.7 Lakhs	16-18 Aug 2015	P.I. Prof. Smriti Saraswat Co-P.I.: Prof. Ila Gupta Prof. Gaurav Raheja Prof. Harshit Lakra Prof. Saptarshi Kolay	Completed
10.	Book “Sanchay - Art, Craft and Interior Architecture of Uttarakhand”	QIP, IIT Roorkee	0.30 Lakhs	Aug 2015	P.I. Prof. Smriti Saraswat	Approved (Scheme withdrawn)
11.	DOCUMENTING THE ART, CRAFT AND INTERIOR-ARCHITECTURE OF RAJASTHAN (Through Participatory Workshops and Community Interaction)	MoC	14 lakhs	April 2016 1 Year	P.I. Prof. Smriti Saraswat Co-P.I. Dr. Madan Meena	Submitted (No Communication)
12.	‘PARAMPARA’ DOCUMENTING TRADITIONAL KNOWLEDGE SYSTEMS IN INTERIOR-ARCHITECTURE OF UTTARAKHAND (Through Participatory Workshops and Community Interaction)	MoC	14 lakhs	July 2016	P.I. Prof. Smriti Saraswat Co-P.I. Prof. Shekhar Joshi	Submitted (No Communication)
13.	GIAN Course on – “Interior-Architecture, Craft and Design: Focus on Inter-Disciplinarity”	MHRD	8.4 Lakhs	03 rd – 12 th Oct 2016 (7 Days)	Faculty: Smriti Saraswat Foreign Faculty: Prof. Maarit Saalolainen, Aalto University, Finland	Completed
14.	‘PRATHA’ DOCUMENTING THE CULTURAL INDUSTRIES	INTACH	13 lakhs	July 2016	P.I. Prof. Smriti Saraswat Co-P.I. Ar. Gaurav Mathur	Not Approved

	OF ALMORA (focus on <i>LikhaiKaam</i>)					
15.	'SHILPSHALA' - DOCUMENTING THE WORK SPACES OF CRAFTSPERSONS OF WALLED CITY, JAIPUR	INTACH	3.2 Lakhs	Oct. 2016	P.I. Prof. Pooja Nigam Co-P.I. Prof. Smriti Saraswat	Not Approved
16	Cultural Industries and Skill Development	Project Vishwa-jeet	350 Lakhs	Oct. 2016	P.I. Prof. Smriti Saraswat	Not Approved
17	GIAN Course on – “Architectural Theory: <i>Worldviews, Conceptual Histories and Role Models</i> ”	MHRD	5.44 Lakhs	20 th – 24 th Dec. 2017 (5 Days)	Faculty: Smriti Saraswat Foreign Faculty: Prof. Axel Sowa, RWTH, Aachen (Germany)	Completed
18	'SANCHAY' - VISUAL INVENTORIES OF THE BUILT SPACES IN ALMORA DISTRICT OF UTTARAKHAND	Sahapedia, UNESCO	0.4 lakhs	2017	P.I. Prof. Smriti Saraswat	Not Approved
19	Documenting the Creative Economy and Cultural Industries of Uttarakhand	INTACH	10 Lakhs	2017	P.I. Prof. Smriti Saraswat	Submitted (No Communication)
20	NPTEL Course on – “Role of Craft & Technology in Interior Architecture”	MHRD	04 Lakhs	2018 8 Weeks	Faculty: Prof. Smriti Saraswat	Completed
21	SWAYAM –NPTEL Online Course “Role of Craft & Technology in Interior Architecture” (Re-run course; Approved under FDP)	MHRD AICTE	02 Lakhs	2019 8 Weeks	Faculty: Smriti Saraswat	Completed
22	The Grant “A New Passage to India”, for the project - Towards an Indo-German Centre for Experimental Architecture and Material Culture (EAMC)	DAAD, Germany	141.5 Lakhs	June 2019-Sep. 2022	P.I. (Germany): Prof. Axel Sowa P.I. (India): Prof. Smriti Saraswat	Ongoing

23	SWAYAM –NPTEL Online Course “Role of Craft & Technology in Interior Architecture” (Re-run course; Approved under FDP)	MHRD AICTE	02 Lakhs	2020 8 Weeks	Faculty: Smriti Saraswat	Completed
24	SWAYAM –NPTEL Online Course “Role of Craft & Technology in Interior Architecture” (Re-run course; Approved under FDP)	MHRD AICTE	02 Lakhs	2021 8 Weeks	Faculty: Smriti Saraswat	Completed
25	Traditional Principles of Settlement Planning in Heritage Temple Sites of Odisha/ Erstwhile Kalinga Region	Indian Knowle- dge Systems MoE	10.0 lakhs	Sep. 2021 2 years	P.I. Prof. Rabi Mohanty Co - P.I.: Prof. Smriti Saraswat Prof. Ashaprava Mohanta Prof. Debasis Das	Approved in Feb. 2022
26	Interiors, Furnishings and Crafts - Pre- Twentieth Century India	Graham Foundat- ion	10,000 dollars	Sep. 2021 1 year	P.I.: Prof. Smriti Saraswat Co - P.I.: Mr. Rajeev Meena	Not approved
27	The Grant “A New Passage to India”, for the project - Towards an Indo-German Centre for Experimental Architecture and Material Culture (EAMC)	DAAD, German y	35 Lakhs	Sep. 2022 – Dec. 2023	P.I. (Germany): Prof. Axel Sowa P.I. (India): Prof. Smriti Saraswat	Initiated

OUTREACH

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FULL LIST OF PUBLICATIONS

A) Books

i) **"Interior Architecture and Narratives: Craft, a Medium"**, Lap-Lambert Publishing Ltd., Germany, 2017, ISBN No. 978-3-330-05625-1

B) Research Papers in Journals

i) **"Radhasoami Samadh, Agra: Stone Crafts as medium of Narration"**, CONTEXT – Journal of the Development and Research Organisation for Nature, Arts and Heritage, Volume VIII, Issue 1, Spring/Summer 2011, pp 91-96

ii) **"Emerging Trends in Tall Building Design: Environmental Sustainability through Renewable Energy Technologies"**, *International Journal of Civil Engineering and Architecture*, January 2014, pp. 116-120, Co-Author: Ar. Arif Kamal

iii) **"Revival of Crafts and Social Change: Case Study on Dholka"**, in Majumdar, S. et. al. (ed.). *Technology and Innovation for Social Change*, Chapter 11, Springer, 2015, pp. 174 to 187

iv) **"Craft, a Narrative Barometer for Interior-Architecture: Specific Focus on Stone Crafts of India"**, in Chakrabarti, A. (ed.). *Research into Design Across Boundaries, Smart Innovation, Systems and Technologies*, 34, Volume I, Springer, 2015, Book ISBN: 978-81-322-2232-3_31, Pp. 353-362; Co-Author: Dr. Gaurav Raheja

v) **"Koti Banal Architecture of Uttarakhand: Indigenous Realities and Community Involvement"**, in Chakrabarti, A. and Chakrabarti, D. (ed.). *Research into Design for Communities, Smart Innovation, Systems and Technologies*, 66, Chapter 14, Volume II, Springer 2017, Book ISBN: 978-981-10-3520-3, pp. 165-177; Co-Author: Gautam Mayuresh

vi) **"Sustainable Craft Practices and Space-making in Tech Design Contexts"**, in Garber, E.; Hochtritt, L. and Sharma, M. *Makers, Crafters, Educators: Working for Social Change*, Routledge, 2018, Chapter 40, pp 169-172

vii) **"Stone: Making and Maker"**, *Candide - Journal for Architectural Knowledge*, No.13, 2022, ISSN 1869–6465

C) Research Papers in Conferences

i) **"Stone Crafts in Interior Architecture: Traditional Systems of Space Making (Specific Reference to Radhasoami Samadh, Agra)"** – presented at the Fourth Global Stone Technology Forum (15Dec – 16 Dec 2011), organized by Centre for Development of Stones (CDOS), and Federation of Indian Chambers of Commerce and Industry (FICCI), in Jaipur, India

ii) **"Technology, Innovation and Social Change: Crafts as an Important Conjunction"** – presented in the international conference on "Technology, Innovation and Social Change", organized and conducted by Tata Institute of Social Sciences, Mumbai, 22-24th January 2013

iii) **"Importance of Art in Interior-Architecture: Specific Reference to Art Works, City Palace Udaipur, India"** - presented in the international seminar on "Importance of Art and it's Inter-relationship with other subjects", organized and conducted by Faculty of Visual Art, Kumaun University, Almora during 06-07th October 2013

iv) **"Craft, a Narrative Barometer for Interior-Architecture: Specific Focus on Stone Crafts of India"** – presented at ICORD 2015, 05th International Conference on Research into Design, organized and conducted by Centre for Product Design and Manufacturing, IISC Bangalore during 07th – 9th January 2015

v) **“Koti Banal Architecture of Uttarakhand: Indigenous Realities and Community Involvement”** – presented at the International Conference on South Asian Vernacular Architecture, organized and conducted by School of Planning and Architecture, Bhopal, at Bhopal, during 11th – 13th Dec 15; Co-Authors: Gautam Mayuresh and Priyanka Mangaonkar

vi) **“Design for Women-safe Public Spaces: Challenges and Concerns in the Specific Case of Delhi, India”**, presented at Spaces and Flows: Seventh International Conference on Urban and ExtraUrban Studies, 10th-11th November 2016, University of Pennsylvania, Philadelphia, USA

vii) **“Koti Banal Architecture of Uttarakhand: Indigenous Realities and Community Involvement”** – presented at the International Conference on Research into Design (ICORD), organized and conducted by Department of Design, IIT Guwahati, during 09th – 11th January 17; Co-Author: Gautam Mayuresh

viii) **“Documenting the Cultural-Creative Industries of Uttarakhand Specific Focus on the Space-Making Crafts of Almora”**, International Conference on Sustainable Built Environment 2017, IIT Roorkee, 03rd – 05th Feb. 2016; Co-Author - Dr. Gaurav Raheja [**Best Paper Award**]

ix) **“Documenting the Cultural-Creative Industries of Uttarakhand: Specific Focus on the Art, Craft, Interior-Architecture”**, Golden Jubilee National Seminar on "Promotion of Skills and Technologies for Sustainable Rural Development in India", NITTTR Chandigarh, 31st Aug. – 01st Sep. 2017

x) **“Documenting, Preserving and Revitalizing the Art, Craft and Interior-Architecture of Almora (Uttarakhand)”**, ICOMOS General Assembly Conference, 11th -15th Dec. 2017; Co-Author: Dr. Gaurav Raheja, Gautam Mayuresh

xi) **“The Cultural-Creative Industries of Uttarakhand (India): Specific Focus on Interior Architecture and Space-Making (Building) Crafts”**, LISD World Research Congress on Engineering, Design & Technology 2020, University of Oxford, 27th -28th January 2020; Co-Author: Dr. Gaurav Raheja

xii) **“Introduction to Interior Architecture and Building Crafts”**, International Webinar on Civil Engineering and Architectural Design (CEAD), Virtual Conference, CEAD Leadership and Committee, 28th -29th April 2022; Key Speaker

D) Contributions in Encyclopaedias

i) **“Vernacular Architecture of Uttarakhand”**, *Encyclopedia of Vernacular Architecture of the World*, Second Edition, UK, Bloomsbury: 2024

ii) **“Vernacular Architecture of Rajasthan and Gujarat”(Ed.)**, *Encyclopedia of Vernacular Architecture of the World*, Second Edition, UK, Bloomsbury: 2024

E) Articles/Essays in Periodicals/Magazines

i) **“Understanding Courtyard Design through Havelis of Rajasthan”** – published in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, Sep 11, pp. 18-21

ii) **“India’s Art Kitli”** – published in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, Nov.11, pp. 18-20

iii) **“Of Space and Crafts”** – published in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, Dec. 11, pp. 18-20

iv) **“The Nuances ofThikriKaam”** - published in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, Jan 12, pp. 18-20

v) **“Spiral: A Representation of Process and Growth”** - in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, April 12, pp. 18-20

vi) **“Natural Stones”** – published in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, June 12, pp. 18-20

vii) **“TILES”** – published in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, Cover Story, Dec. 2012, pp. 24-30

viii) **“Bottle Bricks and the Esthetics of Sustainability”** – published in the magazine POOL, Indi-design Group, Issue 35, 2013, pp. 50-55

ix) **“Dharohar: A National Workshop on Craft and Skill Development for Sustainable Design”**, published in the periodical of Institute of Indian Interior Designers (IIID) – INSITE, Dec 15, pp. 40-43

F) Reports/Monographs

i) The author had worked on two monographs: one on **‘Woodturning and Lacquer Craft, Dholka, Ahmedabad’** and second on **‘Stone Crafts of Gujarat’** at Design Innovation and Craft Resource Centre (DICRC), CEPT University, Ahmedabad - They were published as e-monographs, in 2013. These monographs are uploaded online on the DICRC website:

http://dicrc.in/resource-building-and-dissemination#databank_1299

http://dicrc.in/resource-building-and-dissemination#databank_2732

ii) **‘Dharohar’** – Understanding the Importance of Art in Interior-Architecture (specific focus on City Palace, Udaipur), published by QIP Centre, IIT Roorkee, 2014

iii) **‘Sanchay’** - Art-Craft and Interior Architecture of Almora, draft monograph launched during Dharohar: a National Workshop on ‘Craft and Skill Development for Sustainable Design’, organised and conducted under the aegis of IIT Roorkee, during 16th – 18th August 2015

G) Manifestos/Charters

i) Played a vital role in the creation and development of **National Design Manifesto** (outcome of the Deconstructing Design Workshop organised by MHRD, India) prepared by MHRD, IITs, SPAs, NITs and other institutes of repute, during 2014-15

ii) Played a vital role in the creation of the **Charter on South Asian Vernacular Architecture** during the International Conference on South Asian Vernacular Architecture, organized and conducted by School of Planning and Architecture, Bhopal, at Bhopal, during 11th – 13th Dec 15

H) Poster Presentations

i) **Poster based on “Professional Work during 2012-2015”** - presented in the International Seminar – ‘Inside Future-Future Inside’, organized and conducted by School of Interior Design, CEPT University, Ahmedabad, during 19th – 22nd December 2015

ii) “Documenting, Preserving and Revitalizing the Art, Craft and Interior-Architecture of Almora (Uttarakhand)” –presented in the 19th ICOMOS General Assembly and Scientific Symposium, 11th to 15th December 2017; Co-Author: Gautam Mayuresh

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