

**Name: Dr. Prajakta Dalal-Kulkarni**

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Nationality: Indian

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### **BRIEF INTRODUCTION-**

Prajakta is an accomplished environmental architect and consultant with over 15 years of academic and professional experience. She currently serves as Associate Professor at the Department of Environmental Architecture at BNCA and is a co-founder of Third Wave Environmental Design, a consulting firm that specializes in environmental design and simulation. Prajakta's expertise lies in climate-responsive, zero-energy, carbon-neutral design solutions and urban resilience. She is a gold medallist from Pune University and she holds a PhD in net-zero energy building subject area.

Prajakta is a certified IGBC AP, GRIHA Evaluator & Trainer, and MSME-approved certified solar energy professional. She has worked on several green building certifications, including LEED, IGBC, and GRIHA, for various projects across India. Prajakta has conducted training sessions and workshops for NIUA, GRIHA, CREDAI, PWD, MEDA (ECBC), PCMC, and Nashik Municipal Corporation. She has been invited to speak on national and international platforms. She has worked as a technical committee member for conferences and is actively involved in a number of research initiatives pertaining to environmental field.

She is core committee member of Indian green building council's (IGBC) Pune chapter and Advisor on Thermal comfort Advisory of International WELL Building institute (IWBI) . She is a founding member of Clean cool Pune network (CCPN) set up by BNCA & university of Leeds and also founding member of BNCA's CUBE (Centre for Use of UAV in the Unbuilt and Built Environment), which carries out capacity building, consulting, and research in the area of unmanned aerial vehicles (UAVs) for construction and related fields. She is head, research & development at the MKSSS's Institute of Sustainability and Development Studies.

### **Education:**

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| Pune University<br>2018-2023  | PhD<br>(Subject: Assessing feasibility of net zero energy buildings (NZEB) in the residential sector – A case of Pune)       |
| Dr. B.N. college of Architecture<br>(Pune University)<br>June 2006- June 2008 | M. Arch (Environmental Architecture)<br>First class with distinction<br>Gold medal in thesis and 1st rank in Pune University |
| Dr. B.N. college of Architecture<br>(Pune University)<br>June 2001- June 2006 | Bachelor of Architecture (B.Arch)<br>first class with distinction<br>3rd rank in Pune University                             |

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| Green Building Accreditation professional | GRIHA Evaluator & Trainer<br>IGBC AP                      |
| Renewable Energy                          | Solar Energy professional approved by MSME govt. of India |
| International WELL Building Institute     | IWBI Thermal Comfort Advisor 2025-26                      |

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|---------------------------------|---|
| <b>Key Areas:</b>               | Climate-responsive building design, zero-energy design, green building ratings systems, Climate Resilient Urban Planning, building performance modelling, carbon neutral design and planning, Environmental auditing, post occupancy evaluation & comfort studies, Solar Energy, Sustainable materials, |
| <b>Professional Membership:</b> | Indian Institute of Architects<br>Registered with Council of Architecture<br>Indian Green Building Council (IGBC)   |
| <b>Experience in Years:</b>     | Professional: 16 Years<br>Academic: 15 Years  |

### Academic Work Experience:

- **Associate Professor, Department of Environmental Architecture (M. Arch EA), Dr. Bhanuben Nanavati College of Architecture, Pune**  
2012- till day
  - Subject's taught: Climate responsive design studio, Building Physics, Environmental Planning studio, Energy studio, Tools for measuring Sustainability-Green building certification, ECBC, Renewable Energy and technology, Energy Management and Audit, Natural resource management, Eco friendly materials and technology
  - Guide to Thesis and Research projects: **Guided 50+ students**
  - Conducted, Organised and participated in Workshops, Seminars, awareness & Training programmes, Competitions related to field of environmental architecture.
  - Guided several competitions like US DOE's Race to zero, Solar Decathlon India, HOSMAC, PCERF, NIASA Thesis Awards, CGBMT's Bamboo Design competition etc.
- Institutional Roles:
  - Interim Head of Department – M.Arch (EA) December 2023, to June 2024
  - Coordinator of BNCA Environmental Consultancy Projects
  - Instrumental in various Industry academia collaboration for EA department.
  - Competitions, workshops Coordinator (EA department)
  - SES RE Cell: Co-convener
  - Solar Decathlon India – BNCA coordinator
  - Kirloskar's Vasundhara- BNCA Coordinator
- **Assistant Professor, N. M. V. P. college of Architecture, Nashik.**  
2010- 2012  
Subjects Taught: Basic Design & Architectural design studio, Environmental Sciences for second year, Environmental sciences for third year architecture, Sustainable design (Elective) for fourth Year, Eco-friendly interior design for second & Third year B.Des.

### Professional Work Experience:

- **Director, Partner at Third Wave Environmental Design, Pune**  
2012 to present

'Third Wave Environmental design' is one of the leading Green Building consultancy firm in Pune

providing services in the field of Environmental Architecture with a vision of sustainable, eco-friendly and Energy efficient development.

Work areas:

- Sustainable, climate responsive design solutions.
  - Green building certification facilitation and consultancy for green building certification programs like LEED, IGBC, GRIHA, EDGE
  - ECBC energy code compliance reports.
  - Whole Building Simulation
  - Energy Management and Auditing
  - Consultancy for best eco- friendly construction practices and sustainability Management
- **Associate Environmental Architect with VK:e Environmental , Pune. , 2010 –2012**
  - **Environmental Architect & Project Coordinator with Nirman Consultants, Gujarat 2009- 2011**
  - **Environmental Architect, designer & Project coordinator with Venkatraman and associates, Pune Branch. 2008- 2009**

**Contribution to Live Projects (Integration of Industry and academics):**

- Pimpri Chinchwad Municipal Corporation Heat action plan (2024)
- Chandrapur city ESR report preparation for Chandrapur Municipal Corp.(2023)
- Nashik Municipal corporation Climate action plan- focusing on Energy sector (2022)
- Preparation of construction bricks using processed sanitary pad waste in collaboration with Padcare lab. (2023)
- Energy Audit of 5 star hotels in Pune under Bureau of Energy Efficiency's (BEE's) PAT scheme, 2020.
- Green Audit for K. B. Joshi Institute, Pune (2022)
- Green Audit of Cummins Engineering College, Pune (2021)
- Green building certification feasibility of CTCI Office Building for Cummins India Ltd. Dec 2018-July 2019.
- Contributed to Carbon Neutral Campus project of Samuchit envirotech, 2019.
- Energy Audit of Cummins India pvt. Ltd. Building: September 2018
- Eco-friendly exhibition design for Kirloskar Vasundhara photo exhibition on 4<sup>th</sup>-8<sup>th</sup> January 2018 at Balgandharva art gallery.
- **Pune Municipal Corp. building- IGBC existing building certification (2016)**
- **Eco Cottage design for Writer corp. (Hilton Group) Shillim (2015)**
- **Tourist Cottage in Bamboo -National Bamboo Design Competition for Students by CGBMT- 2014: First prize of Rs. 15,000 and all commendation prizes were won by our students.**
- **Design of Experience zone for Ecobuild Exhibition 2013**

**Training and Advisory roles:**

- **Lead investigator for Heat action plan for PCMC.**
- **Head- R & D at MKSSS's Institute of Sustainability and Development Studies (ISDS), Pune 2021-till day**
- **Technical Committee member for AEEE's Energise 2023 conference.**

- **Trainer for Capacity Building Training for NIUA’s Climate Smart Cities Assessment Framework with focus on 'Green Buildings Adoption' and 'Promotion of Green Buildings' under the Energy & Green Building category of framework.** This training was organized by National Institute of Urban Affairs (NIUA) which aimed at empowering representatives of ULBs and town planning departments in Maharashtra. (2023).
- **Conducted trainings for Public works department’s** newly joined officers on Energy Conservation Building code & Green buildings as a part of their induction (since 2022-till day).
- **Faculty Lead for US Solar Decathlon and Solar Decathlon India competition (2018 till day)**
- **Faculty lead for ‘Solutions for carbon neutral campus’ National level competition** organised by IIM Kozhikode. (2023).
- Regional curator for the **UN Global Conference** titled 'INNOVATE4CITIES'
- **Invited as a speaker** at Virtual Annual Climate Conference by EAUC in collaboration with **UNEP** (2021).
- **Invited as a speaker** in Solar Decathlon India Faculty conference organized by Solar Decathlon India on 17 Dec. 2021
- IBPSA-US Education Committee Member- 2024- till date
- IBPSA- US Conference Committee Member- 2025
- Investigator for Horizons Connect Fund for project establishing a Sustainable Cooling Pune Network, 2023-24.
- Investigator for Marginalised Futures of Sustainable Cooling in Pune project, 2023 - 2024
- Curator for Climate Proofing South Asia (CPSA) Technology Solution, an online conclave organized by the Indian Network on Ethics and Climate Change (INECC) in collaboration with BNCA
- Curator for 'Low-Carbon Climate Resilience: How Architects Can Deliver Change' conference in association with The Indian Network on Ethics and Climate Change (INECC), and Urban Design Collective (UDC).
- Worked as a mentor for NEW URBAN INSERTS: OLD MORPHOLOGIES- INTERNATIONAL ONLINE WORKSHOP by UTAH state university & BNCA (IOWUB) -2021
- **5 star hotel Energy Audit work for BEE’s PAT cycle, Published in Govt. gazette: (April 2020)**
- Prof. Prajakta Kulkarni & Mr. Sachin Deshpande with M. Arch EA students conducted baseline energy Audit of 5 five star hotels in Pune. The baseline study is an important activity which decides baseline or benchmark specific energy consumption of the Hotels. The work was conducted in collaboration with AR energy auditing firm for Bureau of Energy efficiency (BEE), Ministry of Power. The baselines calculated by students are published in Govt gazette exactly as per report prepared by the students.
- **Invited as a speaker** for a webinar on Action Oriented Approaches to Climate change education by LAYA-INECC (Indian Network on Ethics and Climate Change) (2020)
- **Hosted ‘Use of UAV in Built Environment’** in collaboration with SPPU and Riddit technologies on 3rd & 4th February 2020.
- **Preparation of Energy Conservation Building Code (ECBC) materials directory for Maharashtra Energy Development Agency (MEDA), 2018-19.**
- **ECBC Capacity Building Awareness Program for MEDA-** April 2018 to March 2019 Was leading the project of conducting and organising training programs to train key stakeholders like architects and developers to students and urban local bodies in the context of the Energy Conservation Building Code which soon to be notified for the state of Maharashtra.
- **Invited as a speaker** for a program on ‘Showcasing Carbon Neutrality Approach for Campus and Publication of Yuva Drishti Handbook for Carbon Neutral Campus’ organized by Samuchit Enviro tech and Climate Collective Pune (2019).
- **Hosted COA TTP** on Application of Energy Efficiency Concepts in Architecture Pedagogy 10th to 14th December, 2018

- **URBANLAB- June 2018 (worked as Organiser):**  
Led the UrbanLab 2018, part of the Indo-German Smart Initiative (IGSI), where interdisciplinary teams co-created urban solutions and strategies for Pune as a sustainable, comfortable smart city. Coordinator for NIASA-COA TTP “Incorporating energy efficiency in the architectural curriculum” held in December 2018.
- Organized a one day seminar on the theme “ Zero Waste – Approach towards Construction Waste” at the 9 th Kirloskar Vasundhara International Film Festival 2015, Pune.
- Organised a one day seminar on the theme 5R’s - Reduce, Reuse, Recycle, Recover and Refuse
- Organised Green Fest 2013 and 2014 – and exhibition cum lecture series where academicians, entrepreneurs and people come together for a green initiative.
- Organised Seminar on “Climate Change” – 2016
- Organising Badve Lecture Series – from 2015 to 2020
- Organised one day conference on ‘rivers & city resilience’ at BNCA on 8th January 2018 under Kirloskar’s Vasundhara festival.
- Helped organise 2 day workshop on ‘sustainable Built structures- Retrofitting the existing’ on 4th & 5th January 2018 at BNCA along with IDE.
- Organised ‘Green Building & Its Economics’ collaborative workshop with Amity University with on 16th March 2018
- Coordinated ‘sustainable design competition awards (Bapat awards)’ jury on 3rd January 2018 at BNCA.

#### Research and Publication:

##### Publications:

- A Tale of 5 Cities – Nature based Blue- Green Solution to Resilience (Mumbai, Pune, Nagpur, PCMC and Panaji) : 2021
- Heat Island Studies – Case of Pune city: 2022

##### Research Papers:

| Title  | Level National / International | Publication  | Year of Publication |
|--|--------------------------------|--|---------------------|
| Evaluation of Embodied Energy for Building Construction under Urban Renewal Schemes in Core City Area – A Case of Rasta Peth, Pune | International                  | Proceedings of Energise 2023 : Lifestyle, Energy Efficiency and Climate Change | 2024                |
| Projecting the impact of climate change on indoor and outdoor thermal comfort in Indian cities                                     | International                  | International Journal of Research and Analytical Reviews                       | 2023                |
| The impact of Solar Photovoltaic rooftop panels on Temperature profiles of surrounding and urban thermal environment               | International                  | Advances in Clean energy and Sustainability (Springer)                         | 2023                |

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| Methodological Challenges in assessment of need, applicability and barriers of construction of Net zero energy (NZE) residential development in India. | National      | Veranda: An interdisciplinary journal of Art and Architecture                                | 2022 |
| Issues Affecting the Unique Bund Systems in the Khazans of Goa   | National      | National Level Online Conference on Planning, Design and Management - 2021 (NOCPDM-2021)     | 2021 |
| Evaluating The Impact of Rooftop Greening Methods on The Urban Microclimate at A Neighborhood Level (Residential)                                      | International | International Journal of Engineering Research  | 2021 |
| Evaluation of Daylight Distribution in a Hospital room with Complex Fenestration System in Hot & Dry Climate   | International | International Journal of Engineering Research  | 2021 |
| Importance of India's Net Zero Energy shift in residential Sector by 2050  | National      | Envisioning India 2050: Concerns of urban environment  | 2020 |
| Estimating Potential Solar Energy on Rooftops using Unmanned Aerial Vehicle  | International | International Conference on Computational Intelligence and Knowledge Economy (ICCIKE)        | 2020 |
| Analyzing Role of Construction and Demolition Waste in GFRG & EPS Paneling Rapid Walling Technology  | International | International Journal of Architecture, Engineering and Construction                          | 2019 |
| Assessment of building envelope material for embodied energy to reduce global warming and ozone depletion potential                                    | International | IJRAR March 2019, Volume 6, Issue 1  | 2019 |
| Need of energy conservation measures in existing residential buildings   | International | IJRAR Volume 6 Issue 1 March 2019  | 2019 |
| Evaluating rooftop solar photo voltaic potential of existing residential high rise buildings in Pune   | International | Futura Icon conference, Pune.  | 2019 |
| Applicability of Net Zero Energy Building (NZEB) Concept in the Residential Sector in India  | International | INTERNATIONAL CONFERENCE ON INFRASTRUCTURE DEVELOPMENT ICID 2018 proceedings, ICID2018_D_044 | 2018 |
| Life cycle assessment of Mivan construction  | National      | Indian Conference on Life Cycle Management (ILCM 2018) on 5th Oct 2018, Mumbai               | 2018 |

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| Evaluating the barriers for Solar Energy application to Indian Industrial Sector                                    | International | International Journal of Industrial Electronics and Electrical Engineering, ISSN: 2347-6982, Volume-5, Issue-4, | 2017 |
| System Approach for Energy Efficient Residential Buildings in India   | National      | Conference proceedings  | 2008 |
| paper presentation on energy efficient commercial buildings in conference conducted by institute of engineers, Pune | National      | Conference proceedings  | 2008 |

**Awards and Achievements:**

- 1st in thesis and overall 2nd in Pune University in M. arch 2008
- 3rd in Pune University in B. arch. 2006
- Award for achieving first rank in college 2001, 2002, 2004, 2005.
- Pidillite award for excellence in Architectural studies 2005-06.
- IIA Pune award for excellence in Architectural studies 2005-06.
- Best student award 2005
- 2nd prize in national level eco-cottage design competition organized by centre for green building and materials, Bangalore 2009.
- 1st prize in paper presentation on energy efficient commercial buildings conducted by institute of engineers, Pune 2008.

**Languages:**

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| English | Excellent |
| Hindi   | Excellent |
| Marathi | Excellent |