Dauji Saha
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Academic Qualifications

Degree /Examination	Discipline/ Subject	Conferring Authority/Institution	Year	Marks / CGPI	Remarks
Ph.D.	Civil Engg.	IIT Bombay, Mumbai	2016	9.68	CGPI from 44 credits in Course Work
P.G. Elective Course	Reliability Engg.	Homi Bhabha National Institute, Mumbai	2012	95%	4-credit Elective course
P.G. Certificate	Nuclear Science and Engg. (Spl. Civil Engg.)	Training School, Bhabha Atomic Research Centre, Mumbai	2000	75%	Ranked First Civil Engineering Discipline
B.E.	Civil Engg.	Jadavpur University, Kolkata	1998	82%	First Class with Honors; Ranked Seventh Civil Engineering Department (~109 students)
Uchha Madhyamik (Higher Secondary) Examination	Science	West Bengal Council of Higher Secondary Examination/Laban Hrad Vidyapith, Kolkata	1994	79%	Ranked 94th (~3 lakh examinees)
Madhyamik (Secondary) Examination	General	West Bengal Board of Secondary Education/ Acharya Prafulla Chandra High School for Boys, Kolkata	1992	85%	-

Professional Experience Summary

Post-graduation Employment Positions

- Construction Engineer (**Bridge & Roof, Ibrahimpatnam**): August 1998–January 1999
- Design Engineer (**Consulting Engineering Services, Kolkata**): April 1999–July 1999
- *P.G. Certificate Nuclear Science and Engineering with specialization in Civil Engineering): Training School, Bhabha Atomic Research Centre, Mumbai August 1999-August 2000*
- Design Engineer (**Bhabha Atomic Research Centre, Mumbai**): September 2000–March 2016

Post-PhD Employment Positions

- Design Engineer (**Bhabha Atomic Research Centre, Mumbai**): April 2016–till retirement (2024)
- Lecturer (**Homi Bhabha National Institute, Mumbai**): April 2016–till June 2024 (concurrently with above)
- Assistant Professor (**Homi Bhabha National Institute, Mumbai**): July 2024–till retirement (2024: concurrently with first role above)
- **Retired (Voluntary): 07 November 2024**

Post-Retirement Engagements (Freelance)

- Academic services: Instructional, review and editing assignments;
- Consultant: Analysis, and design of civil structures;
- Consultant: Research projects;
- Student guidance: PhD (ongoing); Internship (ongoing);

Life Membership of Professional Organizations

- Indian Society for Hydraulics (ISH) (LM 882).
- Society for Reliability and Safety (SRESA) (LM 71)
- Institution of Engineers (India) [IoE (I)] (M 1618940)
- Indian Geotechnical Society (IGS) (LM 4517)
- Ocean Society of India (OSI) (LM 416)
- Indian Meteorological Society (IMS) (LM 3523)
- Indian Society for Earthquake Technology (ISET) (LM 1737)
- Indian Association of Hydrologists (IAH) (LM 2006)
- Indian Concrete Institute (ICI) (LM 13112)

Domain Expertise

- Structural analysis
- Design of steel structures
- Design of concrete structures
- Geotechnical engineering
- Foundation design
- Applied statistics

Awards and Recognitions

- ***Merit Certificate*** (National Scholarship Scheme) (1992) for Performance in Madhyamik (10) Examination
- ***Merit Certificate*** (National Scholarship Scheme) (1994) for Performance in Higher Secondary (10+2) Examination
- ***Merit Certificate*** (Alumni Association, N.C.E. Bengal and Jadavpur University) (1997) for Academic Performance during 1994-1997
- ***Homi Bhabha Award*** (Department of Atomic Energy) (2000) for First Rank in Civil Engineering Discipline
- ***DAE Group Achievement Award*** (DAE) (2012) for contribution to First Online Examination, BARC Training School
- ***Best Paper Award*** (Indian Geotechnical Society, Kanpur) (2017) for a paper presented at Workshop on Sustainable Geotechnics ##
- ***Best Paper Award*** (GLA University, Mathura) (2021) for a paper presented at Int. Conf. **Second Futuristic and Sustainable Aspects in Engineering and Technology** (FSAET 2021)@@
- ***Best Paper Award*** (GLA University, Mathura) (2022) for a paper presented at Int. Conf. **Third Futuristic and Sustainable Aspects in Engineering and Technology** (FSAET 2022) %%
- ***Best Paper Award*** (Dr. D Y Patil University, Pune) (2023) for a paper presented at Int. Conf. **Sustainable Technologies in Civil and Environmental Engineering** (ICSTCE 2023)&&
- ***Best Paper Award*** (Indian Concrete Institute) (2023) for a paper published in ICI Journal $$

"Determination of Dynamic Properties of Soil Considering Spatial Uncertainty" by Saha Dauji, Kapilesh Bhargava, and Ranjan Kumar

@@ "An innovative method for enhancement of durability of concrete structures for sustainable construction" by P.K. Srivastava, Saha Dauji, and Kapilesh Bhargava

%% "Implications of Different Clear Cover to Reinforcement on Internal and External Faces of Concrete Members" by Saha Dauji, and Kapilesh Bhargava

&& "Exploring extreme value analysis of rainfall for some nuclear power plant sites in India" by Nikhilesh Ghandre and Saha Dauji (paper from Internship Project)

$$ "Effect of Crusher Dust on Properties of Normal Strength Concrete: A Case Study" by Harish R Choudhary, Saha Dauji, and Arham Siddique (paper from M. Tech. Thesis)

Student Guidance (completed)

- **B. Tech Internship Projects**: **07** (**BARC**)
- **Post-graduate Diploma Projects**: **04** (**HBNI**)
- **M. Tech Projects**: **03** (**HBNI**)
- **M. Tech Projects**: **02** (**VIIT***)
- **M. Tech. Internship Projects**: **02** (**BARC**)
- **IIT Bombay ILP Research Internship Projects** (Graduate & Post-graduate): **04** groups (BARC)

* Viswakarma Institute of Information Technology, Pune – jointly with Prof. S Londhe

Student Guidance (ongoing)

- **Ph.D.** (jointly with Prof. Siddhartha Ghosh): **01** (**IIT Bombay**)
- **Ph.D.** (jointly with Dr. K Tirumalesh): **02** (**HBNI**)
- **IIT Bombay ILP Research Internship Projects** (Graduate & Post-graduate): **01** group##

Jointly with Mr. S. Karmakar, DCS&EM, Dept. of Atomic Energy.

Review of Nuclear Safety for Civil Structures

- Analysis, design, and re-evaluation of works for **Bhabha Atomic Research Centre (BARC)**
- Analysis, and design for the **Atomic Energy Regulatory Board (AERB)**

Review of Research Proposals /BIS Code

- Research projects for the **Board of Studies in Nuclear Sciences (BRNS)**
- Invited reviewer for **Mega Science Vision 2035 of India—Climate Research** (Prepared by **Working Group on Climate Research, Government of India**)
- Contributor, **Department of Atomic Energy** review of **Draft IS 1893 (Part 1): 2023**

Review of Academic Research Projects

- Post Graduate Diploma Projects (Civil Engineering) for **Homi Bhabha National Institute (HBNI)**
- M. Tech. Dissertations (Civil Engineering) for **Mumbai University**

Research Projects

- Principal Collaborator, BRNS Project "***Numerical Modeling of Hydrodynamics along Thane Creek, Mumbai"*** (with R. Balaji, IIT Bombay: 2016 – 2023)
- Contributor, Department of Atomic Energy Project for Ministry of Jal Shakti: ***Identification of Groundwater Sources & Recharge Mechanism in Srikakulam District of Andhra Pradesh*** (with K. Tirumalesh, IRAD, BARC, and others; 2021 – 2023)
- Contributor, ***IAEA/RCA RAS 7040 – India: Assessment of impact of urbanization on groundwater quality and quantity in Hard Rock Aquifers of Southern India and improving water resources management through Isotope Applications*** (with K. Tirumalesh, IRAD, BARC, and others; Ongoing from 2022)

Research Interests (Civil Engineering)

- Statistical and data-driven applications in civil engineering
- Uncertainty analysis
- Ocean engineering
- Corrosion in RCC
- Structural analysis
- Nondestructive and partially destructive testing of concrete and interpretation of results
- Sustainability practices in civil engineering

Research Interests (Multi-disciplinary)

- Hydrometeorology
- Groundwater hydrology (water quality and pollution hazard)
- Probabilistic assessment of hydrogeology hazard
- Artificial intelligence and machine learning applications
- Sustainable development goals

Peer Review of International Journals/Conferences

- ACI Materials Journal (**Q1**, SJR 0.692), **American Concrete Institute**
- Advances in Engineering Software (**Q1**, SJR 1.124), **Elsevier**
- Ain Shams Engineering Journal (**Q1**, SJR 1.076) **Elsevier**
- Environmental Survey and Pollution Research (**Q1**, SJR 1.004), **Springer**
- International Journal of Concrete Structures and Materials (**Q1**, SJR 1.070), **Springer**
- PLoS ONE (**Q1**, SJR 0.803), **PLOS**
- Bulletin of Earthquake Engineering (**Q1**, SJR 1.242), **Springer**
- Applied Water Science (**Q1**, SJR 1.103), **Springer**
- KSCE Journal of Civil Engineering (Q2, SJR 0.537), **Springer**
- ACI Structural Journal (Q2, SJR 0.629), **American Concrete Institute**
- Journal of Water and Climate Change (Q2, SJR 0.732), **IWA** Publishing
- Journal of The Institution of Engineers (India): Series A (Q2, SJR 0.312), **Springer**
- Journal of Earth System Science (Q2, SJR 0.417), **Springer**
- International Journal of Civil Engineering (Q2, SJR 0.463), **Springer**
- Multiscale and Multidisciplinary Modeling, Experiments, and Design (Q2, SJR 0.420), **Springer**
- Shock and Vibration (Q2, 0.373), **Hindawi Publishers**
- ISH Journal of Hydraulic Engineering (Q3, SJR 0.392), **Taylor & Francis**
- Engineering Journal (Q3, SJR 0.249), Faculty of Engineering, **Chulalongkorn University**, Bangkok, Thailand
- Journal of Rehabilitation in Civil Engineering (Q3, SJR 0.22) Faculty of Civil Engineering, Serman University
- Life Cycle Reliability and Safety Engineering (Q3, SJR 0.279, **Springer**
- Arabian Journal of Geosciences (suspended from Scopus), **Springer**
- Transactions of the Indian National Academy of Engineering (not on Scopus), **Springer**
- Journal of Asian Concrete Federation (not on Scopus), **Asian Concrete Federation**
- 7th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics co-organized by **IIT Roorkee, IIT Guwahati, IISc Bangalore, CBRI Roorkee, ISET, IGS Bengaluru**

Workshop Organized

"***Mathematical, Statistical, and Computational Techniques for Scientists and Engineers***," Homi Bhabha National Institute, Anushaktinagar, Mumbai, India sponsored by **Jadavpur University Alumni Association Mumbai (JUAAM)**, 3 August 2019

Multi-disciplinary Contributions in Engineering and Research (2012-2024)

- Part of a team tasked with the **Design, and Construction of the Integrated Nuclear Recycle Plant (INRP), Tarapur**: Process Engineering; Chemical Engineering; Mechanical Engineering; Civil Engineering; Electrical Engineering; Instrumentation Engineering; Electronic Engineering; Environmental Engineering) (October 2012–till retirement)
- **Guidance of Ph.D. Student, HBNI: Chemistry** (along with Dr. K. Tirumalesh) for **Chapter:** "**Geospatial Techniques, and Machine Learning Applied to the Evaluation of Groundwater Pollution Hazard**" (October 2023–till date, Thesis under external review)

- **Guidance of Ph.D. Student, HBNI: Chemistry** (along with Dr. K. Tirumalesh), for **Chapter: "Probability and Statistics Applied to Estimation of Risk of Pollution in Groundwater**" (October 2023–till date)
- **Student Internship Project, IIT Bombay** (through Industrial Learning Program), "**Probabilistic Analysis of Effect of Non-potable Water on Concrete Strength across the Globe**" (Industrial Engineering and Operations Research; Mathematics; Civil Engineering) (December 2023–August 2024)
- **Student Internship Project, IIT Bombay** (through Industrial Learning Program), "**Uncertainty Analysis of Extreme Rainfall at Tarapur, an Important Nuclear Site in India**" (Energy Science and Engineering; Civil Engineering) (December 2023–August 2024)
- **Student Internship Project, IIT Bombay** (through Industrial Learning Program), "**Soft Computing Applications for the Estimation of Shear Capacity of Concrete Slab-on-grade**" (Electrical Engineering; Civil Engineering; Mechanical Engineering; Engineering Physics) (May 2024–October 2024)
- **Probabilistic risk assessment for groundwater contaminants in India** (with Dr. K Tirumalesh and team – Chemistry) (July 2012–till retirement, Continuing research activities; Sites investigated: **Rajasthan, Odisha, Pondichery, Hyderabad**)
- **End-member mixing model development for groundwater** (with Dr. K Tirumalesh and team – Chemistry) (April 2022–March 2023, Report submitted to Ministry of Jal Shakti, Government of India)
- **IAEA/RCA RAS 7040 – India: Assessment of impact of urbanization on groundwater quality and quantity in Hard Rock Aquifers of Southern India and improving water resources management through Isotope Applications** (with K. Tirumalesh, IRAD, BARC, and others; Ongoing from 2022)
- **Hydro-meteorological analysis for rainfall at Tarapur, Kalpakkam, and other nuclear sites in India** (with Dr. V Kumar and team – Environmental Engineering) (April 2021–till retirement, Ongoing research activities)
- In the broader domain of civil engineering, I have conducted research in structural engineering, structural design, earthquake engineering, blast vibration modeling, geotechnical engineering, geostatistical and geospatial applications, concrete technology, hydrometeorology, groundwater hydrology, ocean engineering, applied statistics, applied artificial intelligence and machine learning, nondestructive and partially destructive testing on concrete, health assessment, and sustainability practices in civil engineering.

Highlights of assignments undertaken as Design Engineer in BARC (2000-2024)

- Analysis, and design of residential, and industrial buildings (both conventional, and nuclear-safety-related concrete structures;
- Analysis, and design of steel structures;
- Health assessment of existing concrete structures: buildings and jetty structures;
- Interpretation of NDT/PDT results of existing concrete structures for assessment of present-day strength;
- Mentoring junior engineers for analysis and design activities;
- Proof-checking of the analysis and design works carried out by professional consultants;
- Review/checking of the analsyis and design works carried out by other designers;
- Review of analysis, and design works (conventional, and nuclear-safety-related) by other Divisions of BARC (under Civil Task Force / Working Group of BARC Safety Council – BSC);
- Review of analysis, and design works (conventional, and nuclear-safety-related) by other Units of Department of Atomic Energy (under Civil Task Force / Working Group of Atomic Energy Regulatory Board – AERB)
- Proof-checking of interpretation of geotechnical investigation results conducted by consultants;
- Proof-checking of design of controlled blast design conducted by consultants/contractors;
- Research (single or in group) targeted towards addressing civil engineering challenges of Department of Atomic Energy:
    - Development of methodology to design slab-on-grade using numerical approach;
    - Development of charts for capacity enhancement (existing) or reinforcement reduction (new) slab-on-grade using the nominal reinforcement;
    - Development of methodology for prevention of spall in concrete using conventional and modern approaches;
    - Critical review and evaluation of the consideration of different exposure conditions for internal / external faces of concrete, from durability considerations;
    - Review of international codes for identifying the critical factors for empirical estimation of crack width in flexural concrete members and identifying possible improvement options for national codes;
    - Development of methodologies for spatial interpolation of soil/rock properties using geospatial and soft computing techniques;
    - Meta-analysis of the coefficient of variation of in-situ concrete strength parameters obtained from NDT/PDT on existing structures;
    - Research for sustainable concrete production: use of excavation products and non-potable water for concrete mixing;
    - Development of non-dimensional mass curve of rainfall for Tarapur from hourly records;
    - Extreme value analaysis of rainfall records for Tarapur and Kalpakkam – for application in hydraulic design of storm water drainage systems;

Publication Summary

(Details may be accessed at https://scholar.google.com/citations?user=kl6_ECwAAAAJ&hl=en)

Year	Journal				Book Chapter		
	(Ph.D.)	(Single)	(Stu. Proj.)	(Collab.)	(Single)	(Stu. Proj.)	(Collab.)
2025	-	-	*2 Int. (Accepted)*	*1 Int. (Accepted)*	-	*2 Int. (Accepted)*	-
2024		6 Int.	2 Int.	1 Int. 1 N	-	1	-
2023		3 Int.	1 Int., 1 N	2 Int. 1 N	-	1	3
2022		3 Int.	1 Int.1 N	2 Int. 1 N	-	-	1
2021		4 Int.	2 Int.	7 Int.	-	3	-
2020		2 Int.	1 Int.	1 Int.	-	1	-
2019		5 Int., 1 N	1 Int., 1 N	1 Int., 1 N	1	-	-
2018		7 Int.	-	2 Int., 2 N	-	1	-
2017		4 Int.	-	2 Int., 1 N	-	-	-
2016		2 Int.	-	1 Int.	-	-	-
2015	2 Int.	-	-	-	-	1	-
2014	-	-	-	1 Int.	-	-	-
2013	1 Int.	-	-	-	-	-	1
2012	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-
Total	-	37	11 + 2 = 13	27 + 1 = 28	1	8 + 2	5
Grand Total	**Journals: 78 + 3**				**Book Chapters: 14 + 1 (Acc.)**		

Int.: International Journal; N: National Journal; Stu. Proj.: From Student Project; Collab.: Collaborative work.

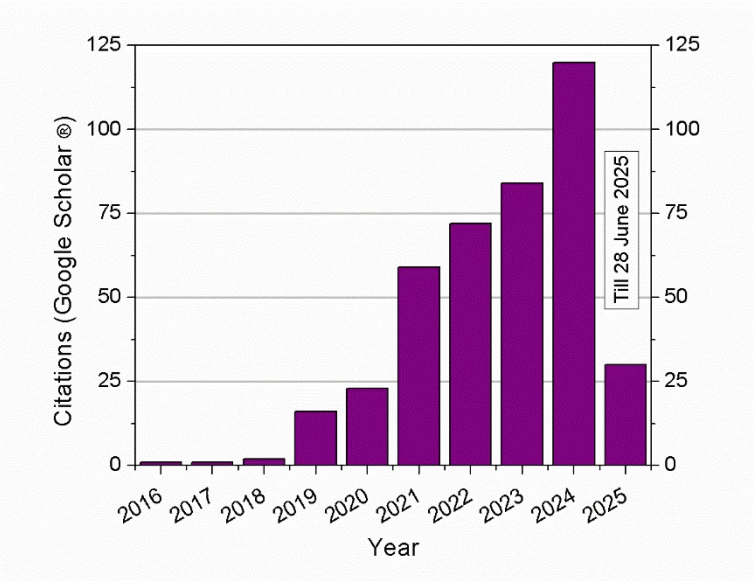
Publication Summary (since 2020: Scimago® as on 09 July 2025)

Year	Q1	Q2	Q3	Q4	Non-Scopus
2025	-	2*	1*	-	-
2024	1	5	2	-	2
2023	-	6	1	1	1
2022	-	3	-	1	2
2021	1	3	2	2	5
2020	1	-	-	1	2

** Accepted for publication*

Google Scholar® metrics (as on 09 July 2025)

Timeline	Citation	h-index	i10-index
All	412	11	18
Since 2020	389	10	17



I am looking for freelance/part-time positions for research/teaching/consultancy in Kolkata; or that can be generally handled on remote mode. Occasional tours, of course, can be managed.