

## Kausalya Swanand Kulkarni



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### Academic Credentials

Degree	Specialization	Institution	University	Year	%/CGPA	Class
M. Tech	Water Management	SGGSIE&T, Nanded	SRTMUN	2013	8.52	<i>Distinction</i>
B. Tech	Civil- Water Management	SGGSIE&T, Nanded	SRTMUN	2011	7.09	First class

### Career Highlights

- Assistant Professor at Maharashtra Institute of Technology, Aurangabad (August 2015 - Current)
- Assistant Professor at Pimpri Chinchwad College of Engineering & Research (PCCOER) Pune. (August 2014 – July 2015)
- Courses conducted - Basic Civil Engineering, Engineering Mechanics.
- Assistant Professor at Deogiri Institute of Engineering and Management Studies, Aurangabad. (July 2013 – Decembere 2013)
- Courses conducted - Fluid Mechanics, Plumbing Engineering.
- Teaching assistantship for two semesters under TEQIP-II scheme, SGGSE&T, Nanded. (July 2012 – June 2013)
- Courses instructed – Basic Civil Engineering, surveying, fluid mechanics.

### Membership of Professional Bodies

- Member of ISTE.
- Member of Hydrological Data User Group (HDUG).

### Current Research Areas

- Environmental Impact Assessment, Mitigation for systems having negative environmental impact, Green Building and its rating systems worldwide, IGBC, LEED, Green Star, Green Rating for Integrated Habitat Assessment, Design for Environment, Green Technology, Carbon Emission, Carbon credits and carbon trading, Sustainable materials for Building constructions
- Water Resources Economics Planning and Management having no negative impact on environment, Water Works Engineering, Ground/Surface Water Hydrology, Irrigation Water management for optimum water use, Design of Hydraulic Systems, Hydraulic Modelling, Water supply Management, Rainwater Harvesting, Watershed Management, Water use optimization in green buildings.

### Computer/Software Proficiency

- EPANET (The pipe network analysis software introduced by **US Environmental Protection Agency**)
- Introduction to ARCGIS and Q-GIS.

## Projects

1. **Assessment of Jalyukta Shivar Abhiyan Structures in Three villages near Chhatrapati Sambhajinagar.**
  - Jalyukta Shivar Abhiyan was a scheme by Maharashtra State Government to **fight against draught**, under which, various structures like Concrete Nala Bunds, Contour Trenches, Farm ponds, Earthen Bunds etc. were constructed.
  - The scheme was so effective that **many draught prone areas came out permanently off the draught** and now these structures are the part of the life of residents there.
2. **Analysis and Design of Water Supply System in Parbhani City. (M. Tech)**
  - The present water supply system which was designed about 30 years ago was analysed for the increased population in the city using the pipe network analysis software **EPANET**, with the support of **ArcGIS**.
  - From the results of the analysis, the drawbacks in the system were observed and suggestions were made.
  - The rising main and pump capacity was designed for the newly developed part of the city, where there was no distribution system.
3. **To propose a Hydropower Station on a dam on the river Karpara in Parbhani district (Maharashtra). (B. Tech)**
  - The project comprised of checking the potential of an irrigation project on a river for the micro hydropower station. The hydropower station was proposed on the canal releases and spillway releases from that dam.
  - The project was carried out keeping in mind the optimized water use by multipurpose application, i.e. water releases for irrigation are used as input for hydropower generation, **which saved the energy and cost required for both the operations to half.**

## Certifications

- NPTEL certification for **“Indian Knowledge System- Engineering Applications”**, conducted by NPTEL, AICTE SWAYAM in Coordination with **Indian Institute of Management Banglore and Chanakya University Banglore..**
- NPTEL certification for **“Environmental Impact Assessment”**, conducted by NPTEL, AICTE SWAYAM in Coordination with **Indian Institute of Technology, Roorkee.**

## STTP/FDP/Industrial Training/Seminar/Workshop/Conference Attended

- I. **Conferences attended**
  - International **conference** on “Urban Lakes: Ecology, Rejuvenation, Technology and Economics” (7<sup>th</sup> and 8<sup>th</sup> September, 2012), Powai, Mumbai 45<sup>TH</sup> Convention of Indian Water Works Association in Pune.
  - National **conference** on “Contribution of Voluntary Organisations in Water Sector” (August 8-9, 2015), Aurangabad.

- Two days International **Conference** on “Recent Challenges and Opportunities in Engineering” organised by College of Technology and Engineering , Jaipur, on March 13, 14, 2021.
- II. **STTP/FDP attended**
- **One-week STTP course** on “Demand Management of Water Supply” (September 24-28, 2012), Nanded (MS).
  - **One-week STTP course** on “Analytical Techniques for Applied Research” (January 21-25, 2013), Nanded.
  - **One-week STTP** interdisciplinary faculty Development Programme on “Role of Textile in Water Preservation” (March 18-22, 2013), Nanded.
  - **One-week STTP course** on Structural Engineering, arranged by IIT Kharagpur (January 2016), at MIT, Aurangabad.
  - **One-week QIP STTP course** on GIS for Civil Engineers, at Indian Institute of Technology, Powai, (May 15-19, 2017) Bombay.
  - **Two-week FDP** on “Effective use of ICT tools in online Teaching”, on MOOC platform, conducted by Government Pharmacy College, Jalgaon, (June 22 to July 04, 2020)
  - **One-week TEQIP STTP course** on “ Advanced Technologies in Water Resource Management” organised by IWWA Aurangabad Centre and GECA, on November 23-27, 2020.
  - **ATAL online FDP** on “ Sustainability Engineering” organised by St. Joseph College of Engineering from December 14 to 18, 2020.
  - Online webinar on “Urban Hydrology”, organised by IWWA Aurangabad Centre with MIT and DIEMS on July 8, 2020.
  - Online session on “Sustainable Infrastructure for 21<sup>st</sup> century” by Dr. Grant Wright, Heriot Watt University, on July3, 2020.
  - Two days educational summit on “Outcome Based Education and NAAC” organised by IQAC MIT and Mastersoft.
  - **One-week FDP** on “ Incorporating Universal Human Values in Education”, conducted by AICTE, (December 22 to 27, 2020)
  - **ATAL online FDP** on “ Instructional Design for Effective Teaching” from July 5 to 9, 2021.
  - AICTE Sponsored **One-week STTP course** on “Machine Learning” Applications In Civil Engineering Under AICTE Quality Improvement Scheme (AQIS) Organized by Department of Civil Engineering & Department of Electronics and Tele.Engineering JJ Magdum College of Engineering, Jaisingpur, from 21<sup>st</sup> to 25<sup>th</sup> February, 2022.
  - 12 week Faculty Development Program on ‘**Environmental Impact Assessment**’ organized by **All India Council for Technical Education, NPTEL, from January to April 2022.**
  - **FDP** on case writing, Analysis, Teaching and publication organised by Ajinkya DY Patil University on March 12, 2022.
  - **One week FDP** on “Outcome based Teaching Learning” organised by Pravara Rural Engineering College, Loni from 21<sup>st</sup> to 25<sup>th</sup> March, 2022.
  - AICTE Training And Learning (**ATAL**) Academy Online Elementary **FDP** on "Instructional Design for Effective Teaching" from 2021-7-5 to 2021-7-9 at BML Munjal University.
  - **Five days ISTE approved FDP** on “ Design and development of AI-ML models for beginners” at APSIT Thane from July 17 to 21, 2023.
  - **AICTE Recognized FDP** on Pedagogical Practices in Civil Engineering Conducted by Education and Educational Management Department from 18/12/2023 to 22/12/2023 (One Week) at NITTTR, Chandigarh.
  - **One week FDP** on “Innovative Techniques in Ground water Improvement and soil reinforcement for sustainable Infrastructure” organised by SVERI’s College of Engineering, Pandharpur with IGS Pune Chapter from November 11 to 16, 2024.

### Contributions at MIT, Aurangabad

#### Academic

- Taught to almost all the years of under graduate programs, majorly the subjects related to Water resources and Environmental Engineering. Also taught open electives such as Design for Environment and Environmental Impact assessment which were open for all branches. From teaching subjects like Rural Water Supply, a different vision of water supply systems was provided, apart from routinely taught urban water supply systems.

#### **Extra-Curricular**

- Work as a mentor for MIT Women's Power Girls Club since last two years, under which, many activities for girls students such as group discussions on topics like women Empowerment and contribution of women in History.
- Sessions like self defence for girls and communication and team building activities are specifically conducted and students found to be enthusiastic during the sessions.

#### **Co-Curricular**

- Organised different seminars and expert talks which are beneficial for students on topics like career development opportunities in Civil Engineering and opportunities in water supply field and water treatment.

#### **Any other special contribution**

- Proudly contributed to syllabus structure design for Autonomous pattern with a special input and contribution to Honours and Minor syllabus for "Green Technology and Sustainability Engineering".
- NPTEL certification for "Environmental Impact Assessment" was done as a skill enhancement for effective teaching.
- SWAYAM NPTEL certification for "Indian Knowledge System- Concepts and application in Engineering" was done and initialization for syllabus setting for "Introduction to Indian Knowledge System" was taken from the institute.

#### **Personal Details**

**Date of Birth:** 06/12/1989

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