

# FACULTY OF CIVIL ENGINEERING DEPARTMENT

## PROF. LAKSHMANAGOUDA PATIL



### 1. Personal Information

- **Name:** Prof. L G Patil
- **Position:** Professor and Dean Planning
- **Department:** Civil Engineering
- **Contact Information:** lgpatil@sggs.ac.in

### 2. Educational Background

- **Degrees:**
- **BE** in Civil Engineering, Karnataka University
- **M.Tech In HWRE, NIT Surathkal**
- **PhD in Civil Engineering, IIT Bombay**

### 3. Research Interests

- **Areas of Expertise:** Hydraulics and Water Resources Engineering

### 4. Teaching Experience

- **Courses Taught:**

Undergraduate – Open channel hydraulics, Hydropower Engineering

Post graduate- Hydraulic Structures, Numerical methods, Adv Hydraulics.

### 5. Publications and Presentations.

#### **Journal Articles:** (Partially updated)

Jyotiprakash G Nayak, **LG Patil**, Vinayak K Patki (2023), Artificial neural network based water quality index (WQI) for river Godavari (India), Journal-Materials Today: Proceedings, Volume-81 Pages 212-220 Publisher-Elsevier

Karanpal Singh Hardeep Singh Hazuria, Arshad K Hashmi, **LG Patil**(2023), Performance-based evaluation of reinforced concrete buildings at vertical geometric regularity limit, Journal Innovative Infrastructure Solutions, Volume-8, Issue 11, Pages-311, Publisher-Springer International Publishing

## FACULTY OF CIVIL ENGINEERING DEPARTMENT

Pooja Goud and **Dr. L. G. Patil** (2023), Comparative Study of an Industrial Building adopting precast RCC and Pre-Engineered Steel Structure, Journal International Research Journal of Modernization in Engineering Technology and Science, Volume 5, Issue-7

**Dr. L. G. Patil** Prathmesh P Kulkarni, C. A. Prasad(2023) Analysis of the Feasibility of a Diagrid Bracing System in Tall Buildings Journal International Journal for Research in Applied Science & Engineering Technology Volume:11, Issue:7, Pages:194-200

US Ansari, **LG Patil**(2022), Numerical analysis of triangular labyrinth side weir in triangular channel, Journal- ISH Journal of Hydraulic Engineering, Volume-28,Issue-sup1, Pages-141-148, Publisher- Taylor & Francis

**Patil L. G.** Hashmi A. K.,Hazuria K. H.(2022) Performance-based efficient seismic design of reinforced concrete frames with vertical irregularities, Asian Journal of Civil Engineering, Volume:23, Issue:3, Pages:375-389

Karanpal Singh Hardeep Singh Hazuria, Arshad K Hashmi, **Lakshmanagouda G Patil** (2021), Performance based evaluation of reinforced concrete regular structures, Journal- ADBU Journal of Engineering Technology, Volume-10, Page:

Ganesh Awchat, **Laxmangaouda Patil**, Ashish More(2022), Effect of different chemical admixtures on fresh and hardened properties of M30 and M40 Grade concrete, Journal Advanced Materials Research, Volume-1171, Pages-105-120, Publisher- Trans Tech Publications Ltd

Qudsiya B A H Farroqui and **L.G.Patil** ( 2021), “ Assessment of Climate Change impacts on precipitation and Temperature using SDSM based on Canesm2 Predictors for Nanded, Maharashtra state”, International Research Journal of Engineering and Technology(IRJET), e-ISSN-2395-0056, Vol.8, Issue no.8, Aug 2021, PP: 78-85

Mr. Shaikh Jafar Shaikh Ismail and **Dr. L. G. Patil** (2021), “Computational Assessment For Seismological Performance Of Multi- Storey Flat Slab Structures With (At Specific Positions) And Without Shear”, WALLS International Journal of Engineering Applied Sciences and Technology, Vol. 6, Issue 3, ISSN No. 2455-2143, Pages 81-87 Published Online July 2021 in IJEAST (<http://www.ijeast.com>)

Jyotiprakash G. Nayak , **L.G. Patil** , Vinayak K. Patki (2020), “Development of water quality index for Godavari River (India) based on fuzzy inference system”, Elsevier Publication, Journal of “Ground Water for Sustainable Development”. Volume 10, April 2020, 100350  
<https://doi.org/10.1016/j.gsd.2020.100350>

U.S. Ansari & **L.G. Patil** (2020), “Numerical analysis of triangular labyrinth side weir in triangular channel” ISH Journal of Hydraulic Engineering, 29 Jan 2020, DOI:10.1080/09715010.2020.1715269

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Ansari U.S., **Patil L.G. (2019)**, “Flow Over Side Weirs with Experimental & CFD Results”, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-1, October 2019, Retrieval Number: A9650109119/2019©BEIESP

DOI: 10.35940/ijeat.A9650.109119, Published By: Blue Eyes Intelligence Engineering & Sciences Publication.

**Dr.L.G. Patil** and Jadhav S S (2017), “Performance evaluation of Stepped Spillway Under Nappe Flow Conditions”, International Advance Research Journal in Science, Engineering and Technology”, Vol.4, Issue no.1 January 2017

**Dr.L.G. Patil** and Laxmikant Bhosikar (2016) “Discharge Coefficient for Sharp-Crested Side Sluice Gate in Rectangular Channel“, Journal of Indian Water Works Association, Nov 2016

**Dr. L. G. Patil** , Amol M. Kode (2016) “Analysis of Side Sluice in Trapezoidal Channel”, International Journal of Application or Innovation in Engineering & Management, ISSN 2319 – 4847, Volume 5, Issue 5, May 2016

Jyotiprakash G. Nayak and **Dr. L. G. Patil (2016)** “Assessment of Water Quality of Godavari River at Nashik, Maharashtra, India” **International Journal** of Civil Engineering and Technology (IJCIET) Volume 7, Issue 1, Jan-Feb 2016, pp. 83-92.

Desai R.J. and **Patil L. G. (2015)** “Performance Comparison of Various Labyrinth Side Weirs”, **International Journal** of Application or Innovation in Engineering and Management, June 2015, Vol.4, Issue.6, pp:68-73

Bhore Sagar M. and **Patil L.G (2015)** “Water Resource Analysis and Potential Evaluation of Bhima Basin in Maharashtra (GIS Approach)”, **Journal** of Water Resources Engineering and Management, May 2015, Vol.2 Issue.2, pp:33-47

Bhore Sagar M. and **Patil L.G (2015)** “Potential Evaluation of Water Resources in Krishna Basin in Maharashtra”, **International Journal** of Remote Sensing & Geosciences. May 2015 Vol.4, Issue.3, pp:59-67

Jyotiprakash G. Nayak and **Patil L.G. (2015)** “A comparative Study of Prevalent Water Quality Indices in Streams”, **International Journal** of Engineering and Advanced Technology, Feb 2015, Vol.4, Issue.3, pp:208-212

Pani. B.S and **Patil L.G. (2007)** “Single-Basin Jet Flocculators”, **Journal** of Hydro-Environmental Research., IAHR, Asia Pacific Divion, July.2007, Vol.1. pp: 20-27

Pani B. S. and **Patil L. G., (2003)**, “Discussion of : An Experimental study on turbulent circular wall jets by Adrian Wing-Keung Law and Herlina”, **Journal** of Hydraulic Engineering, ASCE, September 2003, pp: 738-740.

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### Conference Papers:

Yogesh Biyani(&), **L. G. Patil**, and C. N. Kurhe(201), “Engineered Cementitious Composites” International Conference on emerging Trends in Engineering ( ICETE-19), Held in Hyderabad, India, on 22-23 March 2019. Published as chapter in [www.springer.com/gp/book/9783030243135](http://www.springer.com/gp/book/9783030243135). PP: 206-214.

Jyotiprakash G. Nayak and **Dr. L. G. Patil (2017)**, “Utilization of prevalent Western W.Q.I in Indian Scenario: Limitations and Prospects”, International conference on “Recent Advances in Civil and Environmental Engineering (RACEE-2017), held during 4<sup>th</sup> -5<sup>th</sup> March 2017 at WCE Sangli, pp:160-165

Ansari U.S., **Patil L.G. (2019)**, “CFD an effective tool for complex hydraulic problems” Resinap Journal of Science and Engineering, Volume 1, Issue3 December 2017 ISSN: 2456-9976 Available at [www.rijse.com](http://www.rijse.com) .

Bhore Sagar M. and **Dr. L. G. Patil (2017)**, “Piped Irrigation Water Distribution Sysytem for Lift Irrigation Schemes”, International conference on “ Technological Advances in climate – Smart Agriculture and Sustainability” held during 16<sup>th</sup> – 18<sup>th</sup> January 2107 at SGGSIE&T., Nanded. pp:176-179

**Patil L. G. and Kalaskar (2011)**, “Comparative study of natural coagulants”, National Conference on Water For future, Held on 25-26<sup>th</sup> Feb 2011, at SGGSIE&T., Nanded,

**Patil L. G. and Kanchangire (2006)**, “Rapid mixing in water treatment plant by water jet”, Hydro-2006, International Conference held on 8<sup>th</sup> -9<sup>th</sup> December, Pune. pp: 330-336

**Patil, L. G. and Pani, B. S., (2005)**, “Dual Basin Jet Flocculator”, 17<sup>th</sup> Canadian Hydro-technical Conference, Edmonton, **Alberta**, 17-19<sup>th</sup> August, pp: 799-807

**Patil L. G. and Pani B. S., (2004)**, “Helicoidal Flow Jet Flocculator”, 4th International Symposium on Environmental Hydraulics and 14th Congress of Asia and Pacific Division, International Association of Hydraulic Engineering and Research, 15-18 December, 2004, **Hong Kong, China**

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**Patil, L. G.** and Pani B. S., (2002), “Application of CFD in the study of jet flocculator”, Conference on Hydraulics, Water Resources and Ocean Engineering, HYDRO-2002 **International Conference held in IIT Mumbai**, Dec.16-17, 2002, pp: 404-408

Balkrishna S. and **Patil L. G.**, (1995) “Mathematical Model to Study Sedimentation in Navigational Channel.” Forth International Conference on Coastal & Port Engg in Developing countries. COPEDEC –IV. Held at **Rio. De. Janeiro. Brazil-25<sup>th</sup> to 29<sup>th</sup> Sept.1995**

Ram Murthy K and **Patil L. G.**, (1991) “A planning Model for a Hydro-system.” National Seminar on “Recent Trends in Water – Resources” Held at IIT Kanpur, 9th Feb 1991

- **Editorial Work:** Reviewer for ISH journal.

## 6. Awards and Honors

- ❖ **Grants:** Title: Formulation of Design Guidelines for Jet Assisted Coagulation Unit of WTP Using Experimental and Computational Fluid Dynamics (CFD) Approach  
Details: Category: RPS- C type, Sanctioned Amount: 08 Lakhs (Eight Lakhs)

## 7. Professional Experience

- Visited many engineering institutions as a NBA expert committee member
- Working as Dean Planning (28/01/2022 to till date )
- Worked as HOD of Civil Engg dept. (9/4/2019 to 31/08/2021)
- Working as a Member of IQAC of our institute (9/4/2019 to 31/08/2021)
- Coordinator for Extension of autonomy during 2017
- Worked as a **Dean Academic** from 16/11/2015 to 12/08/2016
- Working as Institute level time table in-charge for academic year 2015 and 2016
- Worked in a committee responsible for the branch transfer during 2014 and 2015
- Working as Secretary of Academic monitoring committee during 2015-16.
- **Chairman** of Academic cell –under the TEQIP-II with effect from 01-12-2015 to 12/08/2016.
- Worked as a **Controller of Examination** of SGGSIE&T., during 06/05/2011 to 24/07/2013

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- Worked as a **Associate Controller of Examination** during 09/07/2010 to 06/05/2011
- Worked in many committees meant for revising rules and regulation related to Examination.
- Worked as M.Tech Coordinator for three turns (total of 6 years)
- University Nominee on Building Committees of various Colleges for SRTMU, Nanded

### Projects completed:

- ❖ Title: Formulation of Design Guidelines for Jet Assisted Coagulation Unit of WTP Using Experimental and Computational Fluid Dynamics (CFD) Approach  
Details: Category: RPS- C type, Sanctioned Amount: 08 Lakhs (Eight Lakhs)
- ❖ Title: Design of water supply system to the newly constructed colony at NPTP, Parli-Vajnath. Amount: Rs.16,500/-
- ❖ Title: Verification of hydraulic design of water treatment plant, Bhokar, Amount:Rs.40,000
- ❖ Title: Third party technical audit (TPTA) in and around Nanded, Amount: Rs. 2crores.
- ❖ Title: “ Study of existing water supply to Waloore water supply” Amount:Rs.15,000
- ❖ Title: “Study of variation in the carrying capacity of proposed pipeline system – right bank canal- Lendi Project” Amount Rs.30,000
- ❖ Worked in 7 client sponsored (Appox. Rs. 30,00,000) projects at Central Water & Power Research Station, Pune as a Research Assistant.

- **Consulting Work:** Actively participated in lot of consultancy works

### 8. Supervision and Mentoring

#### PhD:

- ❖ Supervisor for PhD research scholars- Three completed and one -ongoing

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- Jyotiprakash Nayak, --Title: Investigation of Physio-chemical Properties of Godavari river around Nashik city, Status: Completed
- Ubaid Rrhman Ansari, --Title: Study of Flow Over Labyrinth Spillway, Status: Completed
- Karanpal Singh Huzuria, -- Title: Performance based evaluation of RC frame building at regularity limit, Status: Completed

**Master's Supervision:** List of students supervised, Master's desertation( updated upto 2020-21).

- “Assessment of Climate Change impacts on precipitation and Temperature using SDSM based on Canesm2 Predictors for Nanded, Maharashtra state”, by Qudsiya B A H Farroqui, 2020-21
- “Flood plain Modelling of Godavari river around Nanded City using Arc-GIS and HEC-RAS” by Priyanka S Hande, 2020-21
- “Performance of multi-story flat slab structures with (at specific positions) and with shear walls for seismic forces” by Shaikh Jafar Shaikh Ismail, 2020-21
- “Effect of different chemical admixtures on fresh and hardened concrete properties of M30 and &M40 grade concrete” by More Asish Anandrao, 2020-21
- “Evaluation and comparison between post Tensioned flat slab and RCC flat slab using Finite element method” by Siddiqui Furkhan Ahmed Riyaz Ahmed Siddiqui, 2020-21
- “Dynamic modelling and optimization of urban sewerage network” by Abhijit S. Thalpate 2017-18
- “Design of water grid system for north Marathwada region” by Prasad B Bagad, 2017-18
- “Supercritical flow measurement using cutthroat flume” by Sagar S Dhande, 2017-18
- “Performance Evaluation of Stepped Spillway under Nappe Flow” by Sarika S. Jadhav 2016-17
- “Performance Evaluation of Helicoidal Flow Jet Flocculator” by Telang Pradnya Rajaram, 2016-17
- “Adjustment of Digital Elevation Model For Flood Modeling Over Eari River” by Lokhande Sujit Uttam, 2016-17
- “Analysis of Side Sluice in trapezoidal channel” by Amol Kode, 2015-16
- “Numerical Analysis of Side Sluice Gate” by Bhosikar Laxmikant, 2015-16
- “Sedimentation study for Part of Mutha River using HEC-RAS. BY Umeshchandra K. Bhosale, 2016
- “Study of Coefficient of Discharge and Pressure over the Ogee-Spillway using CFD” by Nitin R. Dhule, 2014-15
- “Water Resources Analysis and Potential Evaluation of Western Maharashtra” by Bhore Sagar, 2014-15
- “Analysis of Flow over Labyrinth Side Weir” by Ranjit J. Desai., 2014-15

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- “Conjunctive Water Use Planning Using Optimization Approach” by Zakerullah Khan 2013-14
- “Determination of Water Quality Index of Source Wells of Rural Water Supply Schemes” by U. S Sakhre 2013-14
- “Rapid Mixing using Rising Air Bubbles” by Vinay S Zate, 2012-13
- “Study of Mahatma Jyotiba Phule Soil and Water Conservation Scheme in Parbhani District” by Gaikwad B.M. 2010-11
- “Experimental Study Of Rapid Mixing In Water Treatment Plant By Using Jet” By Santosh Hanumanji Kalaskar 2010-11
- “Effect of retention time on rapid mixing in WTP using CFD”, by SARPATE USHA S. 2008-09
- “Performance evaluation of Upper Penganga Project” by S. R. Kurle. 2006-07
- “Rapid mixing in water treatment plants by water jet”, by Kanchangire Rameshwari B. 2005-06
- “Application of multi-objective fuzzy linear programming technique to Upper Wardha project.” by Mr. Aswin A Gawai, 2000-2001
- “Application of linear programming technique for multi-reservoir operation.” by Raut Sachin G., 1999-2000
- “Multi-reservoir operation using simulation technique.” by Wathore S. N., 1997-98
- “Application of Non-linear multi-objective optimization technique for multi-reservoir operation.” by B. Murali Mohan Dev, 1996-97

### 9. Professional Memberships

#### Membership of Professional bodies

Sr No	Organization	Status
1	Indian Society for Hydraulics	Life member LM-585
2	Indian Society for Technical Education	Life member LM-23033

### 10. Miscellaneous

- **Languages-** English, Kannada, Marathi