

**Name:** Dr. K. Ravikumar

**Designation:** Associate Professor

**Department:** Civil Engineering

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**Experience (in years):** Teaching: 13 years 9 months

Research: 18 years

## 1. Educational / Technical qualifications:

S. No.	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	Ph.D.	April 2008	Water Resources Engineering
2	M.Tech	December 2001	Water Resources Engineering
3	B.E.	April 2000	Civil Engineering

## 2. Teaching and Learning:

### 2.1. Teaching Interests:

a). **UG courses:** Fluid Mechanics, Hydraulics & Hydraulic Machines, Engineering Hydrology, Irrigation Engineering, Water Resources Engineering, Environmental Studies, Engineering Drawing and Disaster Management.

b) **PG courses:** Water and Wastewater Transport Technology, RS&GIS Applications in Environmental Management, MATLAB application in Environmental Engineering

### 2.2. Novel Teaching & Learning Techniques adopted:

a). Learning from NPTEL video materials.

b). Learning from on-line courses from NPTEL.

c). Spending time in Library in referring books for collection of new models and examples to clarify the concepts in the minds of students.

d). Discussing with senior faculty and specialized scientists in gathering updated knowledge on the topics.

e). Using Black Board, Projector for showing any relevant topic video, PPTs, etc for teaching.

f). Demonstrating Turbines and Pumps with models.

g). Conducting POGIL activity on concept based topics in Disaster Management, FM and H&HM.

h). Class room discussions to help the students to deepen the understanding of the topics.

i. Carrying students to nearby industry, place of interest based on the topic covered in the class.

j). Tutorial classes to make the students to practice more model kind of problems to become ready to solve any civil engineering problems.

k). Personal meetings with students to get feedback on the topic covered.

l). Maintaining good document of WIT and WIL for the topics covered which is cross check of teaching and learning point of view.

m). Doing NPTEL Online Courses to update my knowledge in various fields.

n). Conducting On-line classes using Graphic Tablet, other interacting modes.

### 2.3. Involvement in curriculum updating / Design:

- a). Member of the Board of Studies (4 times) during 2010 to 2015 in previous college in updating the syllabus of M.Tech in Environmental Engg.
- b). Member of the Board of Studies since 2015 for updating the syllabus of B.Tech in Civil Engg at VNR VJIET.
- c). Provided inputs for updating the syllabus of subject 'Design of Hydraulic Structures' as an external academic member for KITS Warangal, Telangana in May 2021.

### **3. Co-curricular and Extra-Curricular Activities**

#### **3.1. Interests and Hobbies:**

Hearing to music and playing chess.

#### **3.2. CCA/ECA Organized:**

Set up of the stall of the BIS of water in the exhibition during 2013-2014.

#### **3.3. CCA/ECA participated:**

- Member in preparation of certificates in several workshops and Conferences.
- Reviewer of projects and papers in the national level contest of Convergence 2020.

#### **3.4. Counseling and Mentoring Activity:**

Mentoring 20 students at present. 10 students each in B.Tech I and II year.

#### **3.5. Committees involved in:**

- Department level: Member of BOS, Coordinator of B.Tech Major Projects, Department Development Committee, Program Assessment Committee, Coordinator of NAAC.
- Institute Level: SPOC-NPTEL for Local Chapter @ VNR VJIET, Online Teaching & Learning Core Committee

### **4. Conference / Workshop / Seminar / Guest Lectures :**

**4.1 Conducted:** 6 no.

**4.2 Attended:** 20 no.

### **5. Academic Contribution and Research & Consultancy:**

**5.1. Invited Lectures:** 6 no.

**5.2. Articles / Chapters published in Books:** 1 Book chapter in Springer International (Jan 2016)

**5.3. Books published as single author or as editor:** Nil

**5.4. Projects Guided:**

a) UG : 13 no.

b) PG : 12 no.

**5.5. Research Interests :**

- Geo-spatial Modelling
- Hydrological Modelling
- Hydrodynamic Modelling of Groundwater
- Surface and groundwater quality modelling
- Optimal operation of reservoirs
- Conflict resolution
- Solid Waste Management

#### 5.6. Ph.D. students:

- a) Enrolled: nil  
 b) Submitted: Nil  
 c) Awarded: 1 no.

#### 5.7. Papers published in reviewed journals:

S.No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/ Citation Index	National/ International
1	Fair and Equitable Allocations of Cauvery River Waters	<i>Water International</i> , 32(4), 571-588	0250-8060	0.686 (SCI)	International
2	Degradation of high concentration of 2-chlorophenol and 2,6-Dichlorophenol by mixed anaerobic culture	<i>International Journal of Pharmacy and Bio-Sciences</i> , 3(1), B-372-378.	0975-6299	SCOPUS	International
3	Evaluating biological degradation of azo dye using mixed culture	<i>Journal of Pharmacy Research</i> , 5(4), 2049-2051	0974-6943	SCOPUS	International
4	A study on the enhancement of sonochemical degradation of eosin B using other advanced oxidation processes	Desalination and water treatment Vol. 52, Issues (34-36), 6770-6776	1944-3994	1.173 (SCI)	International
5	Sonochemical degradation of volatile and non-volatile compounds	<i>Research Journal of Chemistry and Environment</i> , 16(4), 192-199	2278 - 4527	0.636 (SCI)	International
6	Study of Relationship of Potential Kidney Stone with Water (Consumption and Quality) and Dietary Habits of People in Urban	<i>International Journal of Earth Sciences and Engineering</i> , Vol. 5, No 6(1), 1788-1796	0974-5904	SCOPUS	International

	Thanjavur using GIS				
7	Evaluation of Environ-Climatic Variability in Arignar Anna Zoological Park, Chennai	<i>International Journal of Earth Sciences and Engineering</i> , Vol. 5, No. 6(1), 1797-1802.	0974-5904	SCOPUS	International
8	A novel approach for acclimatization of 2,4,6-trichlorophenol into sludge by using effluent treatment plants,	<i>Journal of Pharmacy Research</i> , 5(8), 4612-4615	0974-6943	SCOPUS	International
9	Low Cast Design Stepped Cascade Aeration System	<i>International Journal of Humanities, Science and Technology</i> , Vol. 1(3), 123-127	ISSN – 0975-9611	-----	National
10	Recovery of Nutrient from Wastewater Through Struvite Crystallization	<i>Nature, Environment and Pollution Technology</i> , 12 (3), 479-482.	0971-4871	SCOPUS	International
11	Evaluation of Effect of Calcium on Scale Formation and Corrossivity of Ground Water using GIS”,	<i>Nature Environment and Pollution Technology</i> , 3(1), 101-106	0971-4871	SCOPUS	International
12	A study on the ability of mixed culture in biological degradation of textile effluent.	<i>International journal of pharmacy and pharmaceutical sciences</i> , Vol 5, Supply 4, 30-34	0975 - 1491	SCOPUS	International
13	Auditing Waste Management Practices in an Indian city.	Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol 4, Issue 4, 1026-1032	0975-8585	SCOPUS	International
14	Microalgae Application for Treatment for Textile Effluents.	Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol 4, Issue 4, 1602-1606	0975-8585	SCOPUS	International
15	Alternative Usage of Edible Deoiled Cake for Decolonization of Reactive Red Dye	<i>Desalination and Water Treatment</i> , Volume 53, Issue 10, 2015,	1944-3994	1.173 (SCI)	International

		2720-2726			
16	Microbial Removal of High Concentration Heavy Metal in Tannery,	Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol 5, Issue 4, 217-224	0975-8585	SCOPUS	International
17	Study on Treatment of Electroplating Wastewater using Constructed Wetland”	<i>Nature Environment and Pollution Technology</i> , Vol 14, Issue 1, 95-100.	0971-4871	SCOPUS	International
18	The potential of using low cost naturally available biogenic substrates for biological removal of chlorophenol	<i>Bio-resource Technology</i> , Volume 196, November 2015, Pages 707-711	ISSN-0960-8524	SCI (SCI)	International
19	Monsoon effects on abandoned and active dumping sites at Pondicherry	<i>International Research Journal of Engineering and Technology</i> , Vol 2, Issue 6, 200-213.	ISSN-2395-0056	Google	International
20	Comprehensive Study on Textile Dyeing Sludge as a Substitute for Cement in Cement-Mortar	<i>International Journal of Technology</i> . 5(2): July-Dec., 2015; 219-224	ISSN - 2231-3915	Google	International
21	A Study on Settlement of Particulate Matter in the Residential Colonies of Hyderabad City With Respect to Main Road Distance	<i>International Journal of Earth Sciences and Engineering</i> , Vol 10, No.5, 1040 to 1047.	ISSN – 0974-5904	Google	International
22	Study of Urbanization Impact on Potential Groundwater Rechargeable Zones of Hyderabad City	<i>International Journal of Creative Research Thought (IJCRT)</i> ,	ISSN-2320-2882	UGC Approved	International
23	Groundwater Recharge Modelling of Vadose Zone Using Hydrus-1D: A General Model	<i>Journal of Emerging Technologies and Innovative Research (JETIR)</i> Vol. 6, Issue 2, February 2018.	ISSN-2349 5162	UGC Approved	International
24	An Experimental Study on CBR of Expansive Soil Subgrades using Geotextiles	<i>International Journal of Civil and Structural Engineering</i>	ISSN- 2348-7607	UGC Approved	International

		<i>Research, Vol. 7, Issue 1, pp 119-128, 2019</i>			
25	Prototype of Eco-friendly Indoor Air Purifier to Reduce Concentrations of CO <sub>2</sub> , SO <sub>2</sub> and NO <sub>2</sub>	<i>Nature Environment and Pollution Technology, Vol. 19 (2), 747-753, 2020</i>	<i>ISSN: 0972-6268</i>	SCOPUS	International
26	Assessment Of Recurrence Of Kidney Stones Through Optimized Machine Learning Tree Classifiers Using Dietary Water Quality Parameters And Patient's History	Advanced Science, Engineering and Medicine. (In print)	<i>E-ISSN: 2164-6635</i>	UGC Approved	International
27	Game Theoretic Based Modelling of Krishna Waters Dispute - Equilibrium Solutions By Metagame Analysis	The European Physical Journal B, 94 (101),	<i>E-ISSN (1434-6036)</i>	SCI	International
28	Game Theoretic Based Modelling of Krishna Waters Dispute - Equilibrium Solutions By Hypergame Analysis	The European Physical Journal B (accepted for publication)	<i>E-ISSN (1434-6036)</i>	SCI	International

### 5.8. Papers presented at National / International Conferences:

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	Helsinki Rules Based Allocation of Cauvery River Waters	<i>International Conference on Hydrological Perspectives for Sustainable Development, IIT Roorkee, Roorkee</i>	International	23-26 Feb'2005
2	Role of Individuals in Conservation of Resources and Equitable use of Resources	<i>STOP ABUSE, PRIST University, Thanjavur, T.N</i>	National	12 to 14 <sup>th</sup> June 2010
3	Comprehensive Study on Textile Dyeing Sludge as a Substitute for Cement in	An Industry Academia Conference on Construction Management (IACCM) – 2015' @ NICMAR,	National	4th – 5th Dec'15

	Cement-Mortar	Kondapur, Hyderabad.		
4	Presented paper (Effect of size of Coarse Aggregate on Compressive Strength of Concrete)	National Conference on Modern Concretes – Driving Profit and Sustainability (MCDPAS-2016)' @ Department of Civil Engg, VNR VJIET, Hyderabad	National	26th – 27th August 2016
5	Geophysical Investigation to Find the Potential Ground Water Recharge Sites in VNR VJIET Campus, Hyderabad	Proceedings of HYDRO 2019 – International Conference on Hydraulics, Water Resources & Coastal Engineering by Dept of Civil Engg, Osmania University, Hyderabad, Vol. I, 141-150. BS Publications Hyderabad (ISBN: 978-93-8935-484-3).	International	18-20, December, 2019
6	Influence of Stagnant Surface Water Body on Groundwater Movement (in 2D) in the Vadose Zone Using VS2DTI – A Sustainable Study on Lake Water Management.	'Proceedings of International Conference on Construction Materials and Smart Structures in Sustainable Development' by Department of Civil Engineering, VNR VJIET, Hyderabad, Vol. BS Publications Hyderabad (ISBN: 978-93-8935-484-3)	International	29-31, January, 2020

### 5.9. Sponsored research Projects:

S.No.	Title	Agency	Period	Grant amount (Rs)	Ongoing / Completed
1	Characterization and Utilization of Selected De-Oiled Cake as Adsorbents in Textile Wastewater Treatment (Ref No: DST/TSG/AF/2011/148)	DST	2013-2016	34,98,000/-	Completed
2	Geophysical Investigation to find the Potential Ground Water Recharge Points in VNR VJIET Campus	VNR VJIET	Jan to June 2019	52,550/-	Completed
3	Geophysical Investigation to find the Potential Ground Water Recharge Sites	Awareness in	March 2019 to	1,10,000/-	On Going

	in Pragathinagar, Hyderabad	Action (a NGO's body)	February 2020		
4	Estimation and Tracking of Subsurface Groundwater Discharge (SGD) along coastal stretches of Andhra Pradesh and Tamil Nadu, based on understanding (and modelling) of the coastal aquifer hydrodynamics	RESPO ND/ ISRO	July 2020 to June 2023 (3 years)	33,84,000/-	On Going

#### 5.10 Consultancy Projects:

Sl. No.	Title	Agency	Period	Sanctioned Amount	Ongoing / Completed
1	NIL				

#### 6. Awards / Honours received:

- a). 2nd Topper in NPTEL On-line Course (NOC - 40 Hours) with 76% Marks and obtained "Elite Certificate" on the topic of 'Probability Methods in Civil Engineering' jointly conducted by NPTEL and IIT Kharagpur for the period of 18th January 2016 – 15th April 2016.
- b). 1<sup>st</sup> Topper in NPTEL On-line Course (NOC - 40 Hours) with 92% Marks and obtained "Gold and Topper Certificate" on the topic of 'Regression Analysis' jointly conducted by NPTEL and IIT Kharagpur for the period of July to October 2018.
- c). MHRD Scholarship during PG studies at IIT Delhi.
- d). MHRD Scholarship during Ph.D. studies at IIT Delhi.
- e). Rank 4 in B.E. level in 1996 to 200 batch of students
- f). Obtained 93.45 Percentile in GATE 2000.
- g). Secured 'Grade B' in the 'G.K. Examination' held on 16th Dec'90 by the 'Society for International Language Studies' Durgapura, Jaipur – 302 018, Rajasthan.
- h). Secured 2nd Class in 'Hindi Uttam Exam' in 1993 conducted by Hindi Prachar Sabha, Hyderabad.

#### 7. Motto:

Lead a Good Character Teacher and Enthusiastic Learner all the time.