



# Atria Institute of Technology

## Department of Civil Engineering

### Research Centre Details

Currently, the department having three faculty with doctoral degrees, and out of these, two have been registered as PhD guides in VTU.

S. No.	Name	Specialization	Research areas	Email ID
1	Dr. L Udaya Simha	Environmental Engineering	Water Resources and Environmental Engineering	udaya.simha@atria.edu
2	Dr. Surendra H J	Water Resources Engineering and Management	Soft Computing, Hydrological Modelling	surendra@atria.edu
3	Dr. Vijayarathy R	Structural Engineering	Self Compacting Concrete	vijay.s@atria.edu

### Research Scholar Details

Department Research Centre is having a VTU recognized research center from the year 2015 in which two scholars are registered.

1. Vidyadhare C V (2016)
2. Raghunandan K (2017)
3. Gowtham Prasad M E (2021)
4. Nisarga P (2022)

### Research Work got fundings

S. No.	Title of Project	Year	Project Guide	Agency/Scheme	Amount (in Rs)
1.	KREDL -BEE	2022	Dr. Surendra H J	KREDL -BEE	50,000
2.	KSTA	2022	Dr. Surendra H J	KSTA	20,000
3.	KSCST - Water balance analysis to support sustainable river basin using experimental and soft computing approaches	2022	Dr. Surendra H J	KSCST - 45th series of Student Project Programme (SPP): 2021-22	7,000
4.	KSCST - Experimental study on recycled fine aggregate concrete for sustainability	2022	Mrs Asha Walltagi	KSCST - 45th series of Student Project Programme (SPP): 2021-22	7,000



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5.	KSCST - Traffic analysis and improvement study of public transportation between Hebbal to Guttahalli through Bus Rapid Transit system	2022	Mr Bramendra Kishore AND Mr Srinidhi S U	KSCST - 45th series of Student Project Programme (SPP): 2021-22	5,000
6.	KSCST - Experimental study on Mechanical Properties of GRIO Reinforced Concrete	2022	Mr Srinidhi S U	KSCST - 45th series of Student Project Programme (SPP): 2021-22	8,000
7.	Scheme for Promoting Interests, Creativity & Ethics among Students (SPICES)	2021	Dr. Surendra H J & Dr. &Aishwarya P	All India Council for Technical Education	1,00,000
8.	water balance computations in different river basin using Experimental and Soft computing approach: concept of Hydrological cycle - VGST	2021	Dr. Surendra H J	VGST	3,00,000
9.	Low cost community level community water treatment system using tubular solar still under changing climatic scenarios	2020-21	Dr. Surendra H J	KSCST Student Project Programme - 44th Series	5000
10.	Analysis & Design of Green & Efficient building	2020-21	Mr. Karthik J	Design World Engineering Consultants, CSR	5000
11.	Removal of Nitrate from Ground Water using Low Cost Treatment System	2020-21	Dr. Surendra H J	FAER McAfee Scholar Awards 2020-21	5000
12.	Purification of water using natural materials	2019-20	Dr. Rahul Dandautiya	VTU Financial assistance for innovative projects of Final Year UG	5000
13.	Experimental Analysis of Plastic Bricks	2019-20	Mr. Naga Subramanian	VTU Financial assistance for innovative projects of Final Year UG	5000
14.	Adsorption of lead and arsenic using groundnut shell	2019-20	Mrs. KRITIKA SHARMA Dr. H J SURENDRA	KSCST Student Project Programme -	5000



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7	Improving Indoor thermal efficiency through utilizing wastes by passive techniques	2018-19	Prof Abhilash B L	KSCST Student Project Programme	6000
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#### Publications:

Faculties at the civil engineering department participate actively in various national and international conferences to present their research articles. They are also working actively to publish research articles in reputed peer-reviewed SCI/ SCIE, ESCI, and Scopus index journals.

Department has an H-Index of 6 and an i-10 index of 4 with 44 publications (29 in journals, 12 in the conference, and three book chapters).

#### Year 2021-22

##### Articles Published in journals

Sl No	Title of paper	Name of the author/s	Name of journal	Year of publication
1	Lightweight concrete blocks produced using expanded polystyrene and foaming agent	BR Vinod, HJ Surendra, R Shobha	Materials Today: Proceedings, Elsevier	30 November 2021
2	Optimal cropping pattern for a tail-end distributary canal of Bhadra command area using linear programming model	SB Kumar, BR Ramesh, HJ Surendra	Modeling Earth Systems and Environment	23 January 2022
3	Municipal Residential Water Consumption Estimation Techniques Using Traditional and Soft Computing Approach: a Review	HJ Surendra, Paresh Chandra Deka	Water Conservation Science and Engineering	<a href="#">1 February 2022</a>
4	Application of Mamdani model-based fuzzy inference system in water consumption estimation using time series	HJ Surendra, PC Deka, HN Rajakumara	Soft Computing	29 March 2022
5	Sustainable integrated urban flood management strategies for planning of smart cities: a review	HJ Surendra,	Sustainable water resource management	4 May 2022



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### Research Centre Details

#### Book Chapter

Sl No	Title of the book/chapters published	Name of the author/s	Year of publication	ISBN	Affiliating Institute	Name of the publisher	Relevant link
1	Cropping Pattern Decision for a Canal Distributary for Varied Discharge Using Linear Programming Approach	BR Ramesh, SB Kumar, HJ Surendra	01 December 2021	Pages 931-941 ISBN 978-16-1341-8	Atria Institute of Technology	Springer International Publishing	<a href="https://doi.org/10.1007/978-981-16-1342-5_74">https://doi.org/10.1007/978-981-16-1342-5_74</a>



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### Research Centre Details

Year 2020-21

#### Articles Published in journals

Sl No	Title of paper	Name of the author/s	Name of journal	Year of publication	ISBN/ISS N
1	Experimental Study and Calibration of Hydraulic Coefficients using Vertical Orifice	R. Tejaswini and H. J. Surendra	Springer Nature Switzerland, Hydrological Extremes, Water Science and Technology Library 97	8 Nov 2020	978-3-030-59147-2
2	Prioritization of sub-watersheds of the Kanakapura Watershed in the Arkavathi River Basin, Karnataka, India- using Remote sensing and GIS	Hema hc , Govindaiah S , Lakshmi Srikanth & HJ Surendra	Geology, Ecology, and Landscapes, Taylor & Francis online Journal	29 Dec 2020.	-
3	Pressure Settlement Behaviour of Strip Footing Resting on Unreinforced and Tire Chips Reinforced Copper Slag.	Gill, G., Mittal, R.K. and Dandautiya, R.,	KSCE Journal of Civil Engineering	2020	1976-3808
4	Economic design of alternative system to reduce the water distribution losses for sustainability	H. J. Surendra, B. T. Suresh, T. D. Ullas, T. Vinayak, Vinay P. Hegde	Applied Water Science, Springer International Publishing	21 June 2021	vol 11, pages 1-9

#### Book Chapter

Sl No	Title of the book/chapters published	Name of the author/s	Year of publication	ISBN	Affiliating Institute	Name of the publisher	Relavant link
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1	Utilization Potential of Iron Ore Tailing Waste in Various Applications	S. R. BharathN . Lavanya H. B. Bharath Kumar R. K. Chaitra and Rahul Dandautiya	2021	978-981-336-695-4	ATRIA I T	Springer, Advances in Energy and Environment Scopus Index Book Chapter	<a href="https://www.springer.com/gp/book/9789813366947">https://www.springer.com/gp/book/9789813366947</a>
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2019-20

#### Articles Published in journals

Sl No	Title of paper	Name of the author/s	Name of journal	Volume and Year of publication	ISBN/ISSN number
1	Utilization potential of fly ash and copper tailings in concrete as partial replacement of cement along with life cycle assessment	Rahul Dandautiya	Science direct, Elsevier, Waste Management	November 2019	Volume 99, Pages 90-101.
2	Experimental, statistical and simulation analysis on impact of micro steel – Fibres in reinforced SCC containing admixtures	V. Athiyamaan, G. Mohan Ganesh	Construction and Building Materials	March 2020	118450
3	Fuzzy and Improved fuzzy wavelet approach in modeling municipal residential water consumption estimation using climatic variables	H.J. Surendra, Paresh Chandra Deka	Journal of soft computing Springer, SCI Index, IF: 2.70	May 2020	Soft Computing (2020) 24:11213–11222, Springer

#### Conference

Sl. No.	Name of the Authors	Title of the paper	Title of the proceedings of the conference	National / international	Year of publication
1	Bharath, S. R., Lavanya, N., Bharath, K.H.B., Chaitra, R.K., Dandautiya R.	Utilization potential of iron ore tailing waste in various applications,	International Conference on Trends and Recent Advances in Civil Engineering (TRACE 2020), Amity University Uttar Pradesh, Noida, India,	International	20-21 August 2020.



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Sl. No.	Name of the teacher	Title of the paper	Title of the proceedings of the conference	National / international	Year of publication	ISBN number of the proceeding
1	Prof Ashwini B T	Partial Replacement of Coarse Aggregate with E-Plastic Waste in Interlocking Pavement block	International Web Conference on Smart Engineering Technologies,	International	2020	ISBN: 978-93-5407-648-0
2	H.J. Surendra, Md.Qaiser Junaid	Precipitation overflow demonstration and rainfall-runoff modeling by regression analysis: A case study	AIP Publishing Series	International	Jan 2020	2204, 020013 (2020)
3	Ganesh S.P., Surendra H	Feasibility study for optimal cropping pattern for available water in the distributary of an irrigation system	AIP Publishing	International	Jan 2020	2204, 020002 (2020)
4	Kavya B M., Surendra H J	Estimation of design flood at a reservoir (outlet) by CWC based hydrometeorological approach	AIP Conference proceedings	International	Jan 2020	020010 (2020)
5	Surendra H J Tejaswini R,	Study of Stand-Alone Solar Panel Roof – Design and Construction, Uniqueness and Challenges	International Conference on Recent advances on Renewable energy at NITK, SURATHKAL	International	Feb 2020	Volume-1 Issue-978-1-64826-759-8 Pages-32

**2018-19**

#### Articles Published in journals

Sl No	Title of paper	Name of the author/s	Name of journal	Volume and Year of publication	ISBN/ISSN number
1	Analysis and Assessment of solid waste management through Field approach	Hema H C, H J Surendra, Nagasahadeva reddy k.	International Journal of Innovative research in science , Engineering and Technology	Volume 8, issue 2 Pages 978-984, 2/1/2019	ISSN(Online): 2319-8753 ISSN (Print): 2347-6710



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2	Feasibility study of a new approach to removal of nitrates from groundwater by Biological Denitrification	Priyankashri K N., Surendra H J.	International Journal of Advanced Engineering Research and Science	Volume 5, issue12 Pages190-197, 1/1/2019	ISSN: 2349-6495(P)   2456-1908(O)
3	Sustainable utilization of waste tire-chips reinforced copper tailings as structural fill	Rahul Dandautiya	Environment, Development and Sustainability	Pages 4845–4865(2020), 6/18/2019	ISSN: 1387585X, 15732975
4	Impact assessment of fly ash on ground water quality: An experimental study using batch leaching tests	Rahul Dandautiya	Waste Management & Research,	Volume 36(7), PP. 624-634, 5/31/2018	1096-3669
5	Analysis of the Alignment of Micro-Steel Fibers in Admixture-Based Self-Compacting Concrete (MSFR-SCC) using NDT and Evaluation of Its Effect on the Modulus of Rupture	Dr. Athiyamaan.V	International Journal of Technology	January 2019	ISSN 10(1):5

### Conferences

Sl. No.	Name of the teacher	Title of the paper	Title of the proceedings of the conference	National / international	Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication
1	Rahul Dandautiya	Life cycle assessment of production of concrete using copper tailings and fly ash as a partial replacement of cement	Advances in Sustainable Construction Materials	National	Pp 75-85, 2019	-	ATRIA IT