Curriculum Vitae (CV)

KONA SAI VIKAS

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Interdisciplinary Centre for Water Research (ICWaR)
IISc Bangalore, PIN: 560012.

CAREER OBJECTIVE

To dedicate my career by utilizing my research skills at a multidisciplinary level and solving various water-related problems globally with a strong motive to achieve excellence to the best of my abilities.

RESEARCH INTERESTS

Hydroclimatology: Climate change, Streamflow uncertainty, and Flood Warning systems.
River hydraulics : Rating Curves, Submerged Flows, and Computational hydraulics.

EDUCATION

Ph.D (Joint). in Water Research. *[2021-ongoing]*
Interdisciplinary Centre for Water Research (ICWaR),
Indian Institute of Science (IISc) Bangalore, India.
Department of Infrastructure Engineering,
University of Melbourne, Australia.
CGPA: **9.0/10**
Research Area: Streamflow uncertainty in rivers. Supervisor: Dr. Rajarshi Das Bhowmik

Masters of Technology in Water Resources Engineering. *[2019-2021]*
Indian Institute of Technology Bhubaneswar, Khorda, Odisha, India.
CGPA: **9.67/10 (Institute Silver Medalist)**
Research Area: Submerged flows. Supervisor: Dr. Arindam Sarkar

B. Tech in **Civil Engineering**. *[2014-2018]*
Andhra University College of Engineering, Visakhapatnam, India.
CGPA: **8.08/10**

Intermediate (Mathematics, Physics, and Chemistry). *[2012-2014]*
Sri Chaitanya Junior College, Visakhapatnam, Andhra Pradesh, India.
Percentage: **97.7/100**

Secondary Education. *[2011-2012]*
Janahitha Smart Techno School, Narisipuram, Andhra Pradesh, India.
GPA: **9.7/10**

COMPUTER SKILLS

Applications: BaRatin, SWAT, QGIS/ArcGIS, ANSYS Fluent and AUTOCAD.
Programming: Matlab, R, Python, and C.

PROJECT WORKS

Research Project (Ph.D.): IISc Bangalore & University of Melbourne. *[2021-Ongoing]*
Advisor: Prof. Andrew Western, Dr. Murray Peel and Dr. Rajarshi Das Bhowmik
Title: "Development of a robust hierarchical Rating curve model for the Indian Rivers"
Description: My research primarily focuses on developing a robust hierarchical rating curve model that accounts for the stream flow uncertainty associated with the climate and land surface processes. The model helps as an efficient extreme event warning system for better management and adaptation strategies.

Thesis Project (M. Tech): IIT Bhubaneswar, India. *[2021]*
Advisor: Dr. Arindam Sarkar
Title: "Study on the characteristics of a Surface hydraulic Jump downstream of a sharp-crested weir at multiple slopes"
Description: This study investigated the characteristics of surface hydraulic jumps formed downstream of a sharp-crested rectangular weir under submerged conditions. The effect of the slope of the channel on the jump characteristics has been observed and then modeled using the software ANSYS FLUENT.

Review Project (M. Tech): IIT Bhubaneswar, India. *[2020]*
Advisor: Dr. Meenu Ramadas
Title: "Study of Surface-Ground Water Interactions in Wetlands"
Description: A review was made on the Ground, and Surface water interactions along with the applications of WETSAND model at Duke University restored wetland site located in North Carolina, USA. Additionally, the status of Indian wetlands and the need to restore the wetlands were emphasized, specifying the consideration of water interactions.

Thesis Project (B.Tech): Andhra University College of Engineering, Visakhapatnam, India. *[2018]*
Advisor: Ms. G. Sireesha
Title: "Experimental Investigation on Oil Contaminated Soils using CBR tests."
Description: This study observed the effect of waste engine oil on silty sand. The impact of oil contamination on the engineering properties of the silty sand was investigated. The study concluded that the CBR value increases up to 4% oil content and decreases with a further increase in the oil content.

ACHIEVEMENTS & AWARDS

Institute level Silver Medalist. *[2021]*
Achieved for obtaining the highest CGPA amongst the students graduating with M.Tech degree from the Schoolof Infrastructure, IIT Bhubaneswar.

Awarded the Scholarship for Higher Education (SHE) under INSPIRE scheme. *[2012]*
Achieved for securing a place among the top 1% in Intermediate board examinations.

Merit Scholarship from the Government of Andhra Pradesh. *[2012]*
Achieved for the excellency shown in the Intermediate board examinations.

Qualifying Examinations: Graduate Aptitude Test Engineering (GATE), Engineering Agriculture and Medicine Common Entrance Test (EAMCET), English Proficiency test (IELTS with a 7 Band Score).

PUBLICATIONS / CONFERENCES

- **Vikas K.S.,** and Sarkar, A. (2022). "Submerged Flow Regimes Downstream of a Weir at Multiple Slopes" in "9th IAHR International Symposium on Hydraulic Structures (9th ISHS)". Proceedings of the 9th IAHR International Symposium on Hydraulic Structures – 9th ISHS, 24-27 October 2022, IITRoorkee, Roorkee, India. (DOI: 10.26077/010f-f6ea). *[Status: Published]*

- **Vikas K.S**., and Bhowmik, R. D. (2023). Development of a robust hierarchical river stage-discharge relationship relying on hydroclimate and morphological drivers. American Geophysical Union, Fall Meeting 2023, San Francisco, CA, USA. *[Status: Presented]*

- **Vikas K.S.,** Nilesh, K., and Sarkar, A. (2024). Energy dissipation and turbulent characteristics of flow regimes downstream of a submerged weir at multiple slopes. Special Collection: New frontiers in hydraulic structures engineering. Journal of Hydraulic Engineering. *[Status: Accepted]*

- **Vikas K.S**., and Bhowmik, R. D. (2023). Development of a robust hierarchical Rating curve model for the Indian Rivers. *[Status: Under Review]*

PROFESSIONAL TRAINING

- Intake design of Tata Steel Jajpur plant during the coursework. *[2019]*
- AUTOCAD at Indo-German Institute of Advanced Technology) Visakhapatnam, India. *[2016]*
- Industrial Training at MK Gold Coast Project, Visakhapatnam, India, and Pravin Constructions, Mumbai, India. *[2017]*

COORDINATOR/VOLUNTEER EXPERIENCE

- Volunteer for "Advanced Technologies for Water Resources Management" - a training program on 18-22 April 2022, at IISc Bangalore.
- Student Placement Coordinator for the season 2020-21 at IIT Bhubaneswar.
- Course Assistant for the subjects Water Resources Laboratory, Ground Water Hydrology, Engineering Drawing & AutoCAD.
- Volunteer for "Climate Change Impacts on Hydro-meteorological Extremes: Research Gaps and Challenges"- A one-day workshop on 13 December 2019, at IIT Bhubaneswar, India
- Volunteer for International Conference on "Coastal & Inland Water Systems" (CIS-2019) organized jointly by Forum for River and Ocean Scientists and Technologists (FROST) and IIT Bhubaneswar, India.

LANGUAGES

English (Proficient), **Hindi** (Intermediate), and **Telugu** (Native).

OTHER ACTIVITIES

- Secured 2nd Prize in District Level Science Fair Exhibition in 2011.
- Participated in a constituency-level painting competition organized by EENADU in 2010.
- Appreciated for raising funds for the welfare of blind children in an event by ITRRODDD in 2005.
- Likes Mentoring, Travelling, and Music.

REFERENCES

Dr. Rajarshi Das Bhowmik
Assistant Professor,
Interdisciplinary Centre for Water Research (ICWaR),
Indian Institute of Science, Bangalore,
Mail: rajarshidb@iisc.ac.in

Dr. Arindam Sarkar
Assistant Professor,
Water Resources Engineering,
School of Infrastructure (Civil Engineering),
Indian Institute of Technology (IIT) Bhubaneswar,
Mail: asarkar@iitbbs.ac.in

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