

**Sanjay Kumar Raul, Ph.D.**  
**Associate Professor, Instrumentation Cell**  
**Central Laboratory**



**Education**

- Ph.D. (Agril. Engg.) in Water Resources Management, Indian Institute of Technology, Kharagpur- 2012
- M. Tech (Agril. Engg.) in Irrigation & Drainage Engineering, GB Pant University of Agriculture & Technology, Pantnagar (Uttarakhand)- 2001
- B.Tech. (Ag. Engg. & Tech.), Orissa University of Agriculture and Technology, Bhubaneswar- 1997

**Experience**

- Associate Professor, Central Laboratory, Orissa University of Agriculture and Technology (OUAT), Bhubaneswar from July 2017.
- Senior Scientist (SWCE), Regional Research & Technology Transfer Station (RRTTS), OUAT, Bhubaneswar from January 2016 to July 2017
- Assistant Professor, Anand Agricultural University (AAU), Anand, Gujarat from February 2009 to January 2016.
- Lecturer, Marathwada Institute of Technology, Bulandshahr, U.P. from August 2008 to February 2009
- Research Associate, Water Technology Centre for Eastern Region (ICAR), Bhubaneswar from April 2008 to August 2008.
- Research Associate, Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora (ICAR), Uttarakhand from October 2007 to April 2008.
- Full-time Research Scholar, Indian Institute of Technology, Kharagpur, West Bengal from July 2003 to October 2007
- Research Associate, Central Soil Salinity Research Institute (ICAR), Karnal, Haryana from June 2001 to July 2003
- Senior Research Fellow, Water Technology Centre for Eastern Region (ICAR), Bhubaneswar, Odisha from February 2001 to June 2001

**Externally Funded Projects/ schemes**

- Associated Scientist of a collaborative research project on “Simulation-Optimization Modelling for Integrated Land and Water Resources Management in the Canal Command of the Hirakud Major Irrigation Project, Orissa (India)” completed with financial assistance from DST (India)- DAAD (Germany) (2004-2007).
- Associated Scientist, “Diagnostic analysis of SSNNL project (2011-14)
- Co-Principal Investigator, “Advanced centre for Research and Trainers Training on Agricultural Engineering based Interventions” funded by Govt. of Gujarat (2012-16).
- Associated Scientist, “Developing a watershed based conclave for experimental learning at Kankanpur” funded by Govt. of Gujarat (2012-14).

- Associated Scientist, “Developing a model village incorporating farm mechanization and watershed concepts” funded by Govt. of Gujarat (2012-14).

#### ***Courses taught***

- Agriculture for engineers (B. Tech.)
- Surveying and levelling (B. Tech.)
- Irrigation engineering (B. Tech.)
- Groundwater, wells & pumps (B. Tech.)
- Drainage engineering (B. Tech.)
- Fluid mechanics (B. Tech.)
- Soil mechanics (B. Tech.)
- Micro irrigation systems design (B. Tech.)
- Groundwater engineering (B. Tech.)
- Design of farm irrigation systems (B. Tech.)

#### ***Students guided***

Guided one M. Tech. student of AAU, Anand

#### ***Present research interests***

- Groundwater modeling
- Integrated land and water resources management
- Rainwater harvesting & recycling

#### ***International visits***

- Associated Scientist, Leibniz University of Hannover, Germany under the project ““Simulation-Optimization Modelling for Integrated Land and Water Resources Management in the Canal Command of the HiraKud Major Irrigation Project, Orissa (India)” with fellowship from DAT-DAAD project during August to October 2004, September to November 2005 and July to September 2006.

#### ***Publications***

Authored two book chapters with ISBN number, seven research papers in peer reviewed International journals and seven seminar/ conference/ symposium proceedings (without ISBN)

#### ***Selected publications***

- Raul, S. K., Shinde, T. A. and Panda, S. N. 2016. Irrigation management for non-monsoon crops in a major canal command in eastern India under water limiting environment. Agricultural Engineering (Scientific Journal), XLI(2): 81-92.
- Mohanty, S., Jha, M. K., Raul, S. K., Panda, R. K. and Sudheer, K. P. 2015. Using artificial neural network approach for simultaneous forecasting of weekly groundwater levels at multiple sites. Water Resources Management, 29(15): 5521-5532.

- Raul, S. K. and Panda, S. N. 2013. Simulation-optimization modelling for conjunctive use management under hydrological uncertainty. *Water Resources Management*, 27(5): 1323-1350.
- Raul, S. K., Panda, S. N. and Inamdar, P. M. 2012. Sectoral conjunctive use planning for optimal cropping under hydrological uncertainty. *Journal of Irrigation and Drainage Engineering (ASCE)*, 138(2): 145–155.
- Raul, S. K., Panda, S. N., Holländer, H. and Billib, M. 2011. Integrated water resource management in a major canal command in eastern India. *Hydrological Processes*, 25(16): 2551–2562.
- Raul, S. K., Panda, S. N., Holländer, H., and Billib, M. 2008. Sustainability of rice dominated cropping system in the Hirakud canal command, Orissa (India). *Irrigation and Drainage*, 57(1): 93–104.
- Ambast, S. K., Tyagi, N. K. and Raul, S. K. 2006. Management of declining groundwater in the Trans Indo-Gangetic Plain (India): Some options. *Agricultural Water Management*, 82(3): 279–296.

#### **Book chapter**

- Raul, S. K. and Gaur, M. L. 2016. Evaluation of Performance Indices for Water Delivery Systems: Canal Irrigation. In: B. Panigrahi and M. R. Goyal (eds.), *In: Soil and Water Engineering: Principles and Applications of Modelling, Innovations in Agricultural and Biological Engineering (Vol. 6)*, Apple Academic Press, Inc. pp. 317-341 (ISBN 13: 978-1-77188-392-4, 13: 978-1-77188-393-1).
- Raul, S. K. and Panda, S. N. 2009. Groundwater Flow Simulation Modeling in the Hirakud Canal Command Using Visual Modflow. In: P. C. Sinha and S. Rana (eds.), *Sustainable Water Management: Challenges, Technologies Solutions*, Pentagon Press, New Delhi, pp. 127–148 (ISBN 978-81-8274-389-2).

**Contact details:** Instrumentation Cell (Central Laboratory)  
Orissa University of Agriculture and Technology,  
Bhubaneswar- 751003, Odiha, India  
Email: sanjaykraul@gmail.com  
Ph. +91-9439051997