

Brief-Biography

Shukra Raj Paudel

Professor (Assistant)

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Professional Experience

- Mr. Paudel has been working as Assistant Professor of Environmental Engineering since 2004, in Tribhuvan University, Nepal.
- He had successfully completed 3 years research in the area of Aquatic System in collaboration with 3 different Universities-Columbia University, New York; University of Hawaii at Manoa, USA; and Korea University, South Korea, and also 2 years collaborative research with NASA, USA.
- He has been working as Reviewer for couple of Journals and IWA World Water Conference and Exhibition, to be held in different countries.
- He has published several research papers in various National and International platforms including peer review journals in SCI and proceedings.
- He has presented his research papers in more than dozen of National and International conferences.
- He is actively involved in teaching environmental engineering subjects to Undergraduate/Graduate level in Tribhuvan University.
- He has been working as Environmental Expert/Consultant in many NGOs and INGOs.

Academic/Training

He received undergraduate degree in Civil Engineering and Graduate (Master) degree in Environmental Engineering from Tribhuvan University, Nepal and handled his 3yrs research project in the field of environmental engineering—aquatic system--Korea University, South Korea.

Award and Scholarship

He was awarded couple of National and International awards including Young Water Professional Award, and Full scholarship for studying University degree (Intermediate to PhD study).

General Research Interest Areas

Infrastructure and Economic Development, Green Infrastructure, Plan and Policy on Rapid Transition Strategy, Infrastructure Development Plan and Policy, Clean Energy Technology etc.

Specific Research Interest Areas

Biological Nutrient Removal (Nitrification, Denitrification and ANAMMOX Process), Fate and Transport of Hazardous Substances in the Subsurface, Biodegradation and Bioremediation, Phytoremediation, Bioretention Cell, Microbial Fuel Cell, Climate Change, Waste to Energy, Wastewater to Biodiesel, Membrane Technology, Biological Modeling and Optimization, Water and Wastewater Treatment (Biological, Physiochemical Process), Anaerobic and Aerobic Digestion of Sludge, Groundwater Hydrology/ Chemistry etc.

Experienced Research Areas

Biological Nitrification, Denitrification and ANAMMOX Process: Biological Nutrient Removal. Main Goal of the Research: *Global Mapping of Nitrous Oxide (N₂O) Emission in Aquaculture System and its Implication to Climate Change*. Specific Research Objective: Feeding Rate and Temperature Effect to Nitrous Oxide Emission in Aquaculture System Including Characterization of Water Quality, Optimization Study of Plant Density and Hydraulic Retention Time (HRT) in Hydroponic Bed, and Temperature Effect on Nitrogen Transformation Including Nitrous Oxide Emission in Aquaponics System. Plus, Recovery of Diammonium Phosphate (DAP) Using High Strength Ammonia etc.

Key Publications

1. **Paudel, S.R.**, Banjara, S.P., Wagle A., Freund, F. 2018. Earthquake Chemical Precursors in Groundwater: A Review. *Journal of Seismology*, pp1-22, **SCI, I.F.1.1**
2. **Paudel, S.R.**, Banjara, S.P., Choi, O.K., Park, K.Y., Kim, Y.M. and Lee, J.W., 2017. Pretreatment of agricultural biomass for anaerobic digestion: Current state and challenges. *Bioresource Technology*, 245, pp.1194-1205. **SCI, I.F. 5.81**
3. **Paudel, S.R.**, Choi OK, Khanal S.K., Chardan K., Kim S., Lee J.W., 2015. Effect of temperature on nitrous oxide (N₂O) emission from intensive aquaculture system. *Science of the Total Environment* 518, 16-23. **SCI, I.F., 4.9**
4. **Paudel, S.R.**, Kansakar, B.R., 2010. Dissolved ammonia adsorption in water using over burnt brick. *Energy Research Journal* 1, 1-5. **SCIE**

Research Projects

A. Accomplished

1. 2 yrs research project in collaboration with a senior Scientist Dr. Fridemann Freund from NASA, USA on *Earthquake Chemical Precursors in Groundwater: Empirical Earthquake Prediction*. From 2016 to 2018 March.

B. On-going

2. *Agriculture Waste to Energy* in collaboration with Prof. Jaewoo Lee, Korea University, South Korea. From 2017- present.
3. Implication of Free hydroxyl radical in groundwater before occurrence of earthquake.

Professional and Social Affiliations

- International Water Association (IWA)
- American Chemical Society (ACS)
- Society of Nepali Students in Korea (SONSIK)
- Nepal Engineers' Association (NEA)
- Nepal Engineering Council (NEC)
- Society of Public Health Engineers, Nepal (SOPHEN)
- Nepal Red-Cross Society (NRCS)