

Dr. Anuja Padma Gopalakrishnan

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Environmental professional with more than 9 years' experience in environmental research and Liquid waste management. Proven track record in environmentally sustainable projects related to water quality and liquid waste management.

EDUCATION

- PhD in Environmental Engineering from Nanyang Technological University(NTU), Singapore, 2017
- Master of Science in Environmental Engineering, Nanyang Technological University (NTU), Singapore,2005
- B.Tech in Civil Engineering, Rajiv Gandhi Institute of technology, Mahatma Gandhi University, Kerala,1999

SUMMARY

- Over 8 years of experience in Environmental research, especially in chemical and microbiological analysis of surface water and sediments.
 - Special interest in pathogen detection methods in water and sediments
 - Experience in risk assessment of aquatic bodies for recreational purposes
 - Knowledge in Liquid waste management
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WORK PROFILE

Liquid Waste Management Expert, Suchitwa Mission (Oct 2017 – present)

Local Self Government Department, Government of Kerala

The work in Suchitwa Mission involves evaluation of Detailed Project Reports (DPRs) for liquid waste management projects submitted by local bodies, arranging technical committee meetings for facilitation and Technical sanctions for the liquid waste treatment plants, making reports on various aspects of liquid waste management from time to time and conducting training on various aspects of Liquid waste management systems.

Research Engineer, National University of Singapore (Dec 2013 – Sept 2015)

Department of Civil and Environmental Engineering, National University of Singapore (NUS), Singapore

My role in the project titled 'Risk assessment of pathogens in recreational waters' was to study the occurrence of *N. fowleri* and microsporidia using molecular methods in urban catchment water in Singapore. *Naegleria fowleri* is a free-living amoeba found in aquatic environment and it can cause fatal disease - primary amoebic meningoencephalitis. Microsporidia is an emerging pathogen causing diarrhoea, especially in

immunocompromised patients. This project was supported by Singapore National Research Foundation under its Environmental & Water Technologies Strategic Research Programme.

Research Scholar, Nanyang technological University, Singapore (Aug 2009- Aug 2013)

School of Civil and Environmental Engineering (CEE), Nanyang Technological University (NTU), Singapore

I was awarded NTU research scholarship to pursue the degree of Doctor of Philosophy in NTU. As part of doctoral degree, I worked in a project titled 'Occurrence and fate of enteric viruses in Marina bay', funded by Public utilities Board (PUB) Singapore. This research work was conducted under the supervision of Dr. Tan soon Keat (NTU) and Dr. Karina Gin (NUS). The research work consisted of detection and study of the survival characteristics of viral indicators in aquatic sediments. I learned DNA/RNA extraction techniques, PCR, QPCR, gel electrophoresis, cloning techniques and plaque assay for viruses. Mentoring under graduate students for their final projects was also an important responsibility.

Project Officer (part-time) Aug 2008-Dec 2008

School of Civil and Environmental Engineering (CEE), Nanyang Technological University (NTU), Singapore

I worked in the project titled 'Establishment of a Real Time Control, Alarm and Management System for Marina Bay'. I was responsible for analyzing storm samples collected from marina catchment for nitrate, ammonia nitrogen, silica, total organic carbon, orthophosphate etc. I was maintaining data for water quality parameters.

Project Officer May 2006- May 2008

School of Civil and Environmental Engineering (CEE), Nanyang Technological University (NTU), Singapore

During this period I worked on both projects titled 'Water Quality Modelling & Monitoring for Kranji Reservoir' and 'Establishment of a Real Time Control, Alarm and Management System for Marina Bay'. These projects were funded by Public Utilities Board (PUB), Singapore. My main responsibilities were analyzing water quality parameters, sediment analysis, and sediment nutrient flux experiments etc. I was also responsible for doing literature review to identify suitable methods for different experiments regarding water quality modelling. Monthly presentation of the research data to PUB was part of my work.

RESEARCH PUBLICATIONS

Published

- Gin, K.Y-H., Gopalakrishnan, A.P., 2010 "Sediment oxygen demand and nutrient fluxes for a tropical reservoir", Journal of Environmental Engineering, Vol. 136, No. 1, 78-85.
- Gin, K.Y-H., Ramaswamy, U., Gopalakrishnan, A.P., 2011 "Comparison of Nutrient Limitation in Freshwater and Estuarine Reservoirs in Tropical Urban Singapore", Journal of Environmental Engineering, Vol. 137, No. 10, 913-919.

PhD thesis

Title: Occurrence and survival of enteric viral indicators in sediments in tropical aquatic systems.

<http://hdl.handle.net/10356/70072>
