ANJALI LOTHE

ENGINEER-IN-TRAINING (Certification No. EIT 166154)

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EDUCATION

University of California, Los Angeles **Sep. 2018**

Master of Science, Civil and Environmental Engineering GPA- 3.667/4

Relevant courses: Molecular Biotechnology for Engineers, Environmental Biotechnology, Biological Processes for Water and Wastewater Treatment, Environmental Nanotechnology: Implications and Applications.

Indian Institute of Technology (Indian School of Mines), Dhanbad **May 2016**

Bachelor of Technology, Environmental Engineering OGPA- 8.02/10

Relevant courses: Water Resource Planning and Management, Principal Design of Water supply System, Environmental System Optimization and Modelling, Environmental Hydraulics, Environmental Chemistry, Environmental Management System and Industrial Wastewater Treatment, Municipal Wastewater Engineering.

PROJECTS

Master Thesis Project **Sep. 2018**

Treated water samples containing Nitro-explosives using novel recombinant protein nanotechnology. Manganese peroxidase enzyme packaged in natural major vault protein (MVP) to catalyze removal of amino-nitrotoluene and diaminotoluene - Dr. Shaily Mahendra, Civil and Engineering Department at UCLA.

Bachelor Thesis Project **Aug. 2015**

Experimented with phytoremediation techniques to measure and compare copper extraction levels in different tolerant plants from soil - Dr. Vipin Kumar, Environmental Science and Engineering Department, IIT (ISM), Dhanbad.

PROFESSIONAL EXPERIENCE

Internships

Jamshedpur Utilities Services Company Limited, Jamshedpur **June 2015**

Monitored unit operations at Sewage treatment plant - the primary, secondary treatment of wastewater & anaerobic sludge digester.

Central Mine Planning and Design Institute, Region IV, Nagpur **Dec.14 – Jan. 2015**

Analyzed water samples from 8 different Opencast coal mines for acidity and heavy metal content.
Reported the ways to neutralize the acid mine drainage and utilize water for domestic or irrigation purpose.

Jindal Power limited, Tamnar, Raigarh, Chhattisgarh **May – June 2014**

Reported environmental pollution sources from each sub-process in thermal power plant and ways to control and monitor them, titled as “Identification, Control, and Assessment of Pollution sources”.

Environmental Engineering specialist **Nov. 2018 - Current**

Analysis and Solutions Consultants (ASC)

3767 Overland Ave., Ste 115, Los Angeles, CA, 90034

Working on **METRO’s Purple Line Extension Two** (managed by **Tutor Perini/O&G, JV**) and **Purple Line Extension Three**. (managed by **Frontier-Kemper/ Tutor Perini, JV**).
Responsible for developing noise and vibration control and monitoring plans.
Conducting continuous monitoring for noise and vibration.
Managing instrument installation, data collection and report submissions.
Planning and conducting **In-Situ Gas Monitoring**, **$500,000** scope for Purple Line Two project. This includes identifying existing conditions with respect to gas levels in utility vaults, ground surface and building interiors which fall under zone of study.

Helping with other field like Pre- and Post-Construction Surveys which include logging existing cracks on building floors or ceilings, and photographic as well as video documentation of current conditions of the buildings which fall under limit lines of METRO tunnels.

Teaching Assistantships

Conducted lab sessions for **Mathematics for Life Scientists** using python with Dr. Jukka Keranen. **Jan. – March 2018**

Taught **Genetics, Evolution, and Ecology** for Life Sciences with Dr. Frank Laski & Dr. Debra Pires. **Sep. – Dec. 2018**

Taught **Evolution, Ecology, and Biodiversity**, a course for Life Sciences with Dr. Tonya Kane. **Jan. – June 2017**

Taught **EPANET and HECRAS** while assisting Prof. Timu Gallien for Hydrologic Modelling. **Sep. – Dec. 2016**

PUBLICATIONS

- **Lothe, A. G**. & Sinha, A. Development of a model for prediction of Leachate Pollution Index (LPI) in absence of leachate parameters. Waste Management. (2016). doi: 10.1016/j.wasman. 5yr. Impact Factor: 4.669

- **Lothe, A. G**., Hansda, A. and Kumar, V. Phytoremediation of Copper-Contaminated Soil Using *Helianthus annuus*, *Brassica nigra*, and *Lycopersicon esculentum Mill.*: A Pot Scale Study. Environmental Quality Management 25, (2016). doi:10.1002/tqem.21463

- **Lothe, A. G**., Sinha, A., Kalra, S. S. "A comparative study on biodiesel production from waste cooking oil" Journal of Basic and Applied Engineering Research p-ISSN: 2350-0077; e-ISSN: 2350-0255; Volume 2, Issue 23; October-December 2015 pp.1961-1966.

SKILLS

Software: Python, MATLAB, SoundPLAN, Microsoft Office, HECRAS, EPANET.

Laboratory Skills: Fungal, insect and bacterial cell culturing, Molecular cloning, Gibson DNA assembly, digestion-ligation, fusion protein production by baculovirus expression system and *Pichia pastoris* expression system, total nucleic acid extraction, PCR, qPCR, SDS-PAGE, Western blotting, HPLC Analysis, enzyme assays.

Languages: French (Basic Level A1).

LEADERSHIP EXPERIENCE

National Environmental Engineers Meet (NEEM) **Oct. 2013**

Organized the conference with a team of 10 students for providing a platform to discuss and present research in the field of Environmental Engineering costing $2000 at Indian School of Mines, Dhanbad.

Kartavya NGO **2012-2013**

Taught Science and Mathematics to the students from primary and secondary school for a year through Kartavya, a voluntary NGO working for the education of poor children living in slums and villages and helping their families for a better living.