

CURRICULUM VITAE

Dr. Sri Shalini Sathyanarayanan, Ph.D.

Women Scientist, DST, Govt. of India

Centre for Climate Change and Adaptation Research,
Anna University, Chennai-25

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Scholastic Records

Postdoctoral Research (2017 - 2018)

Department of Bioresource Engineering, McGill University, Quebec, Canada

Ph.D in Environmental Science (2015)

Centre for Environmental Studies (CES), Anna University, Chennai, India

M.Sc. Environmental Science (2006-2008) (9.22/10 CGPA)

Centre for Environmental Studies, Anna University, Chennai, India

B.Sc. Bio-Chemistry (2003-2006) (81%), Ethiraj College for Women, University of Madras

Advance Certification in Lab Technician (2006), Loyola College, Chennai, India

Certificate for Social Services - Community Service Scheme, India

HSC (2003) (84%) & SSLC (2001) (92%)

The Children's Garden HS School (CGHSS), Chennai

Work Experience

Women Scientist – DST, Govt. of India (Present)

Centre for Climate Change & Adaptation Research (CCC&AR), Anna University, Chennai
Awarded - Women Scientists Scheme– A by Department of Science and Technology
(**DST**), Ministry of Science and Technology, **Govt. of India** (SR/WOS-A/EA-37/2018)
Feb. 2019 -

Title: Biochar from solid waste a sustainable green approach for solid waste
management and climate change mitigation

Postdoctoral Scholar – Environmental Science (McGill University, Canada)

Faculty of Agricultural & Environmental Sciences, Department of Bioresource
Engineering, **McGill University, Quebec, Canada.**

Awarded by SERB Overseas Postdoctoral Fellowship, Science and Engineering Research
Board (**SERB**), **DST, Govt. of India** (SB/OS/PDF-453/2015-16).

Jan. 2017 – Apr. 2018.

Title: Effects of biochar on nitrogen cycling and release of greenhouse gases from soils in
Microbial Fuel Cells

- Certification and training on Workplace Hazardous materials Information System
(**W.H.M.I.S**), **Canada** (2017) – Completed with distinction

Team Leader – Project Officer

Environmental and Water Resources Engineering (EWRE), Department of Civil
Engineering, **Indian Institute of Technology Madras, Chennai**, India.

Project funded by **Bill and Melinda Gates Foundation, United States of America.**
Oct. 2015 – 2016.

Title: Monitoring and Evaluation of Onsite Wastewater Treatment systems comprising of
DRDO based Anaerobic digestion units for toilets in South India

Project Officer

Environmental and Water Resources Engineering (EWRE), Department of Civil Engineering, **Indian Institute of Technology Madras, Chennai**, India.

Project funded by **Ministry of Urban Development, Government of India**
Oct. 2014 – 2015.

Title: Performance Evaluation of Sewage Treatment Plants (STPs) all over India and its environmental Pollution Control.

Project Associate

Centre for Environmental Studies (CES), Department of Civil Engineering, **Anna University, Chennai**

Project funded by **Madras Aluminium Company Limited (MALCO), Salem**, Tamil Nadu (Feb. 2009 – Apr. 2009).

Title: Environmental Impact Assessment of Red Mud storage system

Junior Project Associate

Centre for Environmental Studies (CES), **Anna University, Chennai**

Project funded by **Tamil Nadu Pollution Control Board (TNPCB) & Public Works Department (PWD), Government of Tamil Nadu** (Aug. 2008 – Jan. 2009).

Title: Environmental Impact Assessment studies for Government projects like new Tamil Nadu Legislative assembly and Modern Library in Chennai
Status of Industrial Pollution Control (Large, Medium and Small) in Tamil Nadu

Program Manager (Environmental Training)

Exnora PepsiCo Environment Training Institute (EXPEETI), Chennai (Jul.2008)

International work experience

- Postdoctoral research work in **McGill University, Quebec, Canada**.
- Molecular analysis work carried out in **Hong Kong Baptist University, Hong Kong** and Gas analysis in **University of Malaya, Malaysia**
- Paper presentations in International conferences - **Hong Kong, Malaysia, Sweden** and **Las Vegas**

Teaching experience

- Part-time teaching (2 years) - theory classes for M.Sc Environmental Science and M.Sc Bio informatics, Distance Education, **Bharathiar University**, Coimbatore (2008-2010)
- Practical classes (5 years) - Environmental Chemistry for M.E. Environmental Engineering and M.Sc Environmental Science; Unit operations for B.E Civil Engineering, Centre for Environmental Studies, **Anna University**, Chennai (2009-2013)
- Acting as "Reviewer" in many International reputed journals

Research Experience

Postdoctoral Research Project

- **The effects of biochar on nitrogen cycling and release of greenhouse gases from soils in Microbial Fuel cells**, Bioresource Engineering, McGill University, Canada
Mentor - Dr. Vijaya Raghavan, James McGill Professor, McGill University, Canada
(In Microbial fuel cells (MFCs), the effects of Biochar and different soil types on bioelectricity production, nitrogen cycling and greenhouse gas emissions were investigated).

Doctoral Research Project

- **Biological Removal of Ammonia Nitrogen in Landfill Bioreactors using SHARON and ANAMMOX processes**, Centre for Environmental Studies, Anna University, Chennai
Mentor: Dr. Kurian Joseph, Professor, Anna University, Chennai
(In situ ammonia nitrogen removal from landfill bioreactors using enriched aerobic and anaerobic ammonium oxidizing bacteria (AOB and AnAOB) from municipal solid waste for conducting the SHARON and ANAMMOX processes, respectively).

Master Research Project

- **Biological Stability of Municipal Solid Waste from Simulated Landfills**, Centre for Environmental Studies, Anna University, Chennai
- Seminar project (Industrial Training) on Water Purification & Sewage Treatment in Metro Water (Kilpauk and Koyambedu) and Nesapakkam Sewage Treatment plant, Chennai

Publications – Journal Articles / Book Chapters

- **S. Sri Shalini** and Kurian Joseph (2018), "Combined SHARON and ANAMMOX processes for ammoniacal nitrogen stabilization in landfill bioreactors", *Bioresource Technology*, Vol.250, pp. 723 – 732 (Impact factor: 5.807) (Cited by 7).
- **S. Sri Shalini**, Kurian Joseph and J.W.C.Wong (2015), "Aerobic and anaerobic ammonium oxidising bacterial enrichment from municipal solid waste", *International journal of Environmental Science and Technology*, Vol.12, pp. 1107 – 1122 (Impact factor: 2.037) (Cited by 4).
- **S. Sri Shalini** and Kurian Joseph (2014), "Aerobic and anaerobic ammonium oxidising bacteria enrichment from mined municipal solid waste in SHARON-ANAMMOX process", *Malaysian journal of science*, Vol.33, pp.42-49 (Cited by 1) (Impact Factor: 0.025).
- **S. Sri Shalini** and Kurian Joseph (2013), "Start-up of the SHARON and ANAMMOX process in landfill bioreactors using aerobic and anaerobic ammonium oxidising biomass", *Bioresource Technology*, Vol.149, pp.474-485 (Impact factor: 5.807) (Cited by 32).
- **S. Sri Shalini** and Kurian Joseph (2012), "Nitrogen management in landfill leachate: Application of SHARON, ANAMMOX and Combined SHARON-ANAMMOX process – A review", *Waste Management*, Vol.32, pp.2385-2400 (Impact factor: 4.723) (Cited by 129).
- **S. Sri Shalini**, O. P. Karthikeyan and Kurian Joseph (2010), "Biological stability of municipal solid waste under simulated landfill conditions", *Bioresource Technology*, Vol.101, pp.845-852 (Impact factor: 5.807) (Cited by 25).
- Kurian Joseph, Suneethi and **S.Sri Shalini** (2016), "Biotransformation of Nitrogen in landfills", O.P. Karthikeyan, K. Heimann and S.S.Muthu (eds), *Recycling of Solid waste for Biofuels and biochemicals*, Springer, Singapore, ISBN 978-981-10-0148-2.
- **S. Sri Shalini**, Yvan Gariepy, Vijaya Raghavan (2017), "Effects of soil types on Nitrogen cycling and Electricity production from Microbial Fuel cells with Dried Leaves", *Expert Opinion on Environmental Biology* (2017), Vol. 6 (4), 65 (Impact Factor: 0.92).
- Suneethi, **S Sri Shalini**, K Joseph (2014), "State of the art strategies for successful ANAMMOX startup and development: A Review", *International Journal of Waste Resources*, Vol. 4: 168, pp.1 -14 (Impact Factor: 0.8) (Cited by 10).
- Ligy Philip; K. Kalaivani; Praveen Rosario; Vamsi Krishna; **S. Sri Shalini** (2018), "Performance Evaluation of Anaerobic Baffled Biodigester for Treatment of Black Water", *Journal of Water, Sanitation and Hygiene for Development* – Submitted (Impact Factor: 0.785)

International and National Conferences

- **S. Sri Shalini**, Yvan Gariepy and Vijaya Raghavan (2017), "Effects of soil types on Nitrogen cycling and Electricity production from Microbial Fuel cells with Dried Leaves", 4th International conference on Green Energy and Expo & 6th International conference on Recycling: Reduce, Reuse, Recycle, Nov 6 – 8, 2017, **Las Vegas, USA**.
- **S. Sri Shalini** and Kurain Joseph (2016), "Combined SHARON-ANAMMOX process for ammoniacal nitrogen stabilisation in Landfill Bioreactors", *Asia-Pacific Conference on Biotechnology for Waste Conversion*, Dec 6-8, 2016, **Hong Kong SAR, P.R. CHINA**

- **S. Sri Shalini**, Laila Jaseela, Archana P Abraham, Ligy Philip, et al., (2016), "Evaluation of DRDO Based Anaerobic Biodigesters for Blackwater Treatment", 4th International faecal sludge management conference –Paper entitled "Performance", Chennai, February 2016.
- **S. Sri Shalini** and Kurian Joseph (2014), "*In situ* nitrogen management in landfill bioreactors using combined SHARON and ANAMMOX processes", Linnaeus Eco-Tech 2014, Linnaeus University, **Kalmar, Sweden**, November 24 – 26th, 2014.
- **S. Sri Shalini** and Kurian Joseph (2014), "SHARON and ANAMMOX process development in landfill bioreactors", National Conference on Energy and Environment Conference (EECON 2014), Department of Chemical Engineering, AC Tech., Anna University, Chennai – 600025, 3rd March, 2014.
- **S. Sri Shalini** and Kurian Joseph (2014), "Sustainable nitrogen management in landfill bioreactors using SHARON and ANAMMOX processes", National conference on Challenges of Water Resources and Environmental Management, Easwari Engineering College, Department of Civil engineering, Chennai – 600089, January 27 – 28, 2014.
- **S. Sri Shalini** and Kurian Joseph (2013), "Enriching of aerobic and anaerobic ammonium oxidizing bacteria from mined municipal solid waste", The International Conference on Waste Management and Environment, University of Malaya, **Kuala Lumpur, Malaysia**, August 26-27, 2013.
- **S. Sri Shalini** and Kurian Joseph (2013), "2nd ISWA – UM Summer School on Solid Waste Management in Developing Economies and Landfill", International Solid Waste Association (ISWA) in cooperation with the Institute of Biological Sciences, Faculty of Science, University of Malaya, **Kuala Lumpur, Malaysia**, August 12-23, 2013.
- **S. Sri Shalini** and Kurian Joseph (2012), "Enrichment of aerobic ammonium oxidising bacteria from mined municipal solid waste", International conference on Role of Green Technologies for Sustainable Development, Guru Nanak Institutions technical campus, Guru Nanak engineering college, Ibrahimpatnam, R.R. District – 501 506, Andhra Pradesh, March 30 – 31, 2012.
- **S. Sri Shalini** and Kurian Joseph (2011), "Enrichment of aerobic and anaerobic ammonium oxidising bacteria from fresh and mined municipal solid waste and leachate", International Conference of Solid Waste 2011 Moving Towards Sustainable Resource Management (ICSWHK2011), Hong Kong Baptist University, **Hong Kong SAR, P.R.CHINA**, May 2-6, 2011.
- **S. Sri Shalini**, S.Suneethi and Kurian Joseph (2009), "ANAMMOX and SHARON process for nitrogen management in Landfill Bioreactor", International Conference on Solid Waste Management (IconSWM), Kolkatta, India, November 4 – 6, 2009
- **S. Sri Shalini** and Kurian Joseph (2009), "Role of microorganisms in solid waste stabilization", Trends in Microbial Research, Association of Microbiologists in India (AMI), Chennai, India, February 27, 2009.
- **S. Sri Shalini** (2008), "Nanotechnology for Soil Remediation", NEERI Golden Jubilee – Students Seminar, National Environmental Engineering Research Institute (NEERI), Chennai, India, 2008

Awards

- Awarded **Women Scientist – A (WOS-A)** from Department of Science and Technology (**DST**), Ministry of Science and Technology, Govt. of India (2019 - 2022)
- Awarded **SERB Overseas Postdoctoral Fellowship (OPDF)** from Science and Engineering Research Board (**SERB**), Department of Science and Technology (**DST**), Govt. of India (2017-2018) (SERB award No.SB/OS/PDF-453/2015-16).
- Awarded **National Doctoral Fellow (NDF)** from All India Council for Technical Education (AICTE), Govt. of India (2010-2014) (AICTE No.1-10/RID/NDF-3/2009-10).
- Awarded **Junior Research Fellow (JRF)** from University Grants Commission (UGC), Govt. of India (2009-2010) (UGC Award No. F.4-3/2006(BSR)/8-8/2007(BSR))
- Awarded **grant** under **young scientist** cadre for international travel from **Council of Industrial Research (CSIR)**, Govt. of India (Sanction No: TG/8091/13—HRD)

- Awarded **grant** under **young scientist** for international travel from **Department of Science and Technology (DST)**, Govt. of India under young scientist cadre (No.SR/ITS/0249/2011-2012; SB/ITS/04231/2014-15)
- Awarded grants from
 - Waste Management Association of **Malaysia**, Malaysia
 - **Hong Kong Baptist University (HKBU)**, Hong Kong SAR, P.R. CHINA
- **Best Paper prize for paper presentation and Best Poster presentation** in International conference on Green Energy and Expo & International conference on Recycling: Reduce, Reuse, Recycle, Las Vegas, USA, 2017
- **First prize for paper presentation** in National Conference on Energy and Environment, AC Tech, Anna University, Chennai
- **Best Paper Presentation Award** in International Conference on Solid Waste Management, Kolkata, 2009
- Awards from **Tamil Nadu Arya Vysya Maha Sabha** for excelling in academics
- **Best Paper Presentation Award** in the NEERI Golden Jubilee, Chennai
- Awarded as '**Best Interactor**' by Rotary Club
- Awarded as **All Rounder** in school and held the post of **School Pupil Leader**
- Received awards from TNAVMS for excelling in academic proficiency
- Received cash award & medal for securing outstanding scores from KVB Ltd
- **Excellence Student Award** by Kishkinta

Computer Knowledge

- Languages Known : VB, .NET
- Platforms (OS) : DOS, WINDOWS 9X, XP, WINDOWS 7
- Applications & Tools : Microsoft Office 2007, Tally, AutoCAD

Certifications

- Certificate course in Lab Technology – Loyola College, Chennai
- Certificate course in VB.Net, AutoCAD and Tally – Bharatiya Vidhya Bhavan, Chennai
- Certificate for Social Services - Community Service Scheme

Responsibilities

- Master of Ceremonies for various Conferences, Seminars and Workshops
- Part of the organizing team of '**International Conference on Sustainable Solid Waste Management**' conducted by CES, Anna University, Chennai in cooperation with Asian Institute of Technology (AIT), Bangkok and supported by Swedish International Development Co-operation Agency (SIDA), Sep 5-7, 2007.
- Held the post of '**School Pupil Leader (SPL)**' and exhibited leadership skills
- Awarded for efforts spent in Social Service
- Organizer and Active member in the Inter-collegiate Meets, Conferences and Workshops held in University and College
- Conducted and participated (Oratorical, Script writing, Directing and Acting) in various cultural programmes while in school, college and university.

Areas of Interests

Environmental Science, Solid Waste Management, Climate Change Mitigation, Environmental Biotechnology/Biochemistry, Water and Wastewater Treatment, Environmental and Soil Biology, Biochemistry, Genetics and Environmental Pollution Control.

Associations

- International Safety Quality Environment Management Association (ISQEM), **UK** (2015 -2016)
- Active participation in Garden Bridge (CGHSS Alumni), Exnora (NGO), Takkar Bhabha, Hyundai Motor India Ltd (Environmental workshops) and Green Brigade (Anna University)