

# Curriculum vitae

## Personal Details

Name: Dr. Arun Babu V

Age and Date of Birth: 36 (05/11/1985)

Permanent Address: Ayinatharayil House; Mannady-Olikkuzhi Road; Kakkanad P.O, Kochi – 682030; Kerala, India

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## Qualification

- Ph. D. in Environmental Sciences (2018), Mahatma Gandhi University, Kerala, India. Thesis title: Developing suitable techniques for the treatment of leachate originating from municipal solid waste management facilities.
- M. Sc. in Environmental Science and Management (2008), School of Environmental Sciences, Mahatma Gandhi University, Kerala, India. (University First Position)
- B. Sc. in Chemistry - Environment and Water Management (2006), Mahatma Gandhi University, Kerala, India.
- Post Graduate Certificate in Climate Change (PGCCC) (2020), Indira Gandhi National Open University.

## Past Experience

- Assistant Professor, School of Environmental Studies, Thunchath Ezhuthachan Malayalam University, Tirur - 676502, Malappuram, Kerala, India, 02/06/2021 onwards.
- Senior Research Fellow, School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala. Project: “Microplastics contamination in sediment and selected benthic organisms of Arabian Sea Coast and a few Estuaries of Kerala”, 03/09/2020 to 31/05/2021.

- Assistant Professor, Faculty of Basic Science and Humanities, Indian Naval Academy, Ezhimala, Kannur, Kerala, 01/01/2020 to 24/08/2020.
- Assistant Professor, Faculty of Basic Science and Humanities, Indian Naval Academy, Ezhimala, Kannur, Kerala, 01/01/2019 to 30/11/2019.
- Assistant Professor, Faculty of Basic Science and Humanities, Indian Naval Academy, Ezhimala, Kannur, Kerala, 01/01/2018 to 30/11/2018.
- Assistant Professor, Faculty of Basic Science and Humanities, Indian Naval Academy, Ezhimala, Kannur, Kerala, 26/12/2016 to 24/11/2017.
- Project Fellow, Centre for Earth Science Studies, Akkulam, Thiruvananthapuram, Kerala. Project: “Study of water, Sediment quality monitoring and assessment of estuaries of Kerala: A case study from Kochi estuary and Periyar River” 09/09/2008 to 03/11/2009.

#### My Zone / Area of Expertise

- Microplastics in the Environment
- Environmental Pollution Monitoring
- Solid Waste Management
- Water and Wastewater treatment
- Anaerobic treatment technologies
- Phytoremediation

#### Awards

- **Young Scientist Award** in the International Conference on Environmental Science and Climate Change (2016). Organized by Karunya University, Coimbatore.
- Participated in the **Indian Arctic Expedition** (2016) from 29<sup>th</sup> September 2016 to 31<sup>st</sup> October 2016 at the Indian Scientific Station “Himadri” at Ny Alesund, Norway.
- Awarded **UGC - Junior Research Fellowship (UGC-JRF)** and deemed eligible for Lectureship by the University Grants Commission, India (2012).
- **DST INSPIRE Senior Research Fellowship**, School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala. 13 Jan 2014 to 25 Aug 2015.
- **DST INSPIRE Junior Research Fellowship**, School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala. 01 Aug 2011 to 12 Jan 2014.
- **KSCSTE Research Fellowship** (2010). School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala. 26 Aug 2010 to 31 Jul 2011.

- **University First Position (Rank)** in M. Sc. Environmental Science and Management (2008).

#### Publications

1. Padmakumar, B., Sreekanth, N.P., Shanthiprabha, V., Paul, J., Sreedharan, K., Augustine, T., Jayasooryan, K.K., Rameshan, M., **Arunbabu, V.**, Mohan, M., Syllas, V.P., Ramasamy, E. V, Thomas, A.P., 2021. Unveiling tree diversity and carbon density of homegarden in the Thodupuzha urban region of Kerala, India: A contribution towards urban sustainability. *Trop. Ecol.* <https://doi.org/10.1007/s42965-021-00149-2>. **Impact Factor: 0.850.**
2. Mohan, M., Treasa Nimy K. A., Kannan, V. M., Gopikrishna, V. G., Shukkur, A., Binish, M. B., **Arunbabu, V.**, Rakesh, P.S. & Krishnan, K. P. (2019). Metal content in zooplanktons of two Arctic fjords, Ny-Ålesund, Svalbard. *Environmental Nanotechnology, Monitoring & Management*, 12, 100251. ISSN: 2215-1532. <https://doi.org/10.1016/j.enmm.2019.100251>. CiteScore: 6.1. Citations: 02.
3. **Arunbabu, V.**, Indu, K. S., & Ramasamy, E. V. (2017). Leachate pollution index as an effective tool in determining the phytotoxicity of municipal solid waste leachate. *Waste Management* (Elsevier), 68, 329-336. ISSN: 0956-053X. **Impact Factor: 7.145, Citations: 54.** <https://doi.org/10.1016/j.wasman.2017.07.012>.
4. **Arunbabu V.**, Sruthy S., Ignatius Antony, E.V. Ramasamy (2015). Sustainable greywater management with *Axonopus compressus* planted in sub surface flow constructed wetlands. *Journal of Water Process Engineering* (Elsevier), 7, 153-160. ISSN: 2214-7144. September, 2015. **Impact Factor: 5.485, Citations: 36.** <https://doi.org/10.1016/j.jwpe.2015.06.004>.
5. Navya, C., Gopikrishna, V. G., **Arunbabu, V.**, & Mohan, M. (2015). Distribution and fractionation of mercury in the soils of a unique tropical agricultural wetland ecosystem, southwest coast of India. *Environmental Monitoring and Assessment* (Springer), 187(12), 749 (1-11). ISSN: 0167-6369 (print version); ISSN: 1573-2959 (electronic version). December, 2015. **Impact Factor: 2.513, Citations: 03.** <https://doi.org/10.1007/s10661-015-4972-x>.
6. Ignatius A., **Arunbabu V.**, Neethu J., & E.V. Ramasamy (2014). Rhizofiltration of lead using an aromatic medicinal plant *Plectranthus amboinicus* cultured in a hydroponic Nutrient Film Technique (NFT) system. *Environmental Science and Pollution Research* (Springer), 21(22), 13007-13016. ISSN: 0944-1344 (print version); ISSN: 1614-7499 (electronic version). November, 2014. **Impact Factor: 4.223, Citations: 33.** <https://doi.org/10.1007/s11356-014-3204-1>.
7. Varghese R., Krishna M.P., **Arun Babu V.**, & Hatha A.A.M., (2012). Biological removal of lead by *Bacillus* sp. obtained from metal contaminated industrial area. *Journal of Microbiology, Biotechnology and Food Sciences*, 2(2), 756-770. ISSN:1338-5178. November 2012, **Citations – 08.**

8. Krishna M.P., Varghese R. **Arun Babu V.**, & Hatha A.A.M., (2012). Bioaccumulation of Cadmium by *Pseudomonas* sp. Isolated From Metal Polluted Industrial Region. *Environmental Research, Engineering and Management*, 61(3), 58-64. Print ISSN: 1392-1649; Online ISSN: 2029-2139. September, 2012, **Citations – 36.** <https://doi.org/10.5755/j01.ere.m.61.3.1268>.
9. Aryalakshmi K.J., **Arun Babu V.**, Ignatius Antony and E.V. Ramasamy (2014). Nutrient Film Technique (NFT) with *Eichhorhia crassipes* (mart.) Solms: An effective way to treat greywater. *Integrated Water Resources Management (Volume 1)*. Allied Publishers Pvt. Ltd. New Delhi, India. 446-452pp. ISBN:978-81-8424-906-4.
10. Krishna M.P., Varghese, R. **Arun Babu V.**, Jyothy S., & Hatha, A. A. M., (2013). Bioremediation of zinc using *Bacillus* sp. Isolated from metal-contaminated industrial zone. A. Sabu and A. Augustine (eds.) *Prospects in Bioscience: Addressing the Issues*. 11-18 pp. Springer. ISBN 978-81-322-0809-9. January, 2013. Citations – 05.

#### Seminar / Conferences

1. Leachate from municipal solid waste: A potential threat to the environment. International conference on water: From pollution to purification (ICW-2020). 12-14 December 2020. Organized by Mahatma Gandhi University, Kottayam, Kerala. (Poster Presentation).
2. Characteristics and Pollution Potential of Urban Municipal Solid Waste Leachate. International conference on Water resources: innovations in quality and quantity, sustainable development challenges and Management (ICWR-2018). 15-17 March 2018. Organized by Department of Environmental Sciences and Department of Geology, University of Kerala, Thiruvananthapuram, India.
3. A hybrid system of vertical flow constructed wetland and nutrient film technique for the effective treatment of municipal solid waste leachate. International conference on water: From pollution to purification (ICW-2016). 12-15 December 2016. Organized by Mahatma Gandhi University, Kottayam, Kerala.
4. Treatment of Municipal Solid Waste Leachate using Nutrient Film Technique. International Conference on Environment and Climate Change. 07-09 December 2016. Jointly organized by Karunya University, Coimbatore and National Polytechnique Institute, Mexico.
5. Treatment of Landfill leachate using Nutrient Film Technique. International conference on Water from pollution to purification. 23-26 January 2015. Organised by Centre for Environment Education and Technology (CEET), Kottayam, Kerala. 41-42pp.
6. Greywater treatment using sub-surface flow constructed wetlands planted with *Axonopus compressus* (SW.) P. Beauv. International Symposium on Integrated Water Resources Management (IWRM – 2014). 19-21 February 2014. Organised by Centre for Water Resources Development, Kozhikode, Kerala, India. 133-134pp. ISBN:978-81-8424-906-4.

7. *Salvinia molesta* – A potential aquatic weed for treating cadmium contaminated wastewater. International conference on Anthropogenic Impact on Environment and Bioremediation, ICAIEB-2012. 26-28 November 2012. Organised by Department of Zoology, Sri Venkateswara University, Tirupati, A.P. India. 118-119pp.
8. Phytoremediation of Landfill leachate in horizontal subsurface flow constructed wetlands planted with *Limnocharis flava* (L.) Buch. International conference on climate change, forest resources and environment, 9-11 December 2011. Organised by department of environmental sciences, University of Kerala, Thiruvananthapuram. 184pp.
9. Cadmium removal potential of *Macaranga peltata*. National seminar on emerging trends in herbal technology. 07-09 October, 2015. St. Thomas' college, Thrissur.
10. Cadmium Removal from Wastewater Using *Pueraria phaseoloides*: An Emerging Weed in Kerala. Workshop cum Nineteenth National Symposium on Environment (NSE – 19). 11-13 December, 2014. Organized by Mahatma Gandhi University, Kottayam.
11. Treatment and reuse of greywater for sustainable water management: Issues, challenges and potentials. Kerala Environment Congress 22-23 August 2014.
12. Removal of Cadmium from water with Nutrient Film Technique (NFT). LAKE 2014: Conference on Conservation and Sustainable Management of Wetland Ecosystems in Western Ghats. 13-15 November 2014. Organized by Indian Institute of Sciences (IISc), Bangalore.
13. Phytoremediation: Concepts and Applications. State Seminar on Environmental Management. 24-26 July 2014. Organized by B.C.M. College for women, Kottayam, Kerala.
14. Rhizofiltration of landfill leachate using *Ipomoea carnea* (Morning glory). 26<sup>th</sup> Kerala Science Congress, 28-31 January to 2014.
15. Rhizofiltration of Zinc by *Plectranthus amboinicus* (Lour) Spreng in a hydroponic system. National conference on Heavy Metals in the Environment (HME-2013), 28-30, November 2013. Organised by School of Environmental Sciences, Mahatma Gandhi University, Kottayam.
16. *Hydrocotyle asiatica* - A potential bioremediant of cadmium: A concern for ayurvedic preparations. 25<sup>th</sup> Kerala Science Congress. 29<sup>th</sup> January to 1<sup>st</sup> February 2013. ISBN 81-86366-83-0.
17. Municipal solid waste leachate treatment in horizontal subsurface flow constructed wetlands planted with *Colocasia esculenta* (L.) Schott. National seminar on Municipal Solid Waste Management – Issues and Prospects, 2-3 March 2012. Organised by Mar Athanasius College, Kothamangalam, Kerala.
18. Nutrient Film Technique for the Effective Recycling of Greywater. National seminar on Green chemistry-The ultimate tool for pollution control. 14-15 February 2012. Organised by Assumption College, Changanacherry.

19. Grey water treatment using constructed wetland: towards sustainable water management. National seminar on sustainable development: recent trends in meeting the challenges, 20-21 January 2012. Organised by School of Environmental Sciences, M.G. University, Kottayam.
20. Landfill leachate and its impact on the groundwater quality of Vadavathoor, Kottayam – A case study. Kerala Environment Congress, 19-21 August 2009, Organised by Centre for Environment and Development.

## Projects

Nil