

# Curriculum vitae

**Dr. Kakoli Karar Paul**

**Associate Professor**

**Department of Civil Engineering**

**National Institute of Technology**

**Rourkela 769008**

Contact No: +91-9437461079; 0661-2462318 (Office)

Fax No. : 0661-2462301

E-mail : k\_karar1@yahoo.co.in; kkpaul@nitrrkl.ac.in

## Qualifications:

Degree	University	Year	Subjects
Ph.D.	Indian Institute of Technology, Kharagpur	2007	Civil (Environmental) Engineering

## Experience:

Details of employment (past & present):

Institute/ University	Designation	From	To	Nature of Experience
Department of Civil Engineering, National Institute of Technology, Rourkela	Associate Professor	02/02/2018	Till Date	Teaching and research on Environmental Engineering.
Department of Civil Engineering, National Institute of Technology, Rourkela	Assistant Professor	24.09.2007	01/02/2018	Teaching and research on Environmental Engineering.
Kalinga Institute of Industrial Technology, Bhubaneswar	Lecturer	30.01.2006	September, 2007	Teaching and research on environmental engineering.

## List of publications

### PAPER PUBLISHED IN INTERNATIONAL JOURNALS

- [1] Rijwana Parwin, **Kakoli Karar Paul**, April 2020. Overview of applications of kitchen wastewater and its treatment. *Journal of Hazardous, toxic and radioactive waste* Volume 24, Issue 2. [https://doi.org/10.1061/\(ASCE\)HZ.2153-5515.0000482](https://doi.org/10.1061/(ASCE)HZ.2153-5515.0000482)
- [2] Deepayan Priyadarshi, **Kakoli Karar Paul**, March 2019. Optimisation of Biodiesel Production Using Taguchi Model. *Waste and Biomass Valorization* 10, Issue 6, 1547–1559, <https://doi.org/10.1007/s12649-017-0158-9>.
- [3] Rijwana Parwin, **Kakoli Karar Paul**, June 2019. Phytoremediation of Kitchen Wastewater Using *Eichhornia crassipes*. *Journal of Environmental Engineering, ASCE* 145(6), DOI: 10.1061/(ASCE)EE.1943-7870.0001520.
- [4] Deepayan Priyadarshi, **Kakoli Karar Paul**, Swastik Pradhan, June 2019. Impacts of Biodiesel, Fuel Additive, and Injection Pressure on Engine Emission and Performance. *Journal of Energy Engineering* 145(3), ASCE. DOI: 10.1061/(ASCE)EY.1943-7897.0000597.
- [5] Priyadarshi, D., **Paul, Kakoli.Karar**, 2018. Single Phase Blend : An Advanced Microwave Process for Improved Quality Low-Cost Biodiesel Production from Kitchen Food Waste. *Biochemical Engineering Journal (Elsevier)* 137, 273–283. <https://doi.org/10.1016/j.bej.2018.06.006>.
- [6] Parwin, R., Paul, **K.K.**, 2018. Treatment of kitchen wastewater using *Eichhornia crassipes*. *E3S Web of Conferences*, <https://doi.org/10.1051/e3sconf/20183402033>.
- [7] L Mishra, **K K Paul** and S Jena, 2018. Characterization of coke oven wastewater. *IOP Conf. Series: Earth and Environmental Science* 167, doi :10.1088/1755-1315/167/1/012011.
- [8] D Priyadarshi, **K K Paul**, 2018. Engine Performance and Emission study of Waste cooking oil and Sewage sludge derived Biodiesel blend. *IOP Conf. Series: Earth and Environmental Science* 167, doi :10.1088/1755-1315/167/1/012035.
- [9] S Barik, **K K Paul** and D Priyadarshi, 2018. Utilization of kitchen food waste for biodiesel production. *IOP Conf. Series: Earth and Environmental Science* 167, doi :10.1088/1755-1315/167/1/012036.
- [10] Deepayan Priyadarshi, **Kakoli Karar Paul**, 2017. *Utilising FTIR and Gas chromatograph for optimizing lipid extraction for biodiesel production from domestic sewage sludge and Food waste*. *Research Journal of Chemistry and Environment* 21(8), 26-36.
- [11] S. Barik, **Kakoli Karar Paul**, 2017. Extraction of lipid and identification of reuse techniques for kitchen food waste. *Journal of Environmental Chemical Engineering* 5(1), Elsevier, 196-204.
- [12] Naga C Kavuri, **Kakoli Karar Paul**, Nagendra Roy, 2015. TSP aerosol source apportionment in urban region of Indian steel city, Rourkela. *Particuology, Elsevier*, Volume 20, Pages 124-133.

- [13]Lallan Singh Yadav, Bijay Kumar Mishra, Arvind Kumar, **Kakoli Karar Paul**, 2014. Arsenic removal using bagasse fly ash-iron coated and sponge iron char, 2014. **Journal of Environmental Chemical Engineering, Elsevier** Volume 2, Issue 3, Pages 1467-1473.
- [14]A.K. Gupta, **Kakoli Karar**, S. Ayoob, Kuruvilla John, 2008. *Spatio-temporal characteristics of gaseous and particulate pollutants in an urban region of Kolkata, India*. **Atmospheric Research, Elsevier**, Volume 87, Issue 2, 103-115.
- [15]A.K. Gupta, **Kakoli Karar**, Anjali Srivastava, 2007. *Chemical mass balance source apportionment of PM<sub>10</sub> and TSP in residential and industrial sites of an urban region of Kolkata, India*. **Journal of Hazardous Materials, Elsevier**, Volume 142, Issues 1-2, 279-287.
- [16]**Kakoli Karar** and A.K. Gupta, 2007. Source apportionment of PM<sub>10</sub> at residential and industrial sites of an urban region of Kolkata, India. *Atmospheric Research* Volume 84, Issue 1, March 2007, Pages 30-41.
- [17]**Kakoli Karar** and A.K. Gupta, 2006. *Seasonal variations and chemical characterization of ambient PM<sub>10</sub> at residential and industrial sites of an urban region of Kolkata (Calcutta), India*. **Atmospheric Research 81, Elsevier**, 36-53.
- [18]**Kakoli Karar**, A.K. Gupta, Animesh Kumar, Arun Kanti Biswas, 2006. *Seasonal variations of PM<sub>10</sub> and TSP in residential and industrial sites in an urban area of Kolkata, India*. **Environmental Monitoring and Assessment 118**, 369-381.
- [19]**Kakoli Karar**, A.K. Gupta, Animesh Kumar, Arun Kanti Biswas, 2006. *Characterization and identification of the sources of Chromium, Zinc, Lead, Cadmium, Nickel, Manganese and Iron in PM<sub>10</sub> particulates at the two sites of Kolkata, India*. **Environmental Monitoring and Assessment 120**, 347-360.
- [20]**Kakoli Karar**, A.K. Gupta, Animesh Kumar, Arun Kanti Biswas, Sukumar Devotta, 2006. *Statistical interpretation of weekday/weekend differences of ambient particulate matter, vehicular traffic and meteorological parameters in an urban region of Kolkata, India*. **Indoor and Built Environment 15**, 235-245.

## LIST OF PAPER PUBLISHED IN NATIONAL JOURNAL

- [1] Barik, S., **Paul, K. K.**, 2016. Utilization of kitchen food waste for physico- chemical characterization. *Journal of Civil Engineering and Environmental Technology*. Vol 3, Issue1, 10-12.
- [2] Kavuri, N.C, **Paul, K.K.**, 2013, Chemical characterization of ambient PM<sub>10</sub> aerosol in a steel city, Rourkela, **Research Journal of Recent Sciences**, 2(1), 32-38.
- [3] Kavuri N.C., **Paul K.K.** and Roy N., 2013. Regression modeling of Gaseous Air Pollutants and Meteorological Parameters in a Steel City, Rourkela, India **Res. J. Recent Sci.**, 2(1), 285-289.
- [4] **Kakoli Karar**, A.K. Gupta, Animesh Kumar, Arun Kanti Biswas, Sukumar Devotta, 2005. *Statistical Interpretation of Weekday/Weekend differences of ambient gaseous pollutants, vehicular traffic and*

*meteorological parameters in urban region of Kolkata. Journal of Environmental Science and Engineering* 47, 164-175.

- [5] **Kakoli Karar**, A. K. Gupta, 2004. *Impact of Indoor Air Quality on Health – An Overview. Journal of the Institution of Public Health Engineers*. Volume 2004, No 3, 8-14.

## CONFERENCE PUBLICATIONS

- [1] Kavuri, N.C., **Paul, K.K**, N. Roy, **2017**. Chemical characterization of PM<sub>10</sub> aerosol in urban region of Indian steel city, Rourkela. International conference on aerosol climate change connection, Darjeeling, 25<sup>TH</sup> – 27<sup>TH</sup> May 2017.
- [2] Kavuri, N.C., **Paul, K.K**, N. Roy, **2017**. Enrichment analysis of aerosol in urban region of Indian steel city, Rourkela. International conference on aerosol climate change connection, Darjeeling, 25<sup>TH</sup> – 27<sup>TH</sup> May 2017.
- [3] Barik, S., **Paul, K, K**, **2016**. Reuse and recycle of kitchen food waste. All India Seminar on Sustainable technology for cleaner environment. National Institute of technology Rourkela. Organized by The Institute of Engineers (India) Rourkela Local Centre, 13- 14 Feb 2016, page 32.
- [4] Kavuri, N.C., **Paul, K.K**, **2011**, Correlation Study of Air Quality Parameters in a Steel City during Monsoon, International Science Congress 2011, Indore. MP, India.
- [5] Kavuri, N.C, **Paul, K.K**, Roy, N., **2012**, Study of gaseous pollutants and their scenarios in a steel city, Rourkela, India, Research Scholars Day, IIST, Trivandrum, Kerala, India.
- [6] **Kakoli Karar Paul**, **2008**. *Temporal Trends and Weekday-Weekend Differences for SO<sub>2</sub>, NO<sub>2</sub>, NH<sub>3</sub>, PM<sub>10</sub> and TSP in an Urban Region of Kolkata , India. International Conference on Air Pollution Control-Challenges and Technological Solutions-2008* organized by NEERI Nagpur.
- [7] **Kakoli Karar Paul**, **2008**. *Coal mining, an acute environmental concern: an overview. Conference on Emerging Trends in Mining and Allied Industries*, NIT Rourkela, February 2008, Pages 372-374.
- [8] **Kakoli Karar Paul**, **2008**. *A Review Study on Impact of Climate Change on Water Resources. Proceedings of IWWM-2008*.
- [9] **Kakoli Karar**, 2007. *Municipal Solid Waste Management in India. RACE-2007, CET, Bhubaneswar, March*.
- [10] Arpit Khuntia, Sidhartha Pattnaik, **Kakoli Karar**, 2007. *Environmental impact assessment, a decision making tool: an overview. SHILP-07, ITBHU, Varanasi, 27-28 January*.
- [11] Sidhartha Pattnaik, Arpit Khuntia, **Kakoli Karar**, 2007. *Measurement and assessment of major ambient urban air pollutants in india: a review. SHILP-07, ITBHU, Varanasi, 27-28 January*.
- [12] **Kakoli Karar**, 2006. *Indian Urban Environmental Scenario With Reference To Pollution: A Review. National Conference on Environmental Effects on Civil Engineering Structures*, Tirupati.

- [13] Arabinda Ghosh, **Kakoli Karar**, Arun Kanti Biswas, 2005. *Water quality surveillance from parts of Darjeeling himalayas and its impact on local health. Proceedings of the abstract of National seminar* on survey, conservation and utilization of water sources, January 2005.
- [14] **Kakoli Karar**, A. K. Gupta, 2004. *An approach for eco-tourism. International conference* on environment and development, Kolkata.
- [15] **Kakoli Karar**, Arun Kanti Biswas, Mausumi Das, 2004. *Agricultural Use Potential of Community Wastewater: A Case Study. Proceedings of International Conference* on Emerging Technologies in Agricultural and Food Engineering, 482-487.

## RESEARCH

### Sponsored Research Projects

S. N.	Title of the project	Funding agency	Total Financial outlay	Year of start & total period	Names of P.I. and other investigators	Status
1	Characterization and source apportionment of ambient air pollutants in a steel city	DST, Govt of India	17.85953 Lakhs	2010 to 2013	P.I. Dr. Kakoli Karar Paul	Completed
2	Development of surface modified adsorbents for As removal from wastewaters and potable water	CSIR	Project amount 10 lakhs.	2010.	Co PI : Dr. Kakoli Karar Paul. PI: Dr. A. Kumar	Completed
	Study on suitability of iron waste product in GSB and locally available marginal aggregates (moorum) in CTB and CTSB for L&T Sambalpur Rourkella Tollway LTD	L&T	7.80 Lakhs	2014-2016	Co PI : Dr. Kakoli Karar Paul. PI: Dr. M Panda	Completed

**PhD Student:** Two awarded as PI

Three continuing as PI

One continuing as Co-PI.

**Consultancy:**

<b>Sponsors Address</b>	<b>Title of the Project</b>	<b>Sanctioned amount</b>	<b>Faculty Name</b>
JMC Projects (India) Limited	Proof checking Project of RWSS	Rs 50,62,200	PI: Kakoli Karar Paul Co-PI: Pradip Sarkar Co-PI: Sanat Nalini Sahoo

Water quality test for RITES Limited, Larsen and Toubro Limited, Tata Projects, Bridge and Roof Co. (India) Limited, Krishnawatar Bharti, Nation Council for Cement and Building Materials, OCL Rajgangpur, NTPC Thalcher, L & T Construction, Triveni Engineering and Industries Limited, IDCO, Ash Dyke Package, NTPC, Namami Ganga projects by EIL.

**Other:**

- Organized TEQIP II short term course on Advanced Water Treatment Technologies during 19<sup>th</sup> – 21<sup>st</sup> October 2016.
- Organized National Conference Advances in Environmental Engineering, AEE-07 as Convenor during November 2007.