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CURRENT POSITION

Research Associate

📅 May 2020 – Present

📍 United Kingdom

Newcastle University and Northumbria University

Research topic: Clean Air for Delhi Through Interventions, Mitigations and Engagement (CADTIME)

Supervisor: Prof. Anil Namdeo

PUBLICATIONS (* Corresponding author)

📖 Journal Articles

- ✚ Arora, M., Shinde, A.M., Yadav, V., Maji, K.J., Singh, V., Myers, R.J., 2021. Ramifications of Indian vehicle scrapping policy across the mobility sector. *Resources, Conservation and Recycling*. DOI: 10.1016/j.resconrec.2021.105845. (Impact Factor: 10.204)
- ✚ Vega, E., Namdeo, A., Bramwell, L., Miquelajauregui, Y., Resendiz-Martinez, C. M., Jaimes-Palomera, M., Luna-Falfan, F., Terrazas-Ahumada, A., Maji, K. J., Entwistle, J., Núñez Enríquez, J. C., Mejia, J. M., Portas, A., Hayes, L., McNally, R., (2021). Changes in air quality in Mexico City, London and Delhi in response to various stages and levels of lockdowns and easing of restrictions during the COVID-19 pandemic. *Environmental Pollution*. DOI: 10.1016/j.envpol.2021.117664. (Impact Factor: 8.071)
- ✚ Kuppili, S.K., Alshetty, D., Diya, M., Nagendra S.M.S., Ramadurai, G., Ramesh, A., Gulia, S., Namdeo, A., Maji, K. J., Bell, M., Goodman, P., Hayes, E., Barnes, J., Longhurst, J., Vito, L.D., (2021). Characteristics of Real-World Gaseous Exhaust Emissions from Passenger Cars in Delhi. *Transportation Research Part D*. DOI: 10.1016/j.trd.2021.102855. (Impact Factor: 5.495)
- ✚ Maji, K. J., * et al., (2021). Unprecedented Temporary Reduction of Air Pollution and Corresponding Short-term Premature Mortality Associated with COVID-19 Lockdown in Delhi, India. *Journal of the Air & Waste Management Association*. DOI: 10.1080/10962247.2021.1905104. (Impact Factor: 2.235)
- ✚ Maji, K. J., * et al., (2021). Analysis of various transport modes to evaluate personal exposure to PM_{2.5} pollution in Delhi. *Atmospheric Pollution Research*. DOI: 10.1016/j.apr.2020.12.003. (Impact Factor: 4.352)
- ✚ Maji, K. J., * Namdeo, A., (2021). Continuous increases in surface ozone and associated premature mortality growth in China during 2015-2019. *Environmental Pollution*. DOI: 10.1016/j.envpol.2020.116183. (Impact Factor: 8.071)
- ✚ Maji, K. J., * Sarkar, C., (2020). The Spatio-temporal variation and trend analysis of air pollution in China during 2015-2018. *Environmental Science and Pollution Research*. DOI: 10.1007/s11356-02009646-8. (Impact Factor: 4.223)
- ✚ Maji, K. J., * V.O.K., Lam, J.C.K., (2020). Effects of China's Current Air Pollution Prevention and Control Action Plan on Air Pollution Patterns, Health Risks and Mortalities in Beijing 2014-2018. *Chemosphere*. DOI: 10.1016/j.chemosphere.2020.127572. (Impact Factor: 7.086)
- ✚ Maji, K. J., * (2020). Substantial changes in PM_{2.5} pollution and corresponding premature deaths across China during 2015–2019: a model prospective. *Science of the Total Environment*. DOI: 10.1016/j.scitotenv.2020.138838. (Impact Factor: 7.963)

- ✚ Lam, J.CK., Bai, R., Li, V. OK., Leong, J., Han, Y., **Maji, K. J.**, (2020). Household Wealth Proxies for Socio-economic Inequality Policy Studies in China. *Data & Policy*. doi:10.1017/dap.2020.4 (Cambridge University Press).
- ✚ **Maji, K. J.**, * Ye, W. F., Arora, M., Nagendra, S. M., (2019). Ozone Pollution in Chinese Cities: Assessment of seasonal variation, health effects and economic burden. *Environmental Pollution*. DOI: 10.1016/j.envpol.2019.01.049). (Impact Factor: 8.071)
- ✚ **Maji, K. J.**, * Ye, W. F., Arora, M., Nagendra, S. M., (2018). PM_{2.5}-related health and economic loss assessment for 338 Chinese Cities. *Environmental International*. DOI: 10.1016/j.envint.2018.09.024 (Impact Factor: 9.621).
- ✚ **Maji, K. J.**, * Arora, M., Dikshit, A. K. (2018). Premature mortality attributable to PM exposure and future policy roadmap for 'airpocalypse' affected Asian megacities. *Process Safety and Environmental Protection*. DOI: 10.1016/j.psep.2018.07.009. (Impact Factor: 6.158)
- ✚ **Maji, K. J.**, * Dikshit, A. K., Arora, M., Deshpande, A. (2018). Estimating premature mortality attributable to PM exposure and benefit of air pollution prevention and control policies in China for 2020. *Science of the Total Environment*. DOI: 10.1016/j.scitotenv.2017.08.254. (Impact Factor: 7.963)
- ✚ **Maji, K. J.**, * Dikshit, A.K., Deshpande, A. (2017). Disability-adjusted life years and economic cost assessment of the health effects related to PM_{2.5} and PM₁₀ pollution in Mumbai and Delhi, in India from 1991 to 2015. *Environmental Science and Pollution Research*. DOI: 10.1007/s11356-016-81641. (Impact Factor: 4.223)
- ✚ **Maji, K. J.**, * Arora, M., Dikshit, A. K. (2017). Burden of disease attributed to ambient PM_{2.5} and PM₁₀ exposure in 190 cities in China. *Environmental Science and Pollution Research*. DOI: 10.1007/s11356017-8575-7. (Impact Factor: 4.223)
- ✚ **Maji, K. J.**, * Dikshit, A.K., Deshpande, A. (2017). Assessment of city-level human health impact and corresponding monetary cost burden due to air pollution in India taking Agra as a model city. *Aerosol and Air Quality Research*. DOI: 10.4209/aaqr.2016.02.0067. (Impact Factor: 3.063)

Book Chapter

- ✚ **Maji, K. J.**, Dikshit, A.K., Deshpande, A. (2016). Classification of Air Quality Monitoring Stations Using Fuzzy Similarity Measures: A Case Study. Edited by: Lotfi A. Zadeh, Ali M. Abbasov, Ronald R. Yager, Shahnaz N. Shahbazova, Marek Z. Reformat. Recent Developments and New Direction in SoftComputing Foundations and Applications, Springer Press. Vol. 342. DOI: 10.1007/978-3-319-322292_34

EDUCATION

PhD in Environmental Science and Engineering

Indian Institute of Technology, Bombay

 December 2011 – August 2018  India



Mumbai, India

Thesis topic: Development of monitoring network and quantitative assessment of health risk burden due to air quality in the urban region.

Supervisor: Prof. Anil Kumar Dikshit

M.Sc. in Environmental Science

University of Calcutta, India

 June 2008 – June 2010  India



Kolkata, India

Thesis topic: Variation of soil moisture and soil temperature over Kharagpur region and its effects of convective events.

Supervisor: Late Prof. M. Mandal (Indian Institute of Technology, Kharagpur)

B.Sc. in Chemistry (Hons.)

University of Calcutta, India

 June 2003 – June 2008  India

Kolkata, India

RESEARCH INTERESTS

Air Quality Modeling; Personal exposure. Health Risk Assessment; Pollutant Characterizations; Source Apportionment Study; Organic Pollutants; Low-Cost Air Quality Sensors.

RESEARCH EXPERIENCE

Research Associate

📅 May 2020- Present

Topic: Clean Air for Delhi Through Interventions, Mitigations and Engagement (CADTIME), 📍 *Newcastle University and Northumbria University, UK:*

The project aims to understand what is required to deliver significant reductions in levels of air pollution in the Indian capital, through affordable, effective interventions that consider and respond to future changes. This goal will be achieved through the development of an Integrated Action Plan (IAP), detailing strategies and potential interventions for mitigating air pollution in both the city and the surrounding region. The IAP will be based on the development of a sound understanding of the current contributing factors to air pollution across the domestic, transport, industrial and agricultural sectors, for Delhi, as well as forecasting of how those sectors will change across the short, medium and long terms.

Postdoctoral Fellow

📅 May 2019 – April 2020

Topic: In-depth study of air pollution sources and processes within the BTH region in China. 📍 *The University of Hong Kong, Hong Kong:*

The broad aim of this research was to develop a state-of-the-art infrastructure and air quality models to work on four research themes: (1) sources and emissions of air pollutants; (2) atmospheric processes affecting urban air pollution; (3) air pollution exposure and health impacts; and (4) interventions and solutions. The third and fourth research themes are done by our research group.

Project Officer

📅 February 2018-March 2019

Air quality monitoring and source apportionment study in Jawaharlal Port Trust. 📍 *Indian Institute of Technology, Madras, India:*

In this research, we (1) done chemical characterization of the PM₁₀ and PM_{2.5} in four places in Jawaharlal Port and nearby residential area in Chennai and (2) used PMF Model to Estimate the source apportionment in this area. We used EPA PMF 5.0 software for the source apportionment study.

PhD Research Scholar

📅 December 2011- February 2018

Topic: Development of monitoring network and quantitative assessment of health risk burden due to air quality in the urban region. 📍 *Environmental Science and Engineering Department, Indian Institute of Technology, Bombay, India:*

The main aims of the research are as follows: (1) Development of a methodology to find out the minimum number of stations required getting maximum information in an urban city and that can be used for better air quality management in a city. (2) Quantitative assessment of human health risk and corresponding economic burden of air pollution in the urban region. (3) Besides, estimation of the potential health benefit of air pollution control policies in the future year based on the current policy development.

TECHNICAL SKILLS

Programming Language: R; MATLAB

Environmental Software: ADMS; CALINE4; BenMAP; ArcGIS, QGIS

Environmental Quality Analysis: High-Volume Sample; MOUDI; OPC; DustTrak; Microwave Digestion; 16-channel optical particle counter.

INDIVIDUAL FELLOWSHIPS AND TRAVEL AWARDS (~23K USD)

2018	IRCC Research Grand	INR 150,000
2016	IIT Bombay-IRCC International Travel Fellowship	INR 60,000
2016	SETAC International Travel grand	SGD 1000
2014	Senior Research Fellowship	INR 1,008,000
2012	Junior Research Fellowship	INR 348,000

AWARDS AND ACHIEVEMENTS

- ✚ Secured **all India rank 114** in **CSIR-NET 2010** and eligible for Lectureship in **Chemical Science**.
- ✚ Secured **all India rank 637** in GATE 2011 with **94 percentiles in Chemistry**.
- ✚ **Junior Research Fellow (JRF) Scholarship** from Council of Scientific & Industrial Research (CSIR), Ministry of Human Resource Development (MHRD), India from 2011 to 2013.
- ✚ **Senior Research Fellow (SRF) Scholarship** from Council of Scientific & Industrial Research (CSIR), Ministry of Human Resource Development (MHRD), India from 2014 to 2016.
- ✚ **Travel grant award from SETAC** for attending SETAC Asia/Pacific Conference on "Managing Environmental Quality in the Asian Century", NUS, Singapore. During 16-19 Sept. 2016.
- ✚ **"Excellence in PhD Research"** award from Indian Institute of Technology Bombay (2019) (**Best thesis award**).
- ✚ International Postdoctoral Exchange Fellowship, Chinese Academy of Sciences, 2018.

REVIEWER INVITATIONS

Nature Scientific Report (Springer); Environment International (Elsevier); Environmental Pollution, (Elsevier); Environmental Research (Elsevier); Science of Total Environment (Elsevier); Journal of Cleaner Production (Elsevier); Ecological Indicator (Elsevier); Environmental Science and Pollution Research (Springer), Environmental Research Letters.

POSITION OF RESPONSIBILITIES

- ✚ Coordinator, School on "Air Quality Management" Department of Science and Technology-Science and Engineering Research Board, Govt. of India at CESE, IIT Bombay (*Dec'12*)
- ✚ Coordinator, Techfest Green Campus Challenge-2012, IIT Bombay (*Dec'12*)
- ✚ Course Coordinator, "Foundation of Environmental Statistics" in CESE, IIT Bombay (*July'14*)
- ✚ Coordinator, UNESCO workshop on 'Ensuring Water Security in Changing Environment Scenario for Water Professionals of South Asian Countries' (*Nov'15*)
- ✚ Coordinator for "National Environmental Conference", in IIT Bombay (*Jan' 17*)

MEDIA COVERAGE FOR RESEARCH

Spanish News Agency EFE; Gulf News India; International Business Times; Times of India; Hindustan Times; Zee News; Financial Times.