

CURRICULUM VITAE

-PRIYANKA DESOUZA

Address: Senseable City Lab, Massachusetts Institute of Technology

Email: desouzap@mit.edu • Phone: +1-6099203465

EDUCATION

2021	PhD in Urban Planning	Massachusetts Institute of Technology (Presidential Scholar)
2014	MSc. Environmental Change and Management	University of Oxford (Rhodes Scholar)
2015	MBA	University of Oxford (Rhodes Scholar)
2013	B-tech/M-tech Energy Engineering (minor: Physics)	Indian Institute of Technology Bombay

SELECT WORK EXPERIENCE

2021-	Assistant Professor	University of Colorado Denver, Department of Urban and Regional Planning
2021	Consultant	World Health Organization
2017	Researcher	NASA Goddard Space Flight Center
2016-2021	Research Fellow	MIT Senseable City Lab
2015-2016	Consultant	UN Environment

SELECT GRANTS RECEIVED

2019	Co-Investigator on the NIEHS Harvard Center Pilot Grant, March 2019
2018	Santander Travel Grant for Summer 2018
2018	MIT Environment Solutions Initiative grant for Summer 2018

PUBLICATIONS

2021

- [Priyanka deSouza](#), Phoebe Atsieno Oriama, Peter Pederson, Sebastian Horstmann, Lorena Gordillo-Dagallier, Charles N Christensen, Christoph Franck, Richard Ayman, Jacqueline Klopp, Ralph Kahn, Kyle Messier, Patrick Kinney, 'The Neighbourhood-Specific impact of a COVID-19 curfew on fine particulate matter levels in Nairobi: Implications for Environmental Justice', *2021 Environmental Research Communications*
- [Priyanka deSouza](#), Patrick Kinney, 'On the Distribution of Low-Cost PM sensors in the US: Demographic and Air Quality Associations', *Journal of Exposure Science and Environmental Epidemiology*, 2021, pp.1-11
- Shin Bin Tan, [Priyanka de Souza](#), Matthew Raifman, 'Race, structural racism and COVID-19', *2021 Journal of Racial and Ethnic Health Disparities*
- [Priyanka deSouza](#), Ruiqing Lu, Patrick Kinney, Siqi Zheng, 'Air pollution in different transport modes in Zhengzhou', *2021 Atmospheric Environment*

2020

- [Priyanka deSouza](#), Danielle Braun, Robbie M Parks, Joel Schwartz, Francesca Dominici, Marianthi-Anna Kioumourtoglou, 'Assessing the short-term effect of PM_{2.5} on Cardiovascular Hospitalizations in the Medicaid Population: A Case-Crossover Study', *Epidemiology*: September 28, 2020 - Volume Publish Ahead of Print - Issue - doi: 10.1097/EDE.0000000000001265

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- Priyanka deSouza, Ralph Kahn, James Limbarcher, Eloise Marais, Fabio Duarte, Carlo Ratti, ‘Combining low-cost, surface-based aerosol monitors with size-resolved satellite data for air quality applications’, *Atmos. Meas. Tech.*, <https://doi.org/10.5194/amt-2020-136>
- Priyanka deSouza, Amin Anjomshoaa, Fabio Duarte, Prashant Kumar, Ralph Kahn, Carlo Ratti, ‘Air Quality Monitoring Case Study Using Mobile Low-cost Sensors mounted on Trash-Trucks: Methods Development and Lessons Learned’, *Sustainable Cities and Society*. 2020 May 18:102239.
- Priyanka deSouza, ‘Air pollution in Kenya: a review’, *Air Qual Atmos Health* (2020). <https://doi.org/10.1007/s11869-020-00902-x>
- Weiyu Wang, Jeffrey Blossom, Julie Kim, Priyanka deSouza, Weixing Zhang, Rockli Kim, Rakesh Sarwal, S.V. Subramanian. COVID-19 Metrics across Parliamentary Constituencies & Districts in India. *Harvard Center for Population and Development Studies Working Paper Series*, 2020, 20, 4.
- Priyanka deSouza, S V Subramanian, ‘COVID-19 Across United States Congressional Districts’, *J. Glob. Health Sci.* 2. <https://doi.org/10.35500/jghs.2020.2.e22>
- Fabio Duarte and Priyanka deSouza, ‘Data Science and Cities: a critical approach’, *invited paper (peer reviewed)*, *Harvard Data Science Review*. <https://doi.org/10.1162/99608f92.b3fc5cc8>

2018 and earlier

- Amin Anjomshoaa, Fábio Duarte, Daniël Rennings, Thomas Matarazzo, Priyanka deSouza, Carlo Ratti, ‘City Scanner: Building and Scheduling a Mobile Sensing Platform for Smart City Services’, *IEEE Internet of Things Journal*, 2018
- Priyanka deSouza, Victor Nthusi, Jacqueline Klopp, Wah On Ho, John Saffell, Roderic Jones, Carlo Ratti, ‘A Nairobi Experiment in using low cost air quality monitors’ *Clean Air Journal*, 2017, v12, i 2, pp 12-42
- Priyanka deSouza and Yadvinder Malhi, "Land Use Change in India (1700–2000) as Examined through the Lens of Human Appropriation of Net Primary Productivity." *Journal of Industrial Ecology*, 2017
- Priyanka deSouza and Vijay Singh, ‘Simple Model of the 100 meter dash’, *Resonance* Volume 17, Number 6 (2012).
- Priyanka deSouza, K.R Balasubramanian, Rangan Banerjee ‘Setting Targets for Photoelectrochemical Cells,’ *IVth International Conference on Advances in Energy Research proceedings*, IIT Bombay 10th-12th December, 2013

IN REVIEW

- Priyanka deSouza, ‘Key concerns and drivers of low-cost air quality sensor use’, *under review*
- Priyanka deSouza, ‘Political Economy of Air Pollution in Kenya’, *under review*
- Yovitza Romero*, Priyanka deSouza*, Fabio Duarte, Patrick Kinney, Carlo Ratti, Julien Noel, ‘The impact of the pico y placa policy on fine particulate matter levels in Lima, Peru’ (*under review*)* These authors contributed equally
- Simone Mora, Priyanka deSouza, Fabio Duarte, Antonio Berrones, Carlo Ratti, ‘Air Quality Monitoring in a Coal Mining Town: A Hybrid Approach’ (*under review*)

BOOK CHAPTERS

- Contributing Author for the COVID-19, Cities, and Climate Change Element in the Third Assessment Report on Climate Change and Cities (ARC3.3), Cambridge University Press 2021-2023
- Patrick Kinney, Priyanka deSouza, ‘Community Design and Air Quality’, in *Making Healthy Places: Designing and Building for Health, Well-Being, and Sustainability*, in preparation for Island Press 2021
- Janelle Knox-Hayes, Jungwoo Chun, Priyanka deSouza, ‘Sustainable Finance’, *Routledge Handbook of Financial Geography* 2020

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- Grace Mwaura, Louise Fitzgerald, [Priyanka deSouza](#), 'Introduction: Environmental and Sustainability Clubs' in *Encyclopedia of Sustainability in Higher Education*, 2019
- Contributing Author for *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*, edited by Paul Hawken, published by Penguin, 2017

BOOK REVIEWS

- [Priyanka deSouza](#), 'Book Review: Asthma Care in a Time of Climate Change by Alison Kenner', LSE Book Review, 2020
- [Priyanka deSouza](#), 'Book Review: Political Blackness in Multicultural Britain by Mohan Ambikaipaker', LSE Book Review, 2019
- [Priyanka deSouza](#), 'Book Review: Digital Democracy, Analogue Politics: How the Internet Era is Transforming Kenya by Nanjala Nyabola', LSE Book Review, 2018
- [Priyanka deSouza](#), 'Book Review: The Shale Dilemma: A Global Perspective on Fracking and Shale Development', AnthemEnviroExperts, 2018
- [Priyanka deSouza](#), 'Book Review: Rhodes Must Fall: The Struggle to Decolonise the Racist Heart of Empire by Rhodes Must Fall Oxford, edited by Roseanne Chantiluke, Brian Kwoba and Athinagamso Nkopo', LSE Book Review, 2018
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NEWSPAPER ARTICLES

- [Priyanka deSouza](#), 'Nairobi's air has been polluted for decades: new review suggests a path forward', The Conversation, 2020
- [Priyanka deSouza](#) and Alexander Ikawah, 'This Too Is Kenya: How the deCOALONIZE Campaign Challenged a Politicised Bureaucracy and Legal System'. The Elephant, 2019
- [Priyanka deSouza](#), 'Every Breath You Take: Who is Monitoring Air Quality in Kenya', The Elephant, 2018

PODCASTS

- '[Decolonizing Science](#)' series on MIT CoLab Radio

FEATURES IN THE PRESS

[Boston Globe](#), [WGBH](#), [GOETHE INSTITUTE, KENYA](#)

SELECT CONFERENCE PRESENTATIONS

- Facilitator for the discussion on 'Decolonizing Air Pollution Science: Understanding the Power Structure' organized by OpenAQ at the 2020 International Society for Exposure Science Meeting.
- [Priyanka deSouza](#), 'Who Counts Air Quality and Whose Air Quality Counts?', accepted for the *Air Sensors International Conference*, 2020 (postponed)
- Invited talk at the A System Approach to Air Pollution (ASAP) New Delhi, 2019 and Kampala, 2020 (postponed) workshops
- [Priyanka deSouza](#), 'Assessing the short-term effect of PM_{2.5} on Cardiovascular Hospitalizations in the Medicaid Population: A Case-Crossover Study' at the *Health Effects Institute (HEI) Annual 2019* and *International Society of Environmental Epidemiology (ISEE) 2019*
- [Priyanka deSouza](#), 'Localizing Air pollution Science', *Society for the Social Studies of Science (4S) 2019*
- [Priyanka deSouza](#), 'Mobile air quality monitoring using data from low-cost monitors on trashtrucks', *Air Sensors International Conference*, 2018
- [Priyanka deSouza](#), 'Integrating data from low-cost air quality monitors with satellite data', *NASA Health and Air Quality Applied Sciences Team HAQAST*, July, 2018

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- Priyanka deSouza, Fabio Duarte, Carlo Ratti ‘Examining the intra-urban variability of air pollution in Nairobi using satellite data and low cost monitors’ at the *American Association of Geographers* meeting 2017 meeting Boston
 - Invited talk on ‘Low cost air quality monitors’ at the NASA Goddard Space Flight Center, 2017
 - Invited talk at the World Bank Transport Impact Evaluation Workshop in Nairobi, 2016
 - Invited talk at the Ethiopia air quality project workshop, Addis 18-19 March, 2016
 - Priyanka deSouza, Bhaskaran Muralidharan, ‘Power-efficiency trade-off in molecular thermoelectric energy conversion’ at the *American Physical Society* March 2013
 - Invited talk on the ‘Hydrocarbon Sector’ at the *Annual Maritime Seminar*, Feb 21st-22nd, 2013
 - Invited Talk on ‘Sustainability: A Thermodynamic View Point’ at the “*Indo-U.S Women Engineers Leading Global Innovation*”, Aug 29th-31st, 2012
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TEACHING

- Mentored several undergraduate students who worked at the Senseable City Lab
 - TA for the Master’s level course: ‘Introduction to Environmental Policy and Planning’ with a focus on Environmental Justice in Fall, 2020 at MIT
 - Lab Instructor for the Master’s level course: ‘Introduction to Spatial Analysis’ in Fall, 2020 at MIT
 - TA for the Masters level courses: ‘Microeconomics’ & ‘Planning Economics’ in Spring 2020 at MIT
 - TA for the undergrad course: ‘Making Public Policy’ in Fall 2019 at MIT
 - TA for the Masters level course: ‘Quantitative Reasoning’ in Fall 2018 at MIT
 - Taught pre-university Physics to 16 students at the University of Oxford who were part of the Oxbridge Academy in the summer of 2014
 - TA for the undergrad course: ‘Energy Management’ in Spring, 2013 at IIT Bombay
 - TA for the postgrad course: ‘Energy Systems Modeling and Analysis’ in Fall 2012 at IIT Bombay
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SPORTING ACHIEVEMENTS (NATIONAL & INTERNATIONAL HONORS)

- Represented India at the **Asian Youth Chess Championship** in Singapore, 2004
- **Gold Medal at the National Chess Championship** for girls under 17, 2004
- Bronze Medal in the **International Open Thomson Rapid Chess Tournament** in Singapore, 2010
- **Gold medal** in the Inter-IIT tennis tournament for women held in Chennai, 2008
- Bronze level award in the **Duke of Edinburgh Award System**, 2006
- Awarded the **Government of India sports scholarship**, 2005-2006

OTHER ACTIVITIES

- Stage Magician, performed at a variety of charity events and the Magdalen College, University of Oxford Ball 2014
- Produced the musical, ‘*Nyamgondho*’ at the Kenya National Theater, 2016
- Convener of the Speakers Club and Tech Club at IIT Bombay, 2014