

Sachin S. Gunthe

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In the capacity as an Associate Professor and former Head of Max Planck Partner group on bioaerosol research at IIT Madras, I am involved in teaching diverse courses in the field of Environmental Engineering, and Earth System Science and Climate Change at undergraduate and graduate levels. I also lead a research group of approximately 20 PhD students, Master Students, Project Staff, and Post-Doctoral Fellow investigating the problems, which are at the forefront of the Earth System Science mainly focusing on Aerosol – Biosphere – Climate interaction, and aerosol impacts on human and ecosystem health in Indian distinct climate in Anthropocene.

Methods: Field measurements, climate modelling, and laboratory experiments

ACADEMIC/PROFESSIONAL APPOINTMENTS

Jul.2016 – Present	Associate Professor , EWRE Division, Dept. of Civil Engineering, IIT Madras
Oct.2011 – Jul.2016	Assistant Professor , EWRE Division, Dept. of Civil Engineering IIT Madras
May.2014 – Present	Associate Researcher , Max Planck Institute for Chemistry, Mainz, Germany
Jul.2014 – Present	Associate , School of Engineering and Applied Sciences, Harvard University, USA (Host: Prof. Scot T. Martin)
Feb.2013 – Feb.2018	Head , Max Planck Partner Group on Bioaerosol Research at IIT Madras
Jul.2006 – Sep.2010	Post-doctoral Researcher , Max Planck Institute for Chemistry, Mainz, Germany. (Group of Prof. Dr. Ulrich Pöschl and Prof. Dr. M. O. Andreae)

TEACHING

Undergraduate	CE3040 Environmental Engineering (Theory) CE4030 Environmental Engineering (Laboratory) CE4011 Introduction to Atmospheric and Climate Sciences CE5015 Environmental Monitoring and Data Analysis
Post-Graduate	CE5180 Air Quality Management (in the past) CE5150 Environmental Chemistry and Microbiology CE5180 Air Pollution and Control Engineering CE5200 Environmental Analytical Laboratory CE5971 Aerosol Science and Technology CE5235 Introduction to Climate Dynamics and its Mysteries
Extra-Curricular	Introduction to DSLR photography How to make an effective presentation? How to prepare quality figures for research publications?

EDUCATION

- 2002 – 2006** **Ph. D., Indian Institute of Tropical Meteorology, Pune**
(Dept. of Physics, University of Pune)
Dissertation: Study of Ozone and its Precursors over the Indian Tropical Region
- 1999 – 2001** **MS, University of Pune, Pune**
(Dept of Electronic Science)
Electronic Science (Applied Physics)

AWARDS AND RECOGNITIONS

- **Co-Editor** Journal of Atmospheric Chemistry and Physics (2015 onwards)
- **Co-Editor** Journal of Atmospheric Chemistry (2020 onwards)
- **Core Member** National Knowledge Network (An advisory group of MoEFCC to CPCB)
- **Fulbright – Nehru** Academic and Professional Excellence Fellowship (Flex option)
- **Awards** at national conferences/symposiums for best papers to the doctoral/master students
- **Reviewer** – various reputed international peer reviewed journals and funding agencies
- **Principal Member** – Bureau of Indian Standards for Chemical Hazard (CHD07)
- **Special invited speaker** – at various national/international platforms on wide range of topics including invited speaker at various “Institute Colloquium” level lectures.

INSTITUTE ADMINISTRATIVE SERVICES

- **Advisor**, Global Research Program, Global Engagement office at IIT Madras
- **Co-coordinator**, Young Research Fellow Program of IIT Madras
- **Chairman**, Finance and Sponsorship Committee, SAARANG – annual cultural festival of IIT Madras
- **Member**, Strategic Plan 2021 – 2030 Committee for Internationalization, IIT Madras
- **Member**, Board of Industrial Consultancy and Sponsored Research, IIT Madras (Past)
- **Member**, Committee for Institute outreach, Dean, I and AR, IIT Madras (Past)
- **Member**, Committee for Institute outreach, Dean, Academic Research, IIT Madras (Past)
- **Coordinator**, Catering committee, Inter-IIT Sports meet at IIT Madras (Past)

STUDENT GUIDANCE

Name (Degree)	Research Area	Year	Currently
Ms. Shika S., (PhD)	Aerosol Field Measurements	2015	Associate Prof. Vimal Jyothi College of Eng.
Ms. Aswathy E. V., (PhD)	Bioaerosol Research	2017	Asst. Prof., NIT Calicut
Ms. Hema P., (PhD)	Bioaerosol Research	2017	Post Doc at Clarkson Uni.
Mr. Amit Sharma (PhD)	WRF-Chem Modelling	2018	Asst. Prof., IIT Jodhpur
Mr. Tabish Ansari (MS)	WRF-Chem Modeling	2015	Asst. Prof., Uni. of Groningen, The Netherlands
Ms. Saimy Davis (MS)	WRF-Hydro Modeling	2018	At IISc Bangalore

SPONSERED RESEARCH PROJECTS (Total cost: Rs. 21,98,35,743.00)

Sr. Number	Brief Title of the project	Start Date	Closure Date	Sanctioned Value
1	Atmospheric and Climate Sciences Lab	02/04/2021	12/31/2026	24900000
2	Advanced Aerosol Characterization Laboratory	8/31/2020	8/30/2021	550000
3	Support for Sustaining Research (SSR)	08/03/2020	6/30/2021	550000
4	Relation between Pathogenic Bio-aerosol and Biotic Stress of Crop - A Case Study for Yellow Rust Fungus of Wheat	05/01/2019	4/30/2021	4500000
5	Type and Diversity of Ice Nucleating Microbes under Varying Environments: Implications of Natural and Anthropogenic Bioaerosols	11/01/2018	10/31/2021	1042800
6	Properties of Atmospheric Aerosols from Contrasting Environment in Continental and Marine Boundary Layer Over Tropical Indian Region	4/23/2018	4/22/2023	1608000
7	Mass based hygroscopicity of ambient aerosols under contrasting environment over eastern coast of India	3/23/2018	3/22/2023	9357851
8	Assessing the impact of anthropogenic activities on regional climate: Importance of high-altitude site for cleaner/background atmospheric pollution measurements	03/07/2018	4/30/2021	1050000
9	Measurement of Background High Altitude Air Quality for Assessing the Regional Climate Change Impact	11/17/2017	12/31/2020	300000
10	Process analysis, observations and modelling-Integrated solutions for cleaner air for Delhi (PROMOTE)	10/19/2017	3/31/2021	3114000
11	MAX PLANCK INSTITUTE FOR CHEMISTRY (MPIC)	7/15/2015	7/15/2015	7776130
12	Measurements and modelling of cloud condensation nuclei (CCN) in Indian continental and marine air	06/06/2014	05/05/2018	9960000
13	Characterizing properties of atmospheric aerosols to understand climatic and health impact	9/25/2013	11/30/2016	9170800
14	Indo-German partner group on atmospheric sciences	3/31/2013	12/29/2016	4050000
15	Characterizing the properties of biological aerosol particles under different environmental and seasonal conditions over the Indian tropical region: Assessment for possible climatic and health impacts	2/28/2013	1/31/2021	6813232
16	Characterizing atmospheric aerosol properties in South Indian region	11/08/2011	11/07/2014	1800000
As a Co-PI				
17	Support for Sustaining Research (SSR)	08/03/2020	3/31/2022	931000
18	Climate Change Impacts on Coastal Infrastructure and the Adaptation Strategies	3/23/2018	3/22/2023	86020338
19	Dynamic Downscaling to Study Climate Change Impacts on Water Resources in India	3/22/2018	9/30/2021	4474592
20	National Carbonaceous Aerosols Program (NCAP) Working Group-III project	3/30/2016	3/30/2023	39947000

Ongoing student guidance details:

Ongoing student guidance with details of current stage				
Ms. Subha S. Raj	PhD	CCN properties of aerosol under megacity environment	Guide	Second Seminar - Will be submitting thesis in couple of months
Ms. Kalpana B	PhD	Microbial diversity of early childhood caries	Co-guide	Synopsis submitted will be submitting thesis in a week
Ms. Upasana Panda	PhD	Aerosol Chemical Characterization	Co-guide	Synopsis submitted will be submitting thesis in a week
Ms. Emil Varghese	PhD	Bioaerosol and microplastic studies	Guide	Comprehensive examination cleared
Ms. Christi Jose	PhD	Mass based hygroscopicity using novel QCM technique	Guide	Will be presenting thesis proposal soon
Ms. Aishwarya Singh	PhD	Aerosol field measurements for CCN and chemical characteristics	Guide	Comprehensive examination cleared
Mr. Chakradhar Reddy	PhD	GEOS-Chem modeling	Guide	Comprehensive examination cleared
Mr. Ankit Patel	PhD	GEOS-Chem modeling	Guide	Course work is going on
Ms. Rizana Salim	PhD	Air pollution and Immune response	Guide	Course work is going on
Ms. Shailina Srivasava	PhD	Mass based hygroscopicity using novel QCM technique - laboratory experiments	Guide	Course work is going on
Ms. Snehitha K	MS	Atmospheric Aerosol Chemistry	Guide	To submit the thesis in a month's time
Ms. Kavyashree K	MS	Atmospheric Aerosol Chemistry	Guide	Coursework is going on.

PUBLICATION STATISTICS

Overall publication statistics¹:

Total Publications: 53
 Total citations: ~3914
Average Citations per Paper: ~70
 h-Index: 26
 i10-Index: 41

Overall publication statistics²:

Total Publications: 53
 Total citations: ~2890
Average Citations per Paper: ~54
 h-Index: 23
 i10-Index: 38
Field Weighted Citation Impact: 1.86

¹ The statistics as per the google scholar last obtained on Sunday, 16th May 2021.

² The statistics as Scopus last obtained on Sunday, 16th May 2021.