RESEARCH HORIZONS

THE OFFICIAL NEWSLETTER OF THE UNIVERSITY GRANTS OFFICE

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In This Issue

Ahmedabad
University

Researching the Urban Transformation of Ahmedabad

In Conversation With Mona G. Mehta

Mona G. Mehta is a social scientist and an author. She researches urban transformation, youth aspirations, democracy, and middle-class politics. Her research work has been published in reputed academic journals. She has co-edited the book Gujarat Beyond Gandhi: Identity, Society and Conflict. Professor Mehta is currently researching the urban transformation of Ahmedabad for her next book.

What was your motivation to pursue research in political science?

I was born and raised in Mumbai where I studied till graduation. My parents, especially my father, were keen followers of politics and the dinner conversations in our house were often around political and social developments in India and around the world. Growing up in this environment, I was drawn to the study of society and politics from a young age, and I completed both Bachelor's and Master's degrees with a major in political science. Although I did not completely realize what a PhD would entail when I started my studies, it was clear that I wanted to continue studying this subject that I enjoyed in college.

There were many scholars working on Indian politics at different universities around the world at that time. But the University of Chicago was a well-known centre of high-quality work in South Asia studies. I was particularly keen on working with Professors Lloyd Rudolph and Susanne Rudolph who were then working at the University of Chicago and whose work I had been following since undergraduate days. Though they retired the same year that I went to Chicago, I was fortunate that both of them continued to mentor me through the end of my PhD there. While doing PhD I was exposed to what an

academic life actually meant and the different hats one wears as a researcher, teacher, mentor, or administrator. This experience was very useful during my subsequent academic roles.

What has your academic journey been like so far?

My first job was at a Liberal Arts college in California called Scripps College where I taught for 2 years and made some wonderful friends and colleagues. When I decided to move back to India, it coincided with the establishment of a new IIT in Gandhinagar which had a department of humanities and social sciences. After teaching there for 8 years, as my area of scholarship gradually evolved to the problems of urban transformations, it made sense to be based in the heart of the city and at a liberal arts research institution like Ahmedabad University. I have been here for more than a year and a half and it has been a wonderful journey, being part of the process of building a new university and the excitement of being able to shape new courses and programmes.

You have helped to develop the PhD programme in Humanities and Social Sciences. How is this programme unique?

There are several conventional disciplinary

PhD programmes offered all across India. The PhD programme in humanities and social sciences at Ahmedabad University is unique because of the emphasis on interdisciplinary research. The programme offers coursework that provides disciplinary training to students as well as encourages them to explore research questions that are not straight-jacketed into particular disciplines. While the programme respects the expertise that can be developed from going deep into a particular discipline, students have the freedom to frame questions that cross disciplinary boundaries.

Please share your past and present research work and future projects.

My doctoral thesis examined the unexpected nexus between liberal democracy and ethnic conflict. The convention in political science was to predict the occurrence of future violence in terms of time and setting. But I pursued a different path to explore the lead-up to violence and investigated the everyday factors in civil society that create the conditions of social division for ethnic conflict to erupt. I am currently researching the cultural politics of urban transformations in and around Ahmedabad to understand India's unique path to urbanization. The story of urbanization of any city is marked by its unique history and location. The book project that I am currently working on looks at a particular community of pastoralists in Ahmedabad called Maldharis. This is a community that was traditionally not associated with the urban setting and was known to constantly move in search of markets for their milk and grazing grounds for their cattle. I am trying to understand their entry into the urban landscape, how they navigate through city life while keeping alive their rural linkages and through them the story of the urbanization of Ahmedabad.

Another dimension of my project is focused on youth, skill development, and social mobility. My research shows that many of the well-intentioned policies of the government on this front are not in sync with the aspirations, skills,

and education of a large proportion of the youth. For example, the emphasis on tech entrepreneurship or the start-up ecosystem does not resonate with the young in the Maldhari community. They are in fact charting different paths to achieve social mobility, some of which counterintuitively involve going back to their traditional community networks to find jobs in the new economy. This reveals the limitations of economic and urban planning without incorporating the unique history and social context of India.

This disconnect between social reality and urban administration was on display recently in Gujarat when the Maldhari community mobilized to force the state government to withdraw a bill regulating cattle mobility in urban areas. The issue came about partly because the expansion of Ahmedabad city had subsumed the gauchar lands that were traditionally used for grazing by the cattle. While the cattle on city streets are a menace, it was a challenge to the traditional livelihood of the Maldhari community. It was not surprising that they leveraged their numbers in an election year to force the government to seek alternate solutions rather than penalize them through legislation. This is however only a temporary truce as the cattle that have been moved out of the city will likely have to be brought back to cater to the ever-increasing demand for dairy. This kind of mobilization brings into sharp focus the need for greater consideration of our social realities in addressing the issues of urban planning and administration. The importance of developing our cities while integrating these social and historical factors into the planning is what I hope my book project speaks to.

What are your other interests, outside research?

My many interests range from art, theatre and painting. Over the last few years, most of my time outside academia has been spent with my children. More recently, I have also been engaged in social mobilization in the city for communal solidarity in urban spaces.

Awarded Grants

(for the period August - October, 2022)

External Grants

Raghwinder Singh

Development of a Free-Induction-Decay Atomic Magnetometer for Geomagnetic Applications
INR 30,00,000; 2 years
DST - Science and Engineering Research Board (SERB)
Professor Singh plans to develop an optically pumped atomic magnetometer based on the free-induction decay of atomic spins using two amplitude-modulated laser beams resonating from both hyperfine ground states to a common hyperfine excited state of the Rubidium D1 line. The suitability of the instrument for geomagnetic applications will be investigated. An instrument of this kind is being developed for the first time in the country.

Suchismita Das

Development Imaginaries, Infrastructure and Climate Subjectivities in Asia
USD 10,121; 4 months
Social Science Research Council, USA
The project will study how development imaginaries impact climate change discourses, especially discourses about adapting infrastructures that are vulnerable to climate change disasters. The impact of the new climate change discourses on the desire for and planning of new infrastructure projects will also be investigated. The collaborative ethnographic project will compare the social and cultural politics of road building in Sikkim, India and canal building in Bangkok, Thailand.

Shilpa Pandit

The tradition of Kalachakra Initiation and meditative practice by H.H the Dalai Lama: Transformation in 'self' among Kalachakra meditators.
INR 6,80,000; 3 years
Foundation for Universal Responsibility of His Holiness - The Dalai Lama
The project will conduct a culturally informed study on the lived experience of the Kalachakra meditation practice to delineate the psychological processes involved in the contemporary practice of the Kalachakra meditation beyond the highly commodified and non-informative 'mindfulness' paradigm. The research will feed into the cultural psychology of transformation of consciousness and well-being.

Bhuvan Pathak

Development of polyunsaturated fatty acid rich groundnut cultivars using CRISPR-Cas9 gene editing
INR 83,14,712; 3 years
Gujarat State Biotechnology Mission
Research proposed for the project aims to enhance the Omega-3 fatty acid content in groundnuts by editing the plant genome using a technique called CRISPR-Cas9. Omega-3 fatty acids are known to have several health benefits and are generally produced in negligible quantities in groundnut.

Vivek Tanavde

Development of a nano liposomal formulation for targeting chemo-resistant oral cancer stem cells.
INR 34,80,572; 3 years
Gujarat State Biotechnology Mission
In this study, a lipid based delivery system will be developed for treating oral cancer patients who suffer a relapse. Towards this, anti-cancer drugs that are currently in use will be encapsulated in lipid vesicles for delivery. This approach will prevent development of chemoresistance in tumours following such treatment.
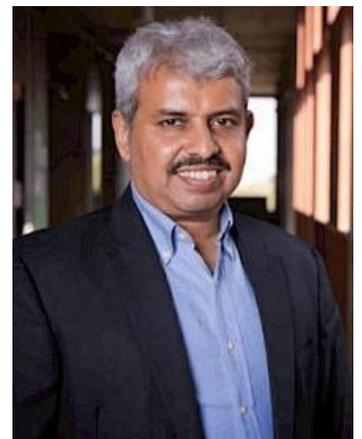
Ahmedabad University Grants

Start-up Grant

Mousa Mohammadian

Ibn Sina and Contemporary Philosophy of Science
₹ 4,46,700; 3 years
This start-up grant aims to provide novel interpretations of some aspects of Ibn Sina's works in philosophy. Professor Mousa Mohammadian will extract Ibn Sina's theory of thought experiments from his works on epistemology and philosophical psychology and bring Ibn Sina into a dialogue with contemporary philosophers of science. The project will use Ibn Sina's philosophy as a resource and an aspiration to tackle some of the contemporary problems in philosophy of science.
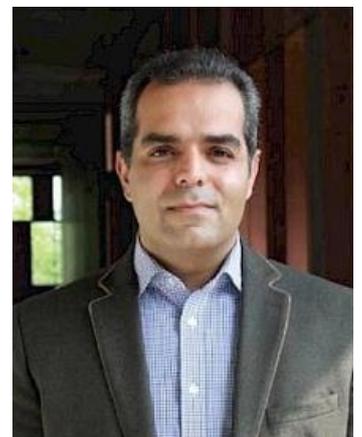
Mona Mehta

Negotiating Urbanisation: Marginality, Mobility and Aspirations in Gujarat
INR 4,50,000; 2 years
Professor Mehta plans to use this start-up grant to conduct qualitative study in to the national, local and indigenous forces that shape India's urbanisation and the processes that intervene in global flows of capitalism in 21st century India. The study will overcome a gap in the existing scholarship related to a lack of clear understanding about how marginal groups shape the process of urbanisation.

Nithin George

Neural and Computational Basis of Habitual Attention
₹ 23,30,000; 3 years
Through this start-up grant, Professor Nithin George will develop non-invasive brain stimulation protocols that could benefit attentional processing. The study results are expected to contribute to the understanding of how experience shapes attention and motivate clinical interventions that can help patients with impaired attention.
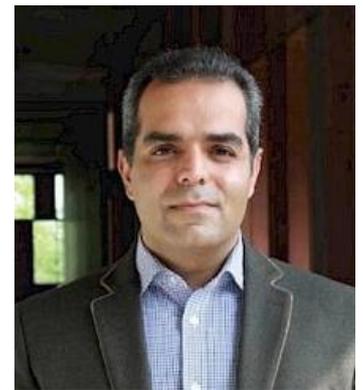
Seed Grant

Mousa Mohammadian

Amrut Mody at the University College, London: The First Indian with a Degree in History and Philosophy of Science?
₹ 2,00,000; 1 year
Through this Seed Grant, Professor Mousa Mohammadian aims to provide a new non-European perspective on the early formative years of History and Philosophy of Science as an academic discipline.

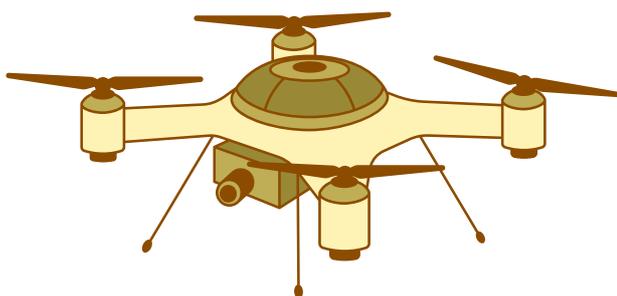## Major Equipment Grant

Sanjay Chaudhary

Network-Attached Storage (NAS) Device
INR 15,00,000

Balaji Prakash

NanoDrop One Microvolume UV-Vis Spectrophotometer
INR 14,20,425

Aditya Vaishya

Drone (UAV category: Small)
INR 30,00,000

Grant Writing Workshop Conducted by the University Grants Office

The University Grants Office conducted a workshop on writing a successful grant for the benefit of the University faculty members on 14 September 2022. The workshop was conducted by Dr Madhavan Nair Chalat, Grants Manager, and attended by over 20 University researchers. The topics discussed during the workshop included planning a grant application, elements of a successful application, good grantsmanship practices, and budget strategies. The presentation was followed by Q&A and discussion.

A need for integrative research to understand inequities in vector-borne disease

Shomen Mukherjee

Shomen Mukherjee is an Associate Professor in the School of Arts and Sciences. He worked for over two decades in Ecology researching species interactions and mechanisms of coexistence. In this issue of Research Horizons, Professor Mukherjee shares his recent work on trying to understand how mosquitoes and the perceived risk of a vector borne disease affect human behaviour.

Cities are heterogeneous landscapes of environmental and social features which have complex consequences for human and nature interactions. In the context of vector-borne diseases (e.g., chikungunya, dengue, malaria), these interactions become even more complicated because of considerable inequities in both access to water and exposure to mosquitoes among the urban human population.

For instance, while some neighbourhoods may have overhead water tanks to store water for everyday use, another community barely a hundred meters away holds water in containers. Which area would be attracting mosquitoes, and do they have a choice?

In another example, one neighbourhood has green lawns, gardens (i.e., cool environment and higher humidity – dream residence for mosquitoes) and houses with screened windows and air conditioning. The adjoining neighbourhood, on the other hand has homes with no insect screening on doors/windows, and the residents often sit outside the house to beat the evening heat. Who would be more prone to vector-borne disease?

These real-life scenarios help make an urgent case for understanding how everyday practices and identity contribute to differences in access to water and vector control across households.

Mosquito sampling at a study site

Our studies in peri-urban and urban landscapes reveal that households rely on multiple access mechanisms (e.g., social, economic, and political capital) to benefit from household water provisions. While the mechanisms available to a household often depend on whether it relies on municipal or private water sources, successful water systems (whether private or public) rely on an individual household's capacity for water storage.

Ecological and sociological data from these complex neighbourhoods suggest that everyone experiences mosquito burdens and that payment for frequent vector control services (e.g., in gated communities) did not seem to provide access to a "mosquito-free" space. We also find that the same mechanisms of social capital that allowed community members to advocate for access to water with the municipality were unsuccessful in gaining access to waste and sanitation infrastructure that they requested to limit mosquito populations. We are finding that integrative research synthesizes multiple perspectives and epistemologies and can help place ecological results into their social context.

Water storage facilities in a peri-urban neighbourhood

CDC trap for mosquito capture

Ahmedabad University Researchers Among the Top 2% of the World

Five of the University faculty members have been recognized among the world's top 2% researchers. As per information from Elsevier, where the list was published, the selection is based on the top 100,000 scientists by c-score (with and without self-citations) or a percentile rank of 2% or above in the sub-field. In total 195,605 scientists are included in the career-long database and 200,409 scientists are included in the single recent year dataset.

Professor Priyadarshi Shukla, Chair of Global Centre for Environment and Energy and Professor Pankaj Joshi, Director of International Centre for Space and Cosmology have been included in the career-long database. Professors Akhand Rai (School of Engineering and Applied Sciences), Ashutosh Kumar (School of Arts and Sciences) and Ritesh Shukla (School of Arts and Sciences) have featured in the recent year dataset.

University Ethics Committee

The University Ethics Committee is responsible for reviewing and approving research work in the University involving the use of human, animals or other biological material to ensure adherence to the University code of conduct and the prevailing legal framework. The Committee was reconstituted in September 2022 and is currently made up of the following members:

Deepak Kunzru, Chairperson
Urmi Biswas
Ratna Ghosal
Ashwin Kumar
Amit Nanavati
Rama Ratnam
Ekta Sharma

Publications

(for the period July - September 2022)

Articles in Refereed Journals

George, N. & Sunny, M. (2022). Dissociable effects of attention and expectation on perceptual sensitivity to action-outcomes. Consciousness and Cognition, 103 (Special Issue: Expecting and perceiving: (how) does the Bayesian brain hypothesis stand?), 1033-1074. https://doi.org/10.1016/j.concog.2022.103374

Mahadevia, D. (2022). Book Review: Debolina Kundu, Remy Sietchiping and Michael Kinyanjui: Developing National Urban Policies: Ways Forward to Green and Smart Cities. The Indian Journal of Labour Economics, 65 (1), 571–573. https://doi.org/10.1007/s41027-022-00373-x

Mohammadian, M. (2022). Virtues of 'values' and 'virtues': on theoretical virtues and the aim of science. Metascience, 31 (3), 1-6. https://doi.org/10.1007/s11016-022-00781-1

Biswas, U. A., & Jijina, P. (2022). Lockdown experience, beliefs in and practice of spirituality: Implications for health and self-protective behaviors. Mental Health, Religion & Culture, 25 (6), 609-626. https://doi.org/10.1080/13674676.2022.2027354

Patel, A., Patel, S., Patel, P., Patel, K., Mandlik, D. & Tanavde, V. (2022). Salivary Exosomal miRNA-1307-5p Predicts Disease Aggressiveness and Poor Prognosis in Oral Squamous Cell Carcinoma Patients. International Journal of Molecular Sciences, 23 (18), 10639. https://doi.org/10.3390/ijms231810639

Mohammadian, M. (2022). An Armstrongian defense of dispositional monist accounts of laws of nature. European Journal for Philosophy of Science, 12 (3), 52-66. https://doi.org/10.1007/s13194-022-00481-x1

Padmanabhan, R & Shukla, A. (2022). When do we have 1 + 1 = 11 and 2 + 2 = 5? The Mathematical Gazette, 106 (566), 319-323. https://doi.org/10.1017/mag.2022.74

Soni, B., Patel, D. K., Shah, S. B., López-Benítez, M. & Govindasamy, S. (2022). PU-DetNet: Deep unfolding aided smart sensing framework for cognitive radio. IEEE Access, 10(01), 98737-98751. https://doi.org/10.1109/ACCESS.2022.3206814

Articles in Conference Proceedings

Prabh, S. (2022). Event Reference Synchronization (ERS): An Event-based IoT clock synchronization. Proceedings of the 2022 Annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC 2022), June 12-15, 1-7.

Prabh, S. (2022). On Intelligent Reflecting Surfaces Element Allocation Using Genetic Algorithms. Proceedings of Workshop on Intelligent Refleccting Surfaces (IRS), The 2022 Annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC 2022), June 12-15, 1-6.
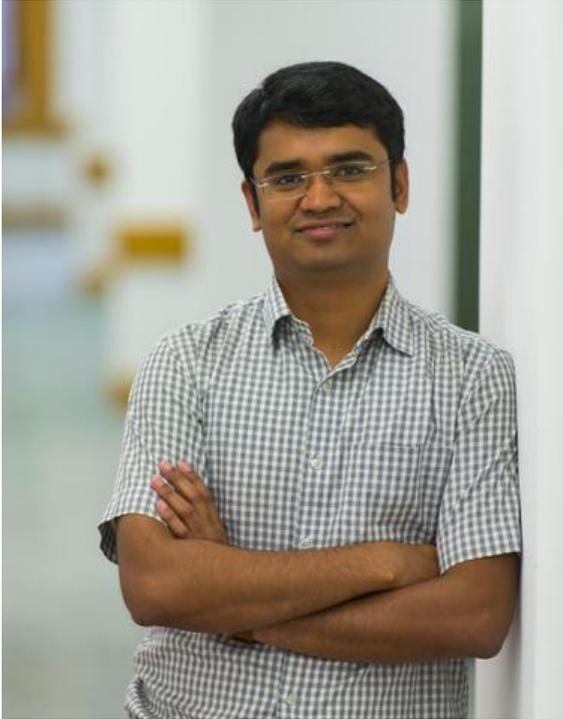
Reimagining Statistics Teaching in India

In Conversation With Kaushik Jana

Kaushik Jana is a member of the University faculty in the Division of Mathematical and Physical Sciences, School of Arts and Sciences. Professor Jana is a statistician whose research is driven by a passion to develop statistical models and tools to seek practical solutions to problems in areas like the environment, climate change, transportation, public health, and teaching practices.

From Kolkata to London and now Ahmedabad, please share your research journey.

My PhD was from the Indian Statistical Institute where I worked on developing statistical models that have applications in the study of water resources, meteorology and climate. One problem I worked on was the correction of the measurement of water flow of a transboundary river called Teesta that flows between India and Bangladesh. The statistical tool that I developed in the process could aid in resolving dispute between the two countries by providing a scientific solution to the water distribution problem. In another project, I developed a model to study the shape of contiguous rainfall regions based on satellite imagery to better understand the convective systems and help predict occurrences of extreme weather events.

I moved to England after completing PhD for post-doctoral research at Imperial College London and Alan Turing Institute. I studied the effect of dedicated bicycle lanes on the highways of London on vehicular traffic flow during my post-doctoral work. The cycle superhighways, as they are called, are made by carving off a portion of the road exclusively for bicycle riders. Potentially, this could narrow the road for automobiles, resulting in increased traffic congestion. However, my research revealed that cycle superhighways reduced 30 percent traffic congestion during the heavy traffic time at the treated locations. This is mainly attributable to the increase in the number of bicycle users who would otherwise use cars. An interesting research challenge in completing this study was to sift through the different variables that could impact the traffic flow to isolate the role of only the superhighway.

During my time at Alan Turing Institute, I got an opportunity to closely see and, occasionally participate in, research programs that looked at ethical concerns and suitability of data science and artificial intelligence for application at scale for public good. Statistics plays a fundamental role in this data driven research. When I returned to India, I carried back those ideas of innovation in research and teaching of statistics and data science that could benefit our diverse society. Since joining Ahmedabad University, I am glad to have got the opportunity to work on these plans through development of teaching and research programs. For example, a course I have designed combines mathematical statistics with a project based data analysis. A

course of this kind is not offered in any other institution. I am currently in the process of developing material to equip students to use statistical techniques to explore issues of social relevance, and use data and statistics as a tool for analytical storytelling.

As a statistician, have you faced any challenges in your academic role and how have you addressed them?

Statistical science is relevant to almost all quantitative disciplines. But unfortunately, the subject is often viewed as a set of tools that needs to be mechanically used during the data analysis of a study. Statistics could offer more if its principles can be incorporated in other steps of the problem solving framework, starting with framing of the question, planning, data gathering, analysis, and interpretation. As a statistician, I got opportunities to work with and learn from researchers from diverse domains, and it pushed me to adapt and communicate with the broader research community.

In teaching, a challenge initially was to develop material that would be relatable to different subjects and also, contextually relevant to the students. A focus of my work over the last year has been research on statistics education in the Indian context. This involves developing a framework of curriculum for a diverse group of students pursuing different subjects using data that is relevant to their respective fields. Feedback is then sought from the students to further refine the course material. In addition, I am involved in designing the research methodology course for undergraduate students. A novel component of this course is that the students are formed into clusters based on their research interests. They then pursue a course of research based on the mixed methodology of addressing a problem through two parallel paths using qualitative and quantitative methods by complementing and occasionally contradicting each other.

In addition to research on teaching methodologies, what are the other projects you are currently working on?

I am currently working on developing models for prediction of rare and extreme climate events that are, nevertheless, severe in impact. Because such events occur very infrequently, only a small amount of data is available which makes modelling their occurrence a statistical challenge. On the other hand, a large amount of data related to climate parameters is available from many different sources including satellite imagery, ground stations, and simulation models. Here, processing this voluminous data from diverse sources to develop an informative system of prediction modelling in a changing climate is the challenge. In collaboration with climatologists and artificial intelligence researchers from the IITs and CSIR, I am developing models and algorithms that make use of the available data to make changes to the prevalent models for climate extremes and provide better estimates of the uncertainty involved. In two other interdisciplinary projects funded by the University, along with colleagues, I am working on understanding the impact of climate change on different vector-borne diseases spread in urban contexts.

The stand-out learning for me from the COVID pandemic experience was the lack of organized data that could effectively inform policy when dealing with such events. Even though lot of data was collected during that time and some of it was available, including from different government sources, oftentimes this was inaccessible and unusable due to practices like not sharing regional data or sharing data in the form of PDF documents or YouTube videos. Over the next few years, one of my research objectives is to collate data repositories in data-dearth areas like public health, climate change and environment where access to quality data infrastructure for researchers and the public is critical. There is ongoing work at the international level and organizations like World Bank or data.org, and others are working in this direction in the Indian context. I plan to contribute to these initiatives by developing a framework to

gather, collate and organize data in a form that is accessible, comprehensible, and usable by researchers and the public.

What was your motivation for a career in statistics?

I started off wanting to study mathematics or Bengali literature but ended up in statistics totally by chance after a well-wisher encouraged me to pursue the subject in the Ramakrishna Mission, Narendrapur in Kolkata which is renowned for its undergraduate statistics program. It was a struggle initially because it took some time to build an understanding of the abstract nature of probability and how it is connected to data and the underlying process generating it. Later, I came to know that many students struggle with the same problem. It was the inferential statistics which was covered in the later part of the program that really drew me to the subject. As someone interested in practical applications of science, statistics gave me an opportunity to use my mathematical inclination to contribute in

solving real-life problems. Working on problems as diverse as river water distribution, meteorology, and climate dynamics during my PhD, I realized the true potential of statistics as a tool to address interdisciplinary problems.

Who are the people you look up to, in life and work?

There have been many inspirations in my life; in fact, I am inspired every day. Professionally, my first inspiration was Professor Prasanta Chandra Mahalanobis because of how he combined his technical and scientific expertise to address various problems of a newly independent and fledgling country. More recently, my current and future work is inspired by Sir David Spiegelhalter, a professor at Cambridge University. He is at the forefront of the efforts to take statistics to the masses in the UK through effective risk and evidence communication. He advocates for statisticians to take up the responsibility of engaging the broader society and contributing to data-driven policies.

Professor Jana uses the game of darts as a teaching tool in introductory statistics class to illustrate Normal distribution and statistical inference

International Recognition for School of Arts and Sciences Professor

Ritesh Shukla, Assistant Professor in the Division of Biological and Life Sciences, was awarded the Young Scientist Medal at the European Assembly of Advanced Materials Congress (AMC) held in Sweden from 28 - 31 August 2022. The medal is awarded by the International Association of Advanced Materials (IAAM) to young and upcoming researchers who have conducted quality research in the field of Materials Science, Engineering, and Technology. The Medal is a recognition for Professor Shukla's contribution to the field of functional nanomaterials and application of Nanozymes in forensic science and detection of food adulteration.

Research Seminars

(for the period July - September 2022)

Amrut Mody School of Management

Loyimee Gogoi, Xavier Institute of Management and Entrepreneurship, Chennai. Group contributions in TU-games: A Class of k-lateral Shapley Values. August 17, 2022.

Suyog Nigudkar, Indian Institute of Management, Ahmedabad. Design for failure of food banking networks. August 23, 2022.

Dewang Pagare, KLH Global Business School, Hyderabad. India's journey from feed-in-tariff to reverse auction: importance of producer type and government incentive in renewable energy procurement. August 25, 2022.

Angshuman Roy, University of Haifa, Israel. Measuring and testing dependence among multiple random variables. September 21, 2022.

The Conversation Series

Talmiz Ahmad, Former Indian Ambassador, Saudi Arabia, Oman And the UAE, Ram Sathe Chair for International Studies, Symbiosis, International University, Pune, Author, West Asia At War: Repression, Resistance and Great Power Games, Professor Minal Pathak, Associate Professor, Amrut Mody School of Management, Ahmedabad University, "Geography, Geology, Geopolitics: The Dynamics In India's Western Neighbourhood", August 20, 2022.

Hemant Mehta, Former Managing Director, Insights Division And Chief Strategy Officer for South Asia, KANTAR , Aspiring Farmer And Founder of selectart.in, Professor Ravi Miglani, Professor of Practice of Management and Director, GEMBA Programme, Amrut Mody School of Management Ahmedabad University, "From Data To Insights: Using Numbers To Tell Stories About India and Indians", September 3, 2022.

Dr Giulio Boccaletti, Honorary Research Associate, Smith School of Enterprise and the Environment, Oxford University, Professor Saptam Patel, Assistant Professor, Amrut Mody School of Management Ahmedabad University, "The Story Of Water: How This Shapeless Substance Has Shaped Society", September 17, 2022.

Presentation by AMSOM doctoral candidate

Ms. Niyati Dave, doctoral candidate, Amrut Mody School of Management, " Relationship between Role of Business Angels and Stages of Startups: A Resource Dependency Theory Perspective ", September 7, 2022.

Research Seminars

School of Arts and Sciences

G V Reddy, Rajasthan State Biodiversity Board, Jaipur. Dynamics and dilemmas of wildlife conservation in human dominated landscape. July 13, 2022.

Samyaday Choudhury, Space Telescope Science Institute, USA. A journey to our nearby universe. August 8, 2022

Lakshmi Sreeram, classical musician, writer and independent researcher, Chennai. Legacies of colonialism in classical music. September 12, 2022.

School of Engineering and Applied Sciences

Garima Mishra, Indian Institute of Technology Madras, Chennai. Influence of flow pulsations and yield stress on heat transfer from a sphere. July 22, 2022.

Anamika Maurya, Indian Institute of Technology Bombay, Mumbai. Flow and thermal characteristics of non-Newtonian fluids in inclined and T-channels. August 9, 2022.

Mayuribala Mangrulkar, Nazarbayev University, Kazakhstan. Rationalizing the effect of overstoichiometric PbI_2 on the stability of Perovskite solar cells. September 7, 2022.

Rahul Sahay, Singapore University of Technology & Design, Singapore. Experimental analysis of flow regimes pertaining to electrospinning and its applications. October 6, 2022.

MoUs Signed With Industry and Civil Society Organizations

To facilitate collaborative research endeavors of the members of the faculty, the University has signed MoUs with Indian Inovatix Ltd., Ahmedabad Textile Industry's Research Association, and Self Employed Women's Association. These MoUs provide an enabling framework for the faculty and researchers from the University to engage closely with industry and non-governmental organizations.

The Indian Inovatix Ltd. has over 4 decades of experience in the design and manufacture of fall protection systems, safety devices for entry to confined spaces, and emergency evacuation.

Ahmedabad Textile Industry's Research Association (ATIRA) was established in 1947 by the textile mills of Ahmedabad as an autonomous non-profit R&D institution. The activities of the institution cover all aspects from fiber to finished fabrics in traditional textiles as well as Technical Textiles in the arena of Geo-textiles, Nano – web technology, and Composites.

Self Employed Women's Association (SEWA), formed in 1972, is the largest women worker's Central trade union in India. SEWA has pioneered cooperative efforts of self-employed women for better income, skill upgradation, marketing, access to credit, access to healthcare, childcare, housing, legal services, etc.

Funding Compendium

Funding for Conferences, Workshops and Seminars

Funder: Indian Council of Social Science Research
Scheme: Training and Capacity Building programme
Deadline: Applications are accepted throughout the year, but the online application should be submitted at least 3 months before the due date of RMC/CBP.
Remit: For organizing research methodology and capacity building programme for young researchers and junior faculties in various social science disciplines
The Training & Capacity Building Programme is divided into following two categories:

- Research Methodology Course (RMC): The aim of the course is to enhance the methodological and writing skills of the M Phil/Ph D/PDF scholars and develop their potential as future academicians/social science researchers.
- Capacity Building Programme (CBP): The aim of this programme is to give an exposure to in-service faculty preferably Lecturers/Assistant Professors in Social Science disciplines to the latest advances in their subjects, technological spin off etc. and/or to enhance their general methodological and writing skills.

Support:
RMC: INR 5,50,000
CBP: INR 8,00,000
Website: https://icssr.org/training-and-capacity-building
Eligibility: An ICSSR Research Institutes/ institutes of national importance as defined by MHRD/UGC recognized Indian university/deemed university and government research institutes having proven research capacity and resources. Additional eligibility criteria for the course directors, co-directors and participants available at the above weblink.
Application process: Online and through post; details available at the above weblink

Research Grants, Fellowships and Prizes

Funder: Nature Awards
Scheme: Inclusive Health Research awards
Deadline: 06 January 2023
Remit: To celebrate those who are driving a more inclusive approach to health research and, in doing so, promote a future of greater health equity globally.
Eligibility: Anyone directly engaged in activities connected to health research and especially those located in low- and middle-income countries (LMICs), and/or representing under-served communities. We are seeking a diverse range of applications demonstrating inclusive thinking and action during the health research process. The project must have occurred within ten years of the application deadline, i.e., the 6th January 2013.
Support: € 20,000, plus coverage on nature.com
Website: https://www.nature.com/immersive/inclusivehealthresearch/index.html
Application process: Submissions must be made through the online application form: https://natureawards.submittable.com/submit/c770daab-1cdd-4c58-b2f6-f522c099cf32/inclusive-health-research-2022

Funding Compendium

Funder: Gujarat Council on Science and Technology

Scheme: Research Support Scheme for R&D (RSSR&D) in the emerging areas of S&T on state and national priorities.

Deadline: Accepted round the year

Remit: The research support will be enhanced in following emerging cutting-edge and high potential technologies by a dedicated STI fund:

- Artificial Intelligence and Robotics
- Biotechnology
- Polymers and special materials
- Nano Technology
- Internet of thing (IoT) Solutions
- Energy Storage Solutions
- Waste treatment and management solutions
- Pollution abatement
- Sustainable Habitat
- Nutrition sensitive research

Duration: Up to 3 years

Support: Up to INR 50 lakhs

Website: https://gujcost.gujarat.gov.in/Portal/News/171_1_RSS-R-D-Scheme-2018-19.pdf

Eligibility: Researchers who work for government-owned or government-funded research institution or at nonprofit research institution or at state/central government universities or at UGC/AICTE approved university/colleges/institutions can apply.

Application process: Through email and hard copies; application format and address available at the above weblink.

Funder: Department of Biotechnology, Government of India with Coalition for Epidemic Preparedness Innovations

Scheme: Ind-CEPI Mission - Epidemic preparedness through rapid vaccine development

Deadline: 31 December 2022

Remit: Support of Indian vaccine development aligned with the global initiative of the Coalition for Epidemic Preparedness Innovations (CEPI) under the following focus areas:

- RNA vaccine platform technologies and vaccine library development against emerging and select endemic infectious diseases, Focus Area-2 (open until December 31, 2022)
- Innovative technologies to improve vaccine thermostability (open until December 31, 2022)

Website: https://cepi.net/get_involved/cfps/

Application process: EoI (templates are accessible via https://cepi.net/get_involved/cfps/) to be submitted through a secured portal access to which can be obtained by writing to rna.cfp@cepi.net.

Funder: Mahindra Humanities Center, Harvard University

Scheme: Postdoctoral fellowships

Deadline: 18 November 2022

Remit: Applications from scholars in all fields whose work innovatively engages with the environment and the humanities.

Eligibility: Applicants must have received a doctorate or terminal degree in or after May 2020. Applicants without a doctorate or terminal degree must demonstrate that they have completed all requirements for a terminal degree (i.e. dissertation defense) by 01 August 2023.

Duration: 1 year

Support: stipends of USD 65,000, medical insurance, additional research support of USD 2,500, and USD 1,500 in moving expenses

Website: https://mahindrahumanities.fas.harvard.edu/postdoctoral-fellowships

Application process: Online, from https://academicpositions.harvard.edu/postings/11416

Funding Compendium

Funder: US Consulate General Mumbai
Scheme: Public Diplomacy Small Grants
Deadline: 22 May 2023
Remit: Project proposals in five areas: U.S.-India economic ties, U.S.-India education ties, equity and inclusion, climate change, and media/journalism. While a proposal may address multiple objectives, each proposal should clearly articulate how the project advances at least one of the objectives.
Topics and objectives:
- Increasing India's Role in Regional and Global Supply Chains
- Strengthen U.S.-India Education Ties
- Promote Equity and Inclusion
- Address Climate Change
- Support a Free and Fair Media Environment

Eligibility:
Private institutions of higher education
Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education
Public and State controlled institutions of higher education
Website: https://www.grants.gov/web/grants/view-opportunity.html?oppId=341555
Application process: Application package available at the above website.

Funder: Ministry of Earth Sciences, Government of India
Scheme: collaborative research under Deep Ocean Mission (DOM)
Deadline: 30 November 2022
Remit: Following thrust areas and sub-themes of the Deep Ocean Mission are covered in this call for proposals:
- Deep Sea Mining:
- Manned Submersible:
- Underwater Robotics
- Development of AI/ML schemes for climate assessment research
- Bio-processing and Bio-transformation of marine microbial enzymes
- Screening of Deep- Sea Metagenomic libraries
- High- throughput screening of microbial metabolites
- Development of high pressure retainable sediment sampler
- Development of cell line from deep sea organisms
- Ocean Energy
- Marine biology

Eligibility: Scientists/academicians working in relevant areas at different institutions and universities in the country.
Duration: 2 years
Website: https://www.moes.gov.in/sites/default/files/2022-09/Advertisement-for-call-for-proposals-under-DOM2.pdf
Application process: Proposal in prescribed format to be submitted by email and post to addresses given in the instructions

Funding Compendium

Funder: Department of Science & Technology (DST), Government of India
Scheme: Hydrogen Valley Platform in India
Deadline: 30 December 2022
Remit:
- Hydrogen Production
- Hydrogen Storage and Distribution
- Hydrogen end uses - transport, clean heat and power

Eligibility: Central government/ state government supported or recognized (public or private) academia and urban or other local bodies with Industry partners. Preference will be given to projects with Industry partners providing funds.
Website: https://onlinedst.gov.in/Projectproposalformat.aspx?Id=Hydrogen%20Valley%20Platform
Application process: In the prescribed format.

Funder: Science and Engineering Research Board, Department of Science and Technology, Government of India with Indian National Academy of Engineering
Scheme: SERB-INAE Online and Digital Gaming Research Initiative
Deadline: 10 November 2022
Remit: Proposals on the following thematic areas concerning online and digital games
- Category (I): R&D in Learning, Educational, and Leisure Online Gaming Platforms
- Category (II): Immersive Game Prototypes, with a focus on Indian Culture & Values
- Category (III): Collaborative Technical Design Process: Creation of SERB Game Labs

Eligibility: Scientists in regular service from educational and research institutes/ laboratories/ universities, start-ups and industries. Proposals ideally form a consortium and should be an industry-academy (including start-ups) collaboration with IP creation as a priority. Applicants [Principal Investigator (PI) and / or Co-Principal Investigator(s) (Co-PI(s))] should be Indian citizens. Foreign nationals (including OCI and NRI) are also eligible to apply provided they fulfil the eligibility criteria notified by SERB (SERB Funding Guidelines for foreign nationals dated 27th Oct 2016) and The Gazette of India Notification of Ministry of Home Affairs vide. S.O. 1050(E) dated 4th March 2021 in respect of OCIs. The applicant(s) from academia must hold a regular academic/research position in a recognized academic institution or national laboratory or in any other recognized R & D institution in India with at least 3 years of service remaining.
Duration: The typical duration of a project will be of two years with a possibility of an extension for one more year (based on progress). However, it may be of 3 years duration (extendable to 2 more years based on progress) for Gaming Labs.
Support: The funding will be provided for (i) essential equipment, consumables, travel, contingency (for certain elements related to gaming) and (ii) manpower. "Overheads" will also be provided to the implementing institution as per prevailing norms of SERB.
Website: https://www.inae.in/serb-inae-online-and-digital-gaming-research-initiative/
Application process: Completed application form in the prescribed format (available on the website) to be submitted through the website.

Funding Compendium

Funding For International Exchange and Collaborations

Funder: Indian Council of Social Science Research
Scheme: Data Collection Abroad
Deadline: Applications accepted round the year
Remit: Financial assistance to Indian Social Science Scholars who intend to visit abroad for the purposes of data collection or consulting archival material in connection with their research work. The scheme is aimed at providing financial assistance to ICSSR scholars who have proposed field work abroad in their original approved fellowship or project proposal and made substantial progress in their research or any other independent scholar where data collection abroad is academically justified for research undertaken and are at an advance stage of their research.
Eligibility: Faculty members in ICSSR research institute/institutions of national importance as defined by the HRD Ministry/university/deemed university/college recognized by the UGC having a Ph.D. are eligible to apply.
Duration: Up to 1 month
Support: Up to INR 3 lakhs
Website: https://icssr.org/data-collection-abroad.
Application process: Online and through post (details available at the above weblink).

Funder: Indo-French Centre for the Promotion of Advanced Research (IFCPAR)
Scheme: Collaborative Scientific Research Programme (CSRP)
Deadline: 30 November 2022
Remit: Applications in following focused areas:
- Sustainability management of health, water, agriculture, environment
- Clean energy (zero carbon energy solutions)
- Marine science and ecological science (biodiversity)
- Quantum technology (material, computing)
- Applied AI and big data

Eligibility: A proposal should be jointly submitted by one Principal Collaborator from India and one Principal Collaborator from France.
Duration: Up to 3 years
Support: Up to Euros 2,00,000
Website: http://www.cefipraonline.in/CEFIPRA/app_srv/cefipra/gl/jsp/crp_icon_details.jsp
Application process: Online, from the website.

Funding Compendium

Funder: The British Academy
Scheme: Visiting Fellowships 2023
Deadline: 30 November 2022
Remit: The British Academy's Visiting Fellowships programme provides outstanding academics based in any country overseas with the opportunity to be based at a UK higher education or other research institution. The programme is open to academics at any career stage, and in any discipline within the humanities and social sciences.
Eligibility: Visiting Fellows must be of postdoctoral level or above, or have equivalent research experience at the time of application. Candidates should be based outside of the UK at the time of application.
Applicants must demonstrate that they have been in contact with their UK host institution prior to applying.
Duration: 3-6 months
Support: £33,000
Website: https://www.thebritishacademy.ac.uk/funding/visiting-fellowships/
Application process: Online, through Flexi-Grant system.

Funder: British Council
Scheme: Going Global Partnerships Grant
Deadline: 14 November 2022
Remit: The objective of the grant is to catalyse industry academia partnerships that will allow academia and industry to work in sync, prepare work ready workforce, reduce on the job training cost, and make learners more employable. The grant aims to build stronger, more inclusive, industry connected higher education systems that support global development impacts.
Eligibility: The application must be a joint application, with minimum three partnering institutions with representation from both UK and India institutions and the industry partner. The consortium must have at least one lead applicant based at a UK institution, at least one co-applicant based at an Indian institution and at least one industry partner either from India or UK., with clear roles in the consortium.
Applications must have the support of all participating Indian and UK institutions and the industry partner, confirmed by supporting letters on their letter heads.
Consortium with a strong plan of systemic impact will be given preference. Consortiums must have resources and other funds committed to this collaboration, and any value added to the grant will be considered desirable. Preference will be given to consortium sponsored or approved by state governments in India and/or aligned to both countries' state and national priorities.
Duration: 10 months
Support: Up to £40,000
Website: https://www.britishcouncil.in/going-global-partnership-grants#:~:text=Going%20Global%20Partnerships%20%E2%80%93%20Industry%20Academia,collaboration%20between%20industry%20and%20academia.
Application process: Online, from https://forms.office.com/Pages/ResponsePage.aspx?id=wXVirt3MRkCyoWJFosyj7JDM0Ti9Il9KvFAToIwk8LdUN0ZESFpRQk1SU1Q1R1VCMkozUUozUEpCMC4u.
Sample application form is available on the website.

Funding Compendium

Industry Contact

Event: Engi Expo 2022
Dates: 17 – 19 December 2022
Location: GMDC ground, Ahmedabad
What to expect: Interaction with exhibitors in areas such as welding & cutting, abrasive, safety, electrical & electronics products, solar, business, IT, finance, etc.
Website: https://engiexpo.com/

Event: Composites Industry National Conference and Exhibition 2022
Dates: 11 – 13 November 2022
Location: Helipad Exhibition Centre (HEC), Gandhinagar
What to expect: A forum for industry experts, manufacturers, suppliers, subject academia, researchers and thinkers to share ideas and approaches and showcase their products, services and innovations in a global market. The 3 days event recognises and responds to the industry needs with world-leading companies presenting their research for advanced composites.
Website: https://kdclglobal.com/cince-2022.html

Event: Plastindia 2023
Dates: 01 – 05 February 2023
Location: Pragati Maidan, New Delhi
What to expect: Exhibition covering the entire gamut of plastics producers, processors and users of plastics, and it witnesses intense participation by both Indian and International Plastics Fraternity.
Website: https://www.plastindia.org/

Ahmedabad University