RESEARCH HORIZONS

THE OFFICIAL NEWSLETTER OF THE UNIVERSITY GRANTS OFFICE

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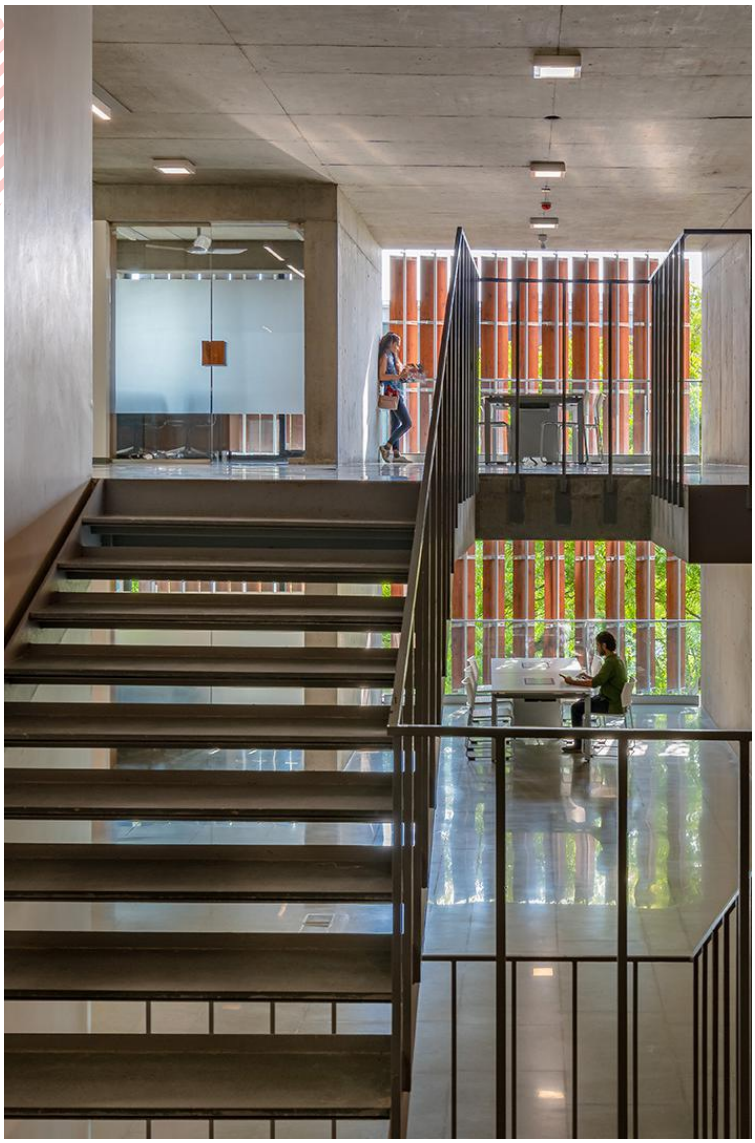


CONTENT

Ahmedabad University

In conversation with Tejaswini Niranjana

Professor Tejaswini Niranjana is an acclaimed inter-disciplinary scholar whose research straddles multiple disciplines and geographies. She is also the Director of the recently launched Centre for Inter-Asian Research at Ahmedabad University. We spoke to her about her research and her plans for the Centre. Excerpts from the conversation.

Please could you tell us about your research interests?

That is probably one of the most difficult questions anyone can ask me. Research is often dictated by the structure and founding questions of a discipline. In my case, the research questions I address are based on what I have encountered in the world at large and have been baffled by. I have then tried to see what kind of methodologies might help me explore these questions. I have been inclined to look at the problem rather than the discipline and what one can do to understand the problem.

My work spans several disciplines and geographies. During my PhD, I wrote a monograph titled *"Siting Translation: History, Post-structuralism and the Colonial Context"*. This book is known across the world and has been translated into several languages including Portuguese, Spanish and Chinese. Colleagues in Translation Studies cite my work, as do English Departments. My work published in the monograph "*Mobilizing India: Women, Music and Migration between India and Trinidad*" draws on history and anthropology and is also used for teaching in the field of Caribbean studies. In the USA, my work is taught in the departments of South Asian studies, in Anthropology, History and in Cultural Studies. Working across the boundaries of disciplines and geographies can be challenging. However, I like to jump into things and see where it takes me.

Please could you tell us about your research on music and women in the Caribbean?

In the early 2000s, I was doing a lot of field work in the Caribbean. The questions I was taking there were the animating questions of my generation at the time. We were a post-independence generation and were influenced by a strong critique of the nation-form. I was doing a comparative study of popular culture between India and the Caribbean. 50% of the population in Trinidad at the time were of Indian origin, descendants of those who had travelled there as indentured labourers from the 1850s onward. In terms of identity, they were Indian and yet not Indian. I chose to focus on music and women, as that seemed to me to be the most striking aspect of the Caribbean for an outsider. I explored this theme through the question of the Indian woman who had taken shape in India at the time of colonialism and of nationalist struggle. In parallel, I was seeking to understand the Indian woman who had taken shape in the Caribbean. I did a historical and anthropological enquiry into this question and tracked that through the calypso music sung in the Caribbean.

I then got to know documentary film maker Surabhi Sharma and Rock-Pop singer Remo Fernandes. We travelled together to the Caribbean along with Surabhi's film crew. During that visit, I got the kind of access to the field that I had not been able to gain in over a decade as an academic. We released both a book and a film ("Jahaji Music: India in the Caribbean") on the project and I have always regarded these as companion projects. Through this experience, I got interested in popular culture forms and in trying to see how one could connect to a space outside the academy. This is an important feature of my research and I look to see how I can speak to different audiences. It also helps me to think about how to write up the research.

Please could you tell us about your research on Hindustani classical music in the city of Mumbai?

For my next book "*Musicophilia in Mumbai: Performing Subjects and the Metropolitan Unconscious*", I chose to work on Hindustani classical music in Mumbai. The problems of Indian and non-Indian identity that I encountered in the Caribbean were brought back to India, to the city of Mumbai. Mumbai as it took shape as a colonial city in the 18th and 19th centuries, became a refuge and home for classical musicians from across India. I decided to take a look at classical music and to understand how a new genre completely unfamiliar to Mumbai, took such deep roots in the city. How and why did this form get identified with Mumbai? Why was it that without Mumbai, that music would not have survived?

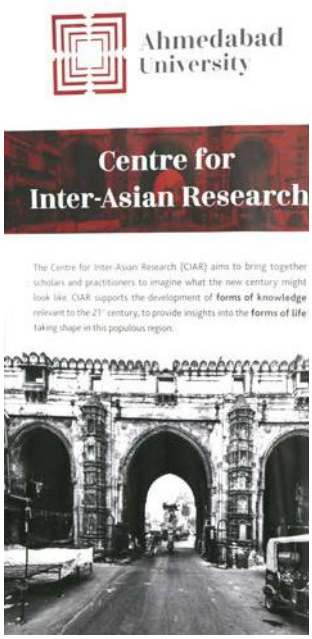
For this research, I worked once again with Surabhi Sharma. I did my historical investigation, which was difficult to carry out as there were no substantial archives in this domain. Surabhi and I conducted nearly 25 interviews with the leading practitioners, some of whom are no more. We made a film on the subject, titled "Phir se sam pe aana- Returning to the first beat". I wrote a book and additionally curated an exhibition working with a set of architects and designers. The exhibition became yet another way of showcasing our research.

I became interested in and open to multi-modal ways of representing research. As a researcher from a Humanities background, I would value the written word. However, I found myself increasingly thinking that the written word was not the only way by which to share research findings with a larger audience. The way one asks research questions is also impacted by what kind of future one sees for that research.

You have led several initiatives in curriculum development for interdisciplinary research. Please could you share your views on how this contributes to research at an institution?

In the late 90s, I helped set up the Centre for the Study of Culture and Society (CSCS) in Bangalore. We were driven by the idea of wanting to do interdisciplinary work. One of the problems we saw was a sharp separation between postgraduate and undergraduate work at educational Centres in India. We collaborated with several institutions such as the Indian Institute of Science, National Centre for Biological Sciences, Srishti School of Art and Design, Christ University and other colleges. We created a PhD programme in interdisciplinary research and encouraged our students to develop courses that could be taught successfully at the Undergraduate level. That imagination has stayed with me.

After decades of teaching PhD and Master's students in India I went to Hong Kong and taught Chinese undergraduates. I believe that effort was successful, because having research imagination allows us to ask questions in a complex way and we can certainly find ways of talking to younger people about it. I have been working with Ahmedabad University since 2016 as a visiting professor and have been involved with curriculum development and faculty development. I believe that research should drive teaching and that teaching in turn would drive research. Researchers should be able to teach the cutting-edge topics they are working on. While it can be hard to balance breadth with the disciplinary requirements some domains have, I do believe this is extremely important.



You are the Director for the newly launched Centre for Inter-Asian Research at Ahmedabad University. Please could you tell us about this initiative?

Our mandate for the Centre for Inter-Asian Research at Ahmedabad University is to engage with research problems that can be addressed by collaborative teams of scholars from social sciences and humanities, natural sciences, engineering and management, and public health. This can be challenging. However, I believe that one can start developing ideas through conversations.We would like to support knowledge generation about Asia, inside Asia and by Asians. We hope to do so through a comparative lens, focusing on learnings from across the Asian region.

While we look forward to developing several projects in due course, we have made a start with two of my projects. The first project explores digital intimacy among young women across Hong Kong, Guangzhou, Singapore, and Bangalore. This project is funded by the Hong Kong Research Grants Council. We are conducting interviews in these four locations and will start analyzing the results and will eventually write a book about our findings. For me, this project has been both exciting and difficult. This kind of collaborative research is generally encountered only in the natural sciences and large economics projects and is typically not done in my field. However, because I have previously worked collaboratively with people from film-making, architecture and other genres, I am primed to be able to do it.

I am also collaborating with Goa-based restaurant Edible Archives to look at the question of food and medicine in Indian and Chinese culinary cultures. We recently had an offline workshop exploring similarities in the philosophies of Ayurveda and Traditional Chinese Medicine (TCM) systems. We are now curating a series of six online conversations with an Ayurvedic doctor in Chennai and with a Traditional Chinese Medicine doctor in Hong Kong. We hope to understand the principles that animate these two health systems. This is an exciting new project I am engaged with and it wouldn't have happened if I hadn't met the chef at the Kochi Biennale a couple of years ago!

The Centre for Inter-Asian Studies at Ahmedabad University is just a few weeks old. We are developing our ideas and ambitions and look forward to shaping some exciting new collaborative research.

In conversation with Snigdha Khuntia

Snigdha Khuntia is an Assistant Professor at the School of Engineering and Applied Science. She is a Chemical Engineer with an interest in developing solutions to environmental challenges. We spoke to her about her research programme and about her work with the Ahmedabad University student chapter of the AIChE. Excerpts from the conversation.

Please could you tell us about your key research interest?

I am fascinated by environmental problems and look for engineering approaches to solving such issues. My specific interest is in developing new technologies for pollution treatment. Our industries need to comply with the environmental norms set by the Government of India and should ensure that industrial waste is treated appropriately prior to release. However, there are both knowledge gaps and technology gaps for these processes. We have approached industries in the areas surrounding Ahmedabad and have identified gap areas and problems being faced by these sectors. These insights from the industries form the basis for our work.

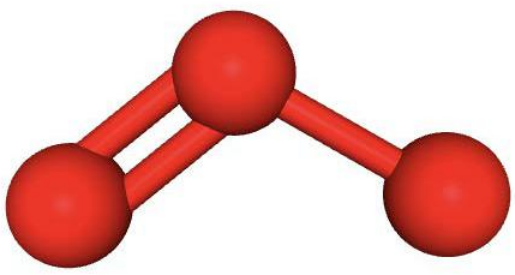
While we can learn from the use of technologies for pollution control in other countries, we need to ensure that our researchers develop indigenous solutions tailored to the specific realities of industries in India. For example, we are not in a position to simply discard existing technologies while adopting new solutions. At an industrial scale, this would not be cost-effective. Additionally, there would be the problem of how to dispose of large amounts of scrap material. Hence, my own approach is to come up with adaptations to existing technology and this is a win-win solution for both sides. We have developed prototypes for this work at Ahmedabad University and use these in our laboratory to determine if our interventions can be applied effectively on an industrial scale.

Please could you tell us about your work on removal of SOx and NOx species from flue gases, which was funded by the Science and Engineering Research Board?

We still rely on burning fossil fuels to generate electricity to meet India's needs. The exhaust "flue" gas generated at the power plants is a mixture of various harmful chemicals, including gases such as carbon dioxide, sulphur oxides and nitrogen oxides. There has already been a lot of interest in carbon dioxide, the key "greenhouse gas" contributing to global warming. The sulphur oxides and nitrogen oxides are referred to as SOx and NOx and are found abundantly in the flue gas of all power plants. These gases can combine with water, oxygen and other chemicals found in air and turn into sulphuric acid and nitric acid. When these acid molecules settle, they can cause a phenomenon called "acid rain". This is highly damaging for the environment. Hence, it is important to ensure that flue gases contain as low as possible amounts of SOx and NOx.

The power plants generate very large amounts of SOx and NOx, much above the permissible Government norms. This problem needs to be addressed and a solution has to be found for reducing the level of SOx and NOx species in the flue gases. Our group has developed technology based on selective catalytic reduction and selective catalytic oxidation. We are working to incorporate a gas called ozone into the system. Ozone is a powerful oxidant and is very effective for breaking down SOx and NOx at the point of release. If we could integrate an ozonator with the equipment, it would rapidly break down SOx and NOx into other compounds which are simpler to remove. In our experiments, the by-products are liquid and settle into the chamber rather than getting released with the rest of the gases. In this manner, we are trying to create SOx/NOx free flue gases which meet the environmental norms and can be released into the atmosphere.

Buoyed by the success of our efforts, we approached Thermax, the biggest manufacturer of boilers and power plant equipment in India. While discussions are still ongoing, we are delighted that our technology is of interest to the Thermax team. We have applied to the Department of Science and Technology (DST) for a larger grant to support a consortium-based project to upgrade our existing technology. If our application to DST is successful, it will open a big window for us to work at both ends: continuing our work at Ahmedabad University and to test our technology and collaborate with Thermax.



Please could you tell us about your plans for working on catalyst coated microbubbles for removal of trace pollutants, which has recently been funded by DST under the Water Technology Initiative?

As I mentioned previously, ozone is a powerful oxidant which has a lot of potential in degrading various other compounds. It is being used for treatment of drinking water, as it can kill bacteria and viruses. However, every technology has its own limitations. Since ozone is a gas, it can quickly come out of water, which diminishes its potential for killing bacteria and in waste-water treatment. Ozone can be generated by an ozone generator through an expensive process that consumes a lot of energy. It has a foul smell, which can affect people working around the gas. While the use of ozone is well accepted in other countries, such as USA and Japan, we are still hesitant to accept the use of ozone for water treatment in India.

We are trying to develop a method for waste water treatment that uses less amount of ozone while exploiting the full potential of the gas. We would like to reduce the exposure of the gas to the environment, reduce the energy cost and make the entire process quicker. If this could be done successfully, ozone-based technology would be more readily accepted by Indian industry. We use microbubbles which have the potential to capture ozone in water and ensure that it stays in water for a longer time. This approach can help us use lesser amounts of ozone and yet treat pollutants in water. We are also using catalysts that help to speed up the chemical reactions and help in driving the degradation process to completion. This project is being developed in collaboration with Professor Sameer Dalvi at IIT Gandhinagar. At his end, he aims to generate the ozone microbubbles and for our part, we are developing the catalyst.

We have planned to treat pharmaceutical wastewater using this technology. Ahmedabad is surrounded by several pharmaceutical industries. Water from these industries contains trace amounts of pharmaceuticals, which is challenging to capture and treat. However, this material cannot be ignored and left in the water. Hence, we plan to use ozone technology to remove these pollutants from the water. Using our combination of approaches, we hope to ensure at least 90% removal of pharmaceuticals from waste water.

You are an advisor for the Ahmedabad University student chapter of AIChE. Please could you tell us a little bit about the activities of the student chapter?

Our Chemical Engineering students were very keen to join the chapter. The students have taken the lead on developing their activities and that is the whole purpose of the student chapter. I have been available behind the scenes as an advisor, to guide them on the best approach to take for a particular task.

We recently successfully completed a student regional conference from South-East Asia region which was funded by AIChE, the School of Engineering and Applied Science and through some sponsorship from industries. The conference was a big success and we hope to organize this again in the future. We were able to win the best student chapter award consecutively for two years! One of the students has received a fully funded scholarship to travel to USA and join their student chapter conference. Various other students won awards and competitions held in other parts of India.

Our students have approached various industries for collaborations and industrial visits and made all the arrangements themselves. While this was a time-consuming task, it was nevertheless an excellent learning experience for them. They had to approach people who were well-recognized, busy and at times reluctant to allow student visits to a chemical factory due to safety reasons. The students learnt how to start the conversation, how to take responsibility and how to obtain the required permissions. The visits additionally taught our students the importance of looking at laws and regulations. In the end, the visits were wonderful experiences for all, including the industry personnel. Such opportunities are very valuable for our students for developing their careers.

More information on the DST Water Technology Initiative can be accessed at https://dst.gov.in/water-technology-initiative-programme-wti

More about the AIChE at https://www.aiche.org/?gclid=CjwKCAjw8KmLBhB8EiwAQbqNoPN__Fn44joFWoHeUdLaj8gpi_CDKwc-UBA8Ga2YBdQohFAz1UbYrBoCMKQQAvD_BwE

The ozonation set-up for Water and Flue gas treatment.

In the Spotlight: EXIM Bank BRICS Economics Research Award 2021 for Rahul Singh

Rahul Singh has been awarded the BRICS Economics Research Award 2021 for his dissertation titled "Essays in International Trade in Post Liberalization India" which examines the effect of Non-tariff measures and Chinese imports on the performance of manufacturing firms in India.

The BRICS Economics Research Award is instituted by the Export-Import Bank of India, for stimulating advanced economic research in international economics, trade, development and related financing as relevant to the member nations of BRICS. This award is given to an early career researcher from amongst the BRICS Nations and represents the EXIM Bank's ongoing efforts at promoting economic research and analysis, thereby contributing to policy formulation.

We congratulate Rahul Singh for this new recognition.

More information on the BRICS Economics Research Award at https://www.eximbankindia.in/awards

Easing Parking with PARKIN

The city of Ahmedabad has grown at a rapid pace and so has its parking issues. Alarmingly, fines being levied, vehicles being towed away and chaotic traffic scenes are quite common since the information available in public domain about parking spaces at various locations within the city is limited and unorganised. These daily frustrations for finding the right parking spot led to the idea for development of PARKIN, a mobile application built for making parking a fret free matter for the residents of Ahmedabad.

PARKIN has been founded and co-founded by Ahmedabad University researchers Professor Jaina Mehta and Mr Vidit Ghelani. The start-up idea was recently shortlisted in herSTART 2021. The app is available on both Android and iOS platforms and aims to create a smoother parking experience.

PARKIN wishes to (1) Provide easily accessible information about parking spots across the city, (2) Limit the towing away of vehicles and levying of fines (3) Create awareness about benefits of proper parking. The 'mind' and 'body' of PARKIN are Data Collection and the mobile application respectively. PARKIN has built a vast database of available parking spots and these have been collated on the map of the city. These data points have been named as "Park-Pins". This database of Park-Pins includes spots owned by Ahmedabad Municipal Corporation (AMC) as well as privately owned parking spots across the city. Using the app involves a few simple steps, where one searches for a destination, clicks on a suitable Park-Pin and locates the parking spot. To put it succinctly: "Search.Click. Park"

PARKIN also provides related information such as availability of valet services, nature of the parking (paid or free), proximity of Park-Pin from destination, Google maps navigation from location to Park-Pin, filters by type of vehicle (2W/ 3W/ 4W), distance filters, tow-away zones and actual photos of the parking facilities. The app also has features such as addition of Park-pins by the users (moderated), option for users to add notes to the Park-Pins, option of integrating a point-based user reward system etc.

More information on the PARKIN app can be accessed at https://www.park-in.co.in/

PARKIN

Awarded grants

External grants (For the period July- September 2021)

Moumita Roy, Ahmedabad University and Daniel Houser, George Mason University, USA
"Doctoral Dissertation Research in Economics: An Experimental Analysis of the Role of Group Identity in Leadership Effectiveness"
National Science Foundation, USA

Ashutosh Kumar, Ahmedabad University, Vikrant Jain, IIT Gandhinagar, Sanjeev Kumar, PRL, Ahmedabad, Vimal Misra, IIT Gandhinagar and Samir Damar, NIO, Goa
"Study of Earth Surface Processes at Three Different Critical Zones with Different Climatic and Geologic Settings in Western India"
Ministry of Earth Sciences, Government of India
23.93 lakh INR, 3 years

Pallavi Vyas, Ahmedabad University and Aditi Upadhyay, Indian Institute of Management
"Does Information Dissemination of the XY Chromosome Lead to Lower Violence Against Women and Increase Bargaining Power?"
J-PAL grant (Gender and Economic Agency Initiative (GEA) Summer 2021)
74,478 USD (via the Institute for Financial Management and Research)

Ahmedabad University Seed grants:

Kaushik Jana
"Regional Covid Infection Explorer and Forecaster in the Indian Context"
2.0 lakh INR, 1 year

Balaji Prakash
"Can We Develop Gut-safe Antibiotics? Investigating EngA Homologues from Pathogenic and Gut Bacteria"
2.0 lakh INR, 1 year

A**hmedabad University Teaching Material Development/Innovation grants:**

Alok Shukla
"Creating Math-Art and Visually Appealing 3D Mathematical Models to Improve the Mathematical Ability of Student"
0.8 lakh INR, 1 year

Ahmedabad University Startup grants:

Keyur Joshi
"Divyawear- a Wearable Haptic Cueing System for Visually Impaired"
9.9 lakh INR, 2 years

UGC approval for Ahmedabad University under Section 12B

The University Grants Commission (UGC) has approved the proposal from Ahmedabad University for recognition under Section 12B. The inclusion of Ahmedabad University by the UGC in the list of Universities approved under Section 12B of the UGC Act makes Ahmedabad University eligible to receive central assistance from UGC and other funding agencies such as ICSSR that require this recognition.

Research Seminars

(For the period July - September 2021)

Amrut Mody School of Management

- Ramadhar Singh, Ahmedabad University. *Birds of a Feather Flock Together: What Scientists Know Makes Them "Surdas" to What They Don't Know* . August 25, 2021.
- Amrita Bihani, Ahmedabad University and Nimit Thaker, Ahmedabad University. *Conflictorium - Museum of Conflict*. September, 29 2021.
- Samarth Gupta, National Council of Applied Economic Research. *Financial Access and Gender Gap in Entrepreneurship and Employment: Causal Evidence from Rural India*. September 9, 2021.
- Abhinandan Sinha, CNRS. *Financial Access and Gender Gap in Entrepreneurship and Employment: Causal Evidence from Rural India*. September 15, 2021.

School of Engineering and Applied Science

- Pankaj Kumar, DAIICT. *Computer Vision and Deep Learning Applications*. July 16, 2021.
- Abinaya Sampath, University of Illinois at Urbana-Champaign, US. *Effects of Promoters and Supports on Selective C-C/C-H/O-O Bond Ruptures over Transition Metal Catalysts*. July 22, 2021.
- Nanji Hadia, Institute of Chemical and Engineering Sciences, Singapore. *Nanoparticles for Enhanced Oil Recovery (EOR) Applications*. July 28, 2021.
- Prerna Gera, University of Wisconsin-Madison, US. *Dynamics of Three-Dimensional Patchy Vesicles*. August 25, 2021.
- Absar Lakdawala, Nirma University. *Level Set Method and its Application to the Study Drop and Bubble Dynamics*. September 7, 2021.
- Tanuj Saxena, NXP Semiconductors, US. *Advancements in RESURF power MOSFET technology*. September 30, 2021.

School of Arts and Sciences

- Soumen Ghosh, University of Calfornia, San Diego. *Slow Positron Beam to Probe Physics of New Annihilation Resonances*. July 2, 2021.
- Shomen Mukherjee, Ben-Gurion University, Israel. *Ecological Applications: From Foraging games to Public Health*. July 9, 2021.
- Kaushik Sen, Karlsruhe Institute of Technology, Germany. *Spectroscopic investigations of fundamental interactions and dynamics in quantum materials*. July 15, 2021.
- Hita Unnikrishnan, University of Sheffield, United Kingdom. *Urban social-ecological systems over time: from case studies to beyond*. July 20,2021.
- Shweta Shivaprasad, Stanford University, USA. *Host-Pathogen Interactions in RNA Virus Infection*. September 13,2021.
- Himanshu Jha, National University of Singapore, Singapore. *Capturing Institutional Change: The Case of the Right to Information Act in India*. September 14, 2021.
- Urmi Nanda Buswas, Sardar Patel University. *Values and work conditions for organising sustainable eldercare*. September 21, 2021.
- Safwan Amir, Madras Institute of Development Studies. *The Muslim Barber's Qissa in South India: A Historical Anthropology*. September 23, 2021.
- Renu Roychoudhuri, The University of Chicago, USA. *Of People and Smoke: Industrialscape in Post-Independence India*. September 27, 2021.
- Mrunmayee Satam, University of Leicester, United Kingdom. *The Influenza Pandemic and the Development of Public Health Infrastructure in Bombay City*. 1919-1935. September 29, 2021.
- Vishakha Desai, Columbia University, *From Ahmedabad to the US : Belonging as Multi-Rootedness*. September 1, 2021.

Publications

(For the period July - September 2021)

Articles in Refereed Journals

Naik S. & Gajjar K. (2021). Applying and Evaluating Engagement and Application-Based Learning and Education (ENABLE): A Student-Centered Learning Pedagogy for the Course Database Management System. Journal of Education, SAGE Publisher, 10.1177/00220574211032319.

Thomas S. (2021). Determinants of Cause-Related Marketing Participation Intention: The Role of Consumer Knowledge, Cause Scope, Donation Proximity. Journal of Nonprofit and Public Sector Marketing (ABDC - B), Online1-21. https://doi.org/10.1080/10495142.2021.1970077.

Thomas S. (2021). Investigating Interactive Marketing Technology: Augmented Reality and Virtual Reality in the Indian Context. International Journal of Business Competition and Growth (UGC approved), 7(3), 214-230. DOI: 10.1504/IJBCG.2021.116266.

Mahadevia D. & Bhatia N. (2021). Towards New Urban Agenda: A Radical Reorientation of Urban Planning Education in India. Environment and Urbanization, ASIA, 12(2), 1-15. DOI: 10.1177/09754253211040193.

Mukhopadhyay C. & Mahadevia D. (2021). How do NDC and UN's Sustainable Development Goals Introduce New Meaning of Sustainability within Mega Transport Project Appraisals?, . Journal of Mega Infrastructure & Sustainable Development, 1(2), 1-18. DOI: 10.1080/24724718.2021.1930946.

Williams G., Charlton S., Coelho K., Mahadevia D. & Meth P. (2021). "(Im)mobility at the Margins: Low-income Households' Experiences of Peripheral Resettlement in India and South Africa. Housing Studies, 36(7), 1-22.

Kaveshgar M., Patel N. & Naik P. (2021). Smart Traffic Signal Control for Ahmedabad City. Innovations in Emerging Technologies and its Applications, 1(1), 37-56.

Published Books

Pandit S. (2021). An Introduction to Psychology . Delhi :SAGE TEXT BOOKS.

Working Paper

Kaveshgar M., Vohra S. & Parikh D. (2021). Experimental Comparison of Attitude Estimation Algorithms on Quadrotor Under Acceleration. IEEE-ISES 2021 Conference.

Funding compendium

RESEARCH GRANTS, FELLOWSHIPS AND PRIZES

Agency: Abdul Latif Jameel Poverty Action Lab (J-PAL)
Initiative: Agricultural Technology Adoption Initiative (ATAI)
About ATAI: A collaboration between J-PAL and UC Berkeley's Center for Effective Global Action launched with support from the Bill & Melinda Gates Foundation, Foreign, Commonwealth and Development Office (FCDO), and an anonymous donor.
ATAI remit: To support researchers in generating rigorous evidence through randomized evaluations on the stages of agricultural transformation. Agricultural transformation is the process of farmers transitioning out of subsistence and into expanding commercial enterprise through expanded output markets, crop diversification, and the deepening of value chains.
ATAI RFPs in 2021:
- Gender-focused RFP
- Agricultural Transformation (AT) RFP

Applicant eligibility: Open to J-PAL and CEGA affiliated professors and invited researchers.
J-PAL affiliation: details at https://www.povertyactionlab.org/page/affiliate-criteria
Submission deadline: On a rolling basis.
Application process: Via a two-stage process including a letter of intent stage and a full application stage.
Website: https://www.povertyactionlab.org/initiative/agricultural-technology-adoption-initiative and **https://www.atai-research.org/**

Agency: Azim Premji Foundation
Scheme: Research Funding Program 2021
Additional information: Projects must be empirically grounded, aiming to directly inform and engage with education and outreach, policy or practice. Successful projects must have a strong component of action in some form. Projects that are solely focused on research will not be considered in this call. Collaborative research applications are encouraged.
Research areas supported: *Climate change action *Local democracy * Labour, livelihoods and employment.
Budget provisions: Rs 5-20 lakhs
Duration: 1-3 years, depending on the domain
Deadline: Deadline for submission of concept notes- 30 September 2021; Deadline for submission of full proposals- 30 November 2021
Weblink: **https://azimpremjiuniversity.edu.in/grants/research-funding-2021**
Application process: Via online portal
****List of 2020 awards: https://archive.azimpremjiuniversity.edu.in/SitePages/research-funding-programme-2020.aspx**

Agency: International Growth Centre (IGC)
Initiative: Call for proposals from Early Career Researchers
Agency remit: The IGC's research focuses on sustainable growth policies in developing countries. Sustainable growth refers to countries developing their potential in an inclusive way that improves social, environmental, and economic well-being for all, including for future generations. More information on IGC research priorities can be accessed at https://www.theigc.org/funding/research-priorities/
Focus area: Early Career Researchers are invited to submit proposals for research projects relevant to promoting sustainable and inclusive growth in developing countries.
Applicant eligibility: Early-career researchers must have five or less years of full-time work experience.
Budget provisions: Up to 20,000 GBP, covering personnel costs, costs incurred in collecting data, travel costs, dissemination of research outputs, equipment costs, subcontracting and up to 15% institutional overheads.
Submission deadline: 14th November 2021
Website: **https://www.theigc.org/funding/call-for-proposals/**
Application guidelines: **https://www.theigc.org/funding/call-for-proposals/how-to-apply/**

Funding compendium

RESEARCH GRANTS, FELLOWSHIPS AND PRIZES

Agency: Mahindra Humanities Center at Harvard University
Scheme: Postdoctoral fellowships in the area of environmental humanities
Theme: The Centre interprets the environmental humanities in the broadest terms, to include all parts of the world and historical eras. Topics may include (but are not limited to) humanistic approaches to climate change, biodiversity, social justice, environmental justice, food justice, regenerative practices, gardening, landscape, urban foraging, health, and animal studies.
Budget provisions: Fellows will receive stipends of USD 65,000, medical insurance, additional research support of USD 2,500, and (for those not already in residence in Greater Boston) USD 1,500 in moving expenses.
Other provisions: In addition to pursuing their own research projects, fellows will be core participants in the bi-weekly seminar meetings for both academic semesters of the fellowship. Other participants will include faculty and graduate students from Harvard and other universities in the region, and occasional visiting speakers. Fellows will also be encouraged to engage with the Center's existing Environment Forum and the Center's new initiative, the Intergenerational Humanities (I-HUM) Project on the theme of "Place and Planet."
Applicant eligibility: Applicants for 2022-23 fellowships must have received a doctorate or terminal degree in or after May 2019. Applicants without a doctorate or terminal degree must demonstrate that they have completed all requirements for a terminal degree (i.e. dissertation defense) by August 1, 2022.
Duration: 1 year
Deadline: 12 November 2021
Weblink: **https://mahindrahumanities.fas.harvard.edu/postdoctoral-fellowships**
Application process: Online, via the website
Additional details: Fellows are expected to be in residence at Harvard for the term of the fellowship.

Agency: Science and Engineering Research Board (SERB)
Scheme: National Science Chair
Scheme remit: To recognise active eminent senior resident Indian superannuated scientists for their outstanding contributions, in the area of Science, Technology, Engineering, Mathematics (STEM) and Medicine
Mode of implementation: Mode 1: Scientific excellence- To extend continuance of support for excellence in R&D activities of eminent senior superannuated scientists who are passionate in research as evidenced by the S&T output; Mode 2: Science leadership-To recognize outstanding contributions made by any of the resident Indian superannuated Scientist towards excellence at the national and the global level.
Budget provisions: Rs 1.5 lakhs Fellowship per month, research grant of Rs 25 lakhs and Rs 5 lakhs per annum for Modes 1 and 2, Rs 1 lakh overheads per annum
Duration: 3 years with the possibility of further extension by 2 years
Deadline: 31st October 2021
Weblink: **https://www.serbonline.in/SERB/nationalScienceChair?HomePage=New**
Application process: via the SERB online portal, as a two-stage online nomination from the Head of the institution or Presidents of the Science Academies

Agency: Simons Foundation
Scheme: 2022 Simons Early Career Investigator in Marine Microbial Ecology and Evolution Awards
Scheme remit: The purpose of these awards is to help launch the careers of outstanding investigators in the field of marine microbial ecology and evolution who will advance our understanding through experiments, modeling or theory. Investigators must be currently active in research on microbial ecology and/or evolution, excluding research focusing on the microbiomes of animals or plants. Investigators with backgrounds in different fields are encouraged to apply.
Applicant eligibility: Applicants must hold a Ph.D. or equivalent degree. They must have carried out research in a tenure-track or, for institutions that do not have a tenure track, an equivalent independent position for at least one year and no more than eight years. They must be the principal investigator (PI) or co-PI currently or within the past year on a research grant on microbial ecology and/or microbial evolution from a national governmental agency.
Budget provisions: Grants will be for $222,000 USD per year, including indirect costs.
Duration: 3 years
Deadline: 5 November 2021 (for letter of intent)
Weblink: **https://www.simonsfoundation.org/grant/simons-early-career-investigator-in-marine-microbial-ecology-and-evolution-awards/?tab=rfa**
Application process: A letter of intent (LOI) by November 5, 2021, 5:00 p.m. Eastern Daylight Time. LOIs must be completed electronically and submitted using forms provided at https://proposalcentral.altum.com/.

Funding compendium

FUNDING FOR INTERNATIONAL EXCHANGE AND COLLABORATIONS

Agency: Agency: ASEAN-India Science & Technology Development Fund (AISTDF)
Scheme: ASEAN-India Collaborative R&D Scheme (updated details)
Scheme remit: To support collaborative Research & Development (R&D) between researchers in India and ASEAN countries (including Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam)
Thematic focus area for call: Development of technology and Innovation for preventing and combating covid-19 disease
Budget provisions: Mobility funds, modest funds for equipment and consumables, 1 JRF on Indian side
Team structure: Researchers in India and at least 2 ASEAN member countries
Duration: 24 months
Deadline: 31st December 2021
Weblink: **https://aistic.gov.in/ASEAN/aistdfCollaborative**
Application process: Online, via website

Agency: Biotechnology and Biological Sciences Research Council (BBSRC)
Scheme: Partner with Indian bioscience laboratories
Scheme remit: To facilitate links between laboratories in the UK and India
Research focus: Emerging areas of science relevant to BBSRC's strategic priorities (details at https://bbsrc.ukri.org/about/vision-mission-strategy/)
Team structure: Lead applicant should be based in the UK and be in receipt of BBSRC funding at the time of applying.
Budget provisions: 30,000 GBP to be used towards collaborative activities including:

- travel for one or more investigators in either direction
- visits and access to overseas institutions
- exchange of staff for scoping studies and skills exchange
- workshops and networking
- researcher exchanges

Duration: Up to 4 years
Deadline: 11 November 2021
Weblink: **https://www.ukri.org/opportunity/partner-with-indian-bioscience-laboratories/**
Additional information: The grant should be seen as a 'pump-priming' award. Research groups will be expected to access other sources of funding.
Application process: Online, via Je-S

Agency: Department of Science and Technology, in collaboration with Federal Ministry Republic of Austria and Agency for Education and Internationalization (OEAD)
Scheme: Call for proposals for Indo-Austrian joint projects 2022-2024
Scheme Remit: To promote scientific and technical cooperation between India and Austria
Research areas supported: The call is open to all scientific disciplines within the thematic areas of natural science and technology.
Budget provisions: Funding will be provided for the mobility of researchers to carry out bilateral research projects. The sending side covers the travel expenses whereas the accommodation expenses will be financed by the hosting side (and vice versa).
Duration: 2 years
Deadline: 26th November 2021
Weblink: **https://dst.gov.in/sites/default/files/Joint%20Call-Austria-India_final-converted.pdf**
Application process: Applications must be submitted both in Austria to OeAD and in India to DST.
Only applications submitted in time in both countries are eligible for funding.

Funding compendium

FUNDING FOR INTERNATIONAL EXCHANGE AND COLLABORATIONS

Agency: Department of Science and Technology, in collaboration with DAAD
Scheme: Project- based Personnel Exchange Programme - Indo-German Joint Research Collaboration
Scheme Remit: To strengthen the collaboration between Indian and German research groups, which are working jointly on a particular scientific project. Research collaborations entered into with the intention of initiating major projects, such as the preparation of joint applications meant for submission to any other funding organisation, are highly preferred.
Research areas supported: Agricultural sciences, veterinary medicine, forestry, engineering, earth sciences, mathematics, theoretical computer science, informatics, medicine, life sciences, health sciences, animal sciences, nutritional medicine, physics, material sciences and chemistry.
Team structure: The research group on each side should consist of a project leader and up to two doctoral students or post-doctoral researchers. The total number of participants in the project on both sides should not exceed three from each side.
Budget provisions: Exchange visits to the partner institution, which are undertaken during the course of the project related collaboration. These allowances cover all the expenses related to mobility and hospitality. Full details on website.
Duration: 2 years
Deadline: 19th November 2021
Weblink: **https://dst.gov.in/callforproposals/dst-daad-call**
Application process: The German partner needs to submit their application online as mentioned through the DAAD Portal (address can be found through the website stated above) while the Indian partners need to submit application through EPMS portal of DST available at https://onlinedst.gov.in .

Agency: Indo-French Centre for Promotion of Advanced Research (IFCPAR/CEFIPRA)
Scheme: Collaborative Scientific Research Programme
Agency Remit: Support for Indo-French Science, Technology & Innovation (ST&I) system through various activities
Scheme Remit: Support for research groups through high quality collaborative research projects in advanced areas of basic and applied science to nurture scientific competency in India and France
Research areas supported: 1) AI and big data, 2) Science for sustainability, 3) Quantum materials and 4) Addressing Biological Questions Using or Developing Mathematical, Computational or Physical Approaches
Applicant eligibility: Proposal to be jointly submitted by one Principal Collaborator from India and one Principal Collaborator from France, Indian PI to have permanent position in University
Budget provisions: Support for Manpower (JRF/SRF/RA/Master students for Indian Partners), Recurring Expenses including consumables, domestic travel & miscellaneous expenses/contingencies, International Travel and Equipment
Duration: 3 years
Deadline: 15th January 2022
Weblink: **http://www.cefipra.org/Collaborative_Research.aspx**
Application process: Submissions via CEFIPRA online portal

Agency: Department of Biotechnology, in partnership with NEI-NIH
Scheme: India-U.S. Collaborative Vision Research Program Funding Opportunity Announcement - 2021
Scheme remit: To support bilateral collaborations that will advance science and technology important to understanding, preventing, and treating blinding eye diseases, visual disorders, and their complications.
Focus areas: Research on the basic biology and/or genetics of ophthalmic diseases through collaborations with Indian investigators on the following: diabetic retinopathy, glaucoma, age-related macular degeneration, retinitis pigmentosa, including rare and genetic diseases such as congenital cataracts, as well as other eye conditions such as ocular inflammation/uveitis, refractive error, low vision, and corneal injury. Basic, translational, or epidemiological research maybe proposed. Clinical trials will not be supported under this call.
Team structure: The collaboration between the Indian and U.S. research teams should be submitted as a Multiple Principle Investigator (Multi-PD/PI) application with both of the lead scientists from each country as the PI.
Budget provisions: The NIH Research Project Grant will directly support salaries of U.S. personnel and research activities within the U.S. Indian award will fund the Indian component and will support research activities within India, salaries of Indian research personnel, and other research costs.
Deadline: 8th November 2021
Weblink: **https://dbtindia.gov.in/sites/default/files/Indo-US%20Vision%20FOA%202021.pdf**
Application process: The Indian and US participants should formulate a joint proposal according to the requirements and templates provided by the NIH. Complete application should also be submitted to DBT at E-mail: jyoti.logani@nic.in
Ethics: DBT and the US Commission are committed to ensuring that projects involving human or animal subjects are protected from research risks in compliance with the rules and policies in respectively the NIH and India (ICMR/DBT policies).

Funding compendium

FUNDING FOR INTERNATIONAL EXCHANGE AND COLLABORATIONS

Agency: Swiss National Science Foundation, in collaboration with Indian Council of Social Science Research (ICSSR)
Scheme: Indo-Swiss Joint Research Programme (ISJRP) 2021
Scheme remit: To facilitate links between India and Switzerland
Research focus:

- Topics in the field of social sciences:
- International Migration and Immigration Policies
- Technology, Social Media and Social Cohesion
- Heritage and Cultural Exchange in Global Age
- AI, Big Data and Social Science

Team structure: At least one partner based in India and one based in Switzerland, leading as Principal Investigators on either side. Further applicants based in Switzerland and/or India can also participate.
Budget provisions: For the Indian side, Funding of up to INR 25 lakhs per proposal
Duration: 3 years
Deadline: 30 November 2021
Weblink: **https://www.snf.ch/en/UKQxlLyeulyH9qfi/funding/programmes/bilateral-programmes-indo** and **https://icssr.org/sites/default/files/tender/Call%20Document%20of%20JRP%20ICSSR_SNSF_MoES.pdf**
Additional information: The proposal must include a Data Management Plan (DMP) set up according to the requirements issued by the SNSF. The proposal can only be submitted once the DMP has been completed. Applicants must submit a DMP that is understandable, suits their project and meets the standards set by their research community.
Application process: Submitted by the Swiss main applicant to the SNSF via its electronic submission system mySNF (www.mysnf.ch)

Agency: Swiss National Science Foundation, in collaboration with Ministry of Earth Sciences (MoES)
Scheme: Indo-Swiss Joint Research Programme 2021
Scheme remit: To facilitate links between India and Switzerland
Research focus: Mountain research, with a focus on glaciers or climate research. The proposal must fall under one of the following subtopics:

- Glaciers as climate archives
- Cryospheric modelling
- Forecasts for heavy rainfall/cloudburst
- Multi-risk early warning systems
- Orographic cloud and precipitation formation
- Aerosols from mountainous ecosystems to act as cloud condensation nuclei and ice nucleating particles

Team structure: At least one partner based in India and one based in Switzerland, leading as Principal Investigators on either side. Further applicants based in Switzerland and/or India can also participate.
Budget provisions: For the Indian side, MoES will support 100% of the approved budget costs, maximum to 1.5 cr per project. Eligible costs for funding include manpower (JRF, SRF, RA, TA etc, Consumables, Travel costs (domestic and international), Fieldwork, laboratory equipment, training and awareness and overhead charges as per MoES norms
Duration: 3-4 years
Deadline: 30 November 2021
Weblink: **https://www.snf.ch/en/UKQxlLyeulyH9qfi/funding/programmes/bilateral-programmes-indo** and **https://icssr.org/sites/default/files/tender/Call%20Document%20of%20JRP%20ICSSR_SNSF_MoES.pdf**
Additional information: The proposal must include a Data Management Plan (DMP) set up according to the requirements issued by the SNSF. The proposal can only be submitted once the DMP has been completed. Applicants must submit a DMP that is understandable, suits their project and meets the standards set by their research community.
Application process: Submitted by the Swiss main applicant to the SNSF via its electronic submission system mySNF (www.mysnf.ch)

Funding compendium

FUNDING FOR ACADEMIA-INDUSTRY COLLABORATIONS

Agency: Biotechnology Industry Research Assistance Council (BIRAC)
Scheme: Promoting Academic Research Conversion to Enterprise- Academic Innovation Research (PACE-AIR)
Agency Remit: To strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs
Scheme Remit: To promote development of Proof-of-concept (PoC) for a process/product by academia with or without the involvement of industry
Applicant eligibility: Primary applicant should be from academia
Budget provisions: Rs 50 lakhs
Duration: 24 months
Deadline: 30th November 2021
Weblink: **https://www.birac.nic.in/desc_new.php?id=286**
Application process: Online via BIRAC website

Agency: Biotechnology Industry Research Assistance Council (BIRAC)
Scheme: Promoting Academic Research Conversion to Enterprise- Contract Research Scheme (PACE-CRS)
Agency Remit: To strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs
Scheme Remit: Aims at validation of a process or prototype (developed by the academia) by the industrial partner
Applicant eligibility: Academia has to be the Primary Applicant with one or more partners of which at least one is a company
Budget provisions: While funding is provided to the academia for In-House research which forms a part of validation of the Proof of Concept, funds are provided to the industrial partner for validation.
Deadline: 30th November 2021
Weblink: **https://www.birac.nic.in/desc_new.php?id=286**
Application process: Online via BIRAC website

Agency: Biotechnology Industry Research Assistance Council (BIRAC)
Scheme: Biotechnology Industry Partnership Programme (BIPP)
Agency Remit: To strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs
Scheme Remit: An Advanced Technology Scheme for high risk, transformational technology/ process development from proof-of-concept to validation leading to high value product commercialization
Focus areas: a) Drugs including drug Delivery, b) Vaccines and clinical trials, c) Biosimilars & stem cells, d) Devices & Diagnostics, e) Agriculture, f) Industrial Biotechnology including Secondary Agriculture and g) Bioinformatics & facilities that virtually cover every aspect of Biotechnology.
Team structure: Consortium can include companies and academia
Budget provisions: While funding is provided to the academia for In-House research which forms a part of validation of the Proof of Concept, funds are provided to the industrial partner for validation.
Deadline: 30th November 2021
Weblink: **https://www.birac.nic.in/desc_new.php?id=216**
Application process: Online via BIRAC website

Funding compendium

FUNDING FOR ACADEMIA-INDUSTRY COLLABORATIONS

Agency: Department of Science and Technology (DST)
Scheme: Optimal Water Use in Industrial Sectors-2021: Research Stream
Scheme Remit: The objective of the call is to develop knowledge through R&D and demonstration and developing solutions in the context of Water Conservation, Waste Water Treatment and Water use efficiency in Industry. The focus is on Research and Development proposals, where R&D and private sector work together to design generic solutions for optimal water management in industrial sector.
Stream remit: Leading to Establishment of Proof-of-Concept
Focus areas: Water Conservation, Water Use efficiency, Waste Water Recovery and Utilization of Residues
Team structure: Proposals should be submitted in the industry -institute partnership only, with the academic partner taking the lead. The company/industry may show willingness to be involved in the project through industry attributable technical inputs and resources in-kind.
Budget provisions: Capped at Rs 50 lakhs.
Duration: 2 years
Deadline: 10th January 2022
Weblink: **https://dst.gov.in/callforproposals/optimal-water-use-industrial-sector-2021**
Application process: Proposals are accepted only online at the DST e-PMS portal under Technology Mission Division.

Agency: Department of Science and Technology (DST)
Scheme: Optimal Water Use in Industrial Sectors-2021: Technology Stream
Scheme Remit: The objective of the call is to develop knowledge through R&D and demonstration and developing solutions in the context of Water Conservation, Waste Water Treatment and Water use efficiency in Industry. The focus is on Research and Development proposals, where R&D and private sector work together to design generic solutions for optimal water management in industrial sector.
Stream remit: Leading to Lab Scale Demonstration.
Focus areas: Water Conservation, Water Use efficiency, Waste Water Recovery and Utilization of Residues
Team structure: Proposals should be submitted in the industry -institute partnership only, with the academic partner taking the lead. The role of industry in the proposal should be tangible and it should show interest in promoting or encouraging the developed technology. The company/industry has to be willing to contribute at least 10% of the project cost.
Budget provisions: Capped at Rs 50 lakhs.
Duration: 2-3 years
Deadline: 10th January 2022
Weblink: **https://dst.gov.in/callforproposals/optimal-water-use-industrial-sector-2021**
Application process: Proposals are accepted only online at the DST e-PMS portal under Technology Mission Division.

Agency: Department of Science and Technology (DST)
Scheme: Optimal Water Use in Industrial Sectors-2021: Technology Validation Stream
Scheme Remit: The objective of the call is to develop knowledge through R&D and demonstration and developing solutions in the context of Water Conservation, Waste Water Treatment and Water use efficiency in Industry. The focus is on Research and Development proposals, where R&D and private sector work together to design generic solutions for optimal water management in industrial sector.
Stream remit: Leading to Pilot Scale Demonstration for technology in industrial setting.
Focus areas: Water Conservation, Water Use efficiency, Waste Water Recovery and Utilization of Residues
Team structure: Proposals should be submitted in the industry -institute partnership only, with the industry partner taking the lead. The applicant company should have a valid R&D recognition from DSIR and have at least 51% of its shares held by Indian promoters.
Budget provisions: The Scheme provides grants to academic/R&D institute(s), technically supporting the applicant company as a partner for success of the project, for setting up of demonstration plant, provided the partner company demonstrates willingness to validate the technology through providing tangible inputs to the project. Eligible costs include Equipment, Prototype design & fabrication, Manpower, Work to be outsourced, Consumables, National Travel, Contingency, Miscellaneous, Overheads
Duration: 18 months
Deadline: 10th January 2022
Weblink: **https://dst.gov.in/callforproposals/optimal-water-use-industrial-sector-2021**
Application process: Proposals are accepted only online at the DST e-PMS portal under Technology Mission Division.

Funding compendium

FUNDING FOR ACADEMIA-INDUSTRY COLLABORATIONS

Agency: Global Innovation and Technology Alliance (GITA)
Scheme: India-Israel Joint Call
Scheme remit: To promote facilitate and support joint Industrial R&D projects between companies from India and Israel, which would lead to successful commercialization and benefit for both countries.
Thematic focus:

- Agriculture
- Energy
- Healthcare
- Information & Communication Technologies (ICT)
- Water

Team structure: The Indian Project Lead (IPL) (i.e. lead company) must be a commercial (for profit) company under the Indian Companies Act 1956/2013, which operates in and is headquartered in India.

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The Indian Project Lead must be a commercial company under the Indian Companies Act 1956/2013, which operates in and is headquartered in India. Other Industry Partners or Academic/R&D Institutions can be brought in as co-investigators. The Israeli Project Lead applicants must be a for-profit Israeli R&D Company.
Budget provisions: Labour, equipment, project management, materials and consumables, sub-contracts, travel and subsistence, joint commercialization, institutional overheads
Deadline: 3 January 2022
Weblink: **https://gita.org.in/OnlineRfp/ProgramInfo.aspx?GITA=kZdo4yRVS4gRExygXA1Gyu367iMVXNEC5g/IPjfr53Y=**
Application process: Application package available on website

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All requests for research funding from internal and external sources should be sent to the University Research Board for approval, via the Grants Portal.

Details of intramural funding available via Ahmedabad University are available in the University Research Board Policy Document. This includes Start-up grants, Seed grants, University Challenge grants, Teaching Material Development/Innovation grants and Conference Travel support.

Previous editions of the Research Horizons Newsletter and Funding compendium are archived on AURIS. These editions include details of schemes with rolling calls and additional schemes with past, ongoing or anticipated deadlines. For suggestions on the Funding compendium, please contact the Dean of Graduate School and Research at urb@ahduni.edu.in.