



Australia India  
Institute

# Strengthening Australia-India Research Collaboration and Engagement: Case Studies and Good Practices

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# Foreword

The prominent role played by Indian diaspora researchers in driving Australia's research collaborations with India was recognised by Peter Varghese AO in his report *An India Economic Strategy to 2035*. The Varghese report also noted the important correlation between increased bilateral research collaboration and positive perceptions of the quality of Australia's education institutions.

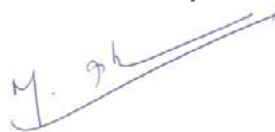
The case studies in this report by the Australia India Institute provide concrete examples of how research collaboration with India and research on India is happening in universities across Australia, and places special emphasis on the insights to be gained from researchers of Indian descent and the India expertise that sits within Australian universities.

The case studies showcase the work of twenty researchers and scholars who are collaborating with India and conducting research about India, including researchers of Indian descent. By sharing their insights into working with the Indian research system, and the good practices that underpin successful bilateral research activities, the case studies aim to stimulate new collaboration and research engagement between Australia and India.

We thank the Australian Government Department of Education, Skills and Employment for commissioning these case studies as a reference point for building bilateral research collaboration.

We also thank the scholars who generously participated in this project and hope that readers of this report will find it useful. I believe this report offers valuable insights that will help researchers and scholars build their own connections and research collaborations with India.

**Professor Muthupandian Ashokkumar**

A handwritten signature in blue ink, appearing to read 'M. Ashokkumar', written over a horizontal line that extends to the right.

Acting Director, Australia India Institute



# Introduction

Research collaborations across national boundaries can help promote strong bilateral ties and enable scholars to advance their research agendas and produce knowledge. Research collaborations can take several forms, ranging from formalised partnerships between institutions, to those built on informal ties between colleagues.

## Aims

This report presents case studies of 21 scholars who are conducting research and engagement activities relevant to India and the Australia-India relationship. It has two aims. First, it aims to identify good research practice among Australian based scholars who work on and in India and those who are involved in productive collaborations between the two countries. Second, it generates insights into how to better support scholars working on India and how to stimulate and sustain productive research collaborations.

## Background

The project was prioritised in the India Reference Group's November 2019 report, *Positioning for Deeper Engagement: A Plan of Action in India*, and commissioned by the Australian Department of Education, Skills and Employment (DESE) in February 2020. It supports the strong bilateral focus on collaborative research documented in the *Joint Statement on a Comprehensive Strategic Partnership* (CSP), issued by the Prime Ministers of both countries in June 2020. The CSP is a statement of the joint commitment of the Australian and Indian governments to enhancing their science, technology and research collaboration. The project affirms the importance given to the diaspora in the India Economic Strategy (IES), and their role in building the diaspora-focused connections between Australia and India. It delivers on recommendation 89 of the IES, with the case studies highlighting how Indian diaspora researchers and scholars are using their networks to drive research collaboration between Australia and India.

## The Case Studies

This report includes examples of Australian scholars working in science, technology, engineering and mathematics (STEM) fields who are successfully collaborating with their counterparts in India. It also showcases the contribution of scholars in the humanities, arts and social science (HASS) disciplines whose innovative research has advanced understandings of India in Australia. All the scholars represented in these case studies demonstrate a commitment to deepening the Australia-India bilateral relationship through impactful research and engagement.

The Australia India Institute interviewed 20 faculty and one senior executive from 12 Australian universities in Victoria, New South Wales, South Australia, Western Australia, Queensland and the Australian Capital Territory. An additional scholar based in India was also interviewed. The case studies include 11 academics from STEM disciplines and 10 academics from HASS disciplines at different career stages. Most occupy senior positions, but others are early- and mid-

career. Eleven scholars are men and ten scholars are women. Thirteen scholars are of Indian origin. Each was selected based on their standing in their respective fields, and to reflect the diversity of India-focused research at Australian universities.

Many of the scholars showcased in the case studies have developed individual partnerships with Indian researchers, while others have created formal institutional collaborations with Indian institutions. As one scholar observed, “They both have their place ... *Individual collaborations* will rise and reign as individual’s interests change. ... *Institutional collaborations* ... have a longevity and spread ... and go up in scale.” Not all research requires collaboration, and this report includes case studies showcasing the work of several senior and early career researchers working in or on India who have made a strong contribution to their fields without collaborating with Indian partners.

In Australia, the Indian diaspora have been a driving force in bilateral research collaboration. Over half of the scholars represented in these case studies are of Indian origin and their experiences can be seen as exemplifying the advantage represented by cultural background, language facility and the importance of people-to-people connections with India in leveraging their relationships to develop research collaborations. Even without the diaspora advantage, Australian scholars have been able to develop and sustain relationships conducive to collaboration, but the case studies demonstrate the significance of the diaspora network in opening the doors to collaboration.

Many of the scholars we interviewed have developed multi-faceted research collaborations. Some share knowledge through conferences, seminars, webinars and podcasts. Some scholars formally collaborate on co-authored publications and commercialisation ventures. Many scholars also build ties between Australia and India by enabling inbound and outbound exchanges, and supervising students undertaking postgraduate coursework and research programs.

The research showcased in the case studies has been sponsored by various Australian, Indian and international funding sources, including government, universities, philanthropy, industry and supranational organisations. Some collaborations involve engagement with industry, government, non-government organisations (NGOs), the civil society sector and think tanks. Several projects are interdisciplinary and involve multiple Australian and Indian-based scholars.



## Barriers

While there is a cohort of scholars in Australian universities who work on India, and a growing number of productive research collaborations between the two countries, much of the potential for Australia-India research collaboration remains untapped. This project found that systemic barriers to further collaboration include the limited availability of research funding, the limited focus on Indian studies and languages in Australian universities, and the limited understanding of research capability in both countries. The COVID-19 pandemic has also presented significant obstacles to scholars who conduct research in India and those who collaborate with Indian colleagues. With research collaboration now a bilateral priority under the CSP, addressing barriers to successful Australia-India research collaboration is also a priority.

## Good Practices

The report identified seven good practices:

1. Physical mobility, particularly in the early stages
2. A spectrum of research, collaboration and teaching elements
3. A relationship built over time, for the long term
4. A relationship built on mutual interests and complementary capabilities
5. Understanding the diversity of India
6. New communication technologies
7. Visibility and consolidation of Australia's research strengths and focus on India.

# Findings: Good Practices & Recommendations

## GOOD PRACTICE 1: Physical mobility, particularly in the early stages of projects

“You cannot just email. You need to put in the time, you need to go and visit. You need to stay there, do seminars, and do workshops.”

“So you start off a collaboration hoping it’ll go well, but then you’ve got to get to know each other and you’ve got to know each other’s style and the values of the other person.”

Physical mobility between Australia and India is strongly linked in the case studies to the success of research collaborations and the generation of future opportunities.

Interviewees reported that physical mobility ensures scholars can immerse themselves in-country, identify potential partners, establish person-to-person relations, and embed a productive relationship.

International research often requires in-country activity, although the extent to which scholars undertake research in-country varies. HASS scholars may spend considerable time conducting fieldwork based in India. Others visit India on a regular short-term basis for the purpose of establishing and maintaining institutional relationships and ties. Some scholars said that they had difficulty securing research visas and this was an impediment to conducting research and strengthening ties.

Joint PhD programs in STEM disciplines emphasise the sharing of facilities, while both STEM and HASS PhD programs encourage Indian researchers to spend time in Australian universities.

**RECOMMENDATION 1:** Australian universities promote awareness of existing mobility grants and virtual mobility tools and provide seed funding for mobility to connect researchers in Australia and India.

## GOOD PRACTICE 2: A spectrum of research, collaboration and teaching elements

“We are doing field work together. He is coming to Australia. I [have taken] a team to India already. ... We’re co-editing a book together. We’re co-editing a special issue of a journal. We’ve done field work in India together. I’ve taught at his institution for two months ... He will do some teaching at mine ... I took people with me. He’ll bring people with him. We’re absolutely interwoven at every level.”

Many scholars, especially senior scholars, reported broad research engagement with India and a multifaceted approach to research projects. These projects typically include:

- research (with Indian colleagues; in/on India; involving post-doctoral scholars, research assistants and translators)
- research funding
- conferences, seminars, webinars and podcasts (face-to-face and virtual)
- inbound and outbound exchanges (involving executive delegations, faculty, students and others)
- postgraduate coursework and research programs (supervising; mentoring; teaching)
- undergraduate programs (teaching; co-designing)
- co-authored publications and commercialisation

**RECOMMENDATION 2:** Australia based researchers consider ways of ensuring that their collaborations with Indian colleagues incorporate multiple elements to enhance research impact and generate knowledge and understanding between Australian and Indian researchers.

### GOOD PRACTICE 3: A relationship built over time, for the long term

“How do you build any other relationship? You have to see it from their point of view, you have to understand ... from their perspective, what’s important and really, if you were collaborating, working together, how committed you are to that partnership.”

“I think if you get good people together, they will generate great outputs, but you have to have them together long enough for sustained time to move things forward.”

Many of the case studies demonstrate that the strongest relationships are built over time.

Person-to-person relationships may form during undergraduate or postgraduate study in home or host countries. Other relationships emerge later, through employment, “conferences, workshops, ... other friends and collaborators, and ... travelling doing fieldwork.” Relationships may emerge unexpectedly or from purposive intent; “a mix of serendipity and knowing and reading their work and approaching them directly.”

Over time, some individual relationships transform into institutional collaborations, particularly in the STEM disciplines or from shared institutional priorities. Individual relationships are less reliant on institutional standing, whereas, “to build larger scale institutional collaborations ... parity of esteem requires that they are equally esteemed institutions.”

However, not every relationship needs to be long term for scholars to advance their research agendas and to strengthen ties between Australia and India. Strong relationships with government officials, for example, can help facilitate access to certain research sites even though those relationships may not endure.

**RECOMMENDATION 3:** Australian universities provide institutional support for events, both online and in person, to help Australian and Indian researchers establish relationships, build connections and create networks.

#### **GOOD PRACTICE 4: A relationship built on mutual interests and complementary capabilities**

“I think it’s first is the researcher interest, and then the mutual interest, and probably the last would be the institutional, because it’s very difficult to go other way round.”

“Because if you can find mutual interests and mutual understanding, then that works.”

Many of the case studies highlight the importance of relationships built on mutual interests and complementary capabilities.

In some instances, mutual interests closely align with government priority areas and funding scheme requirements, whereas in others they do not.

At the individual level, mutually beneficial relationships involve scholars with different capabilities, approaches and resources working together, enabling a “true cross pollination of ideas and experiences.”

Some interviewees cautioned against approaching a collaboration thinking “what can I get out of this?”, suggesting that this approach has stymied Australia’s engagement with India.

**RECOMMENDATION 4:** Researchers participate and engage with the digital platform being developed by the Australia India Institute for the Department of Education, Skills and Employment, to link researchers with complementary capabilities to help them pursue their research agendas and build people to people ties between Australia and India.

### GOOD PRACTICE 5: Understanding the diversity of India

“if you cannot understand the culture and you cannot understand the way of working, it is not going to work.”

“There’s a different way of working in all countries. As an Australian researcher you just need to understand the differences in working. Sometimes it takes longer to get some things done, sometimes it’s actually quicker.”

A number of scholars attributed the success of their research to their capacity to understand cultural practices occurring in the sites in which they conducted fieldwork or established institutional ties.

For example, some scholars who were not from an Indian background reported that they benefited from developing Indian language skills: “being a Hindi speaker has been the biggest door opener that I’ve experienced . . . in almost every exchange I’ve had with Indian colleagues.”

Members of the Indian diaspora reported a distinct advantage in terms of understanding different ways of working in India and navigating higher education institutions.

**RECOMMENDATION 5:** Australian universities consider and implement ways to leverage the India expertise within their institutions to help foster understanding of the diversity of India and to help Australian based researchers stimulate new research collaborations with Indian colleagues.

### GOOD PRACTICE 6: Harnessing new communication technologies

“I do think it’s much more possible to maintain a project through long distance communication than it used to be. You don’t have to be in India to do this, you can actually keep it going in between visits, in ways that you couldn’t before.”

“We realized that Zoom has actually enabled us to communicate differently and better.”

The importance of computer-mediated communication was emphasised by a number of scholars, particularly in relation to the impact of the COVID-19 pandemic. One interviewee stated that the COVID-19 pandemic has been a “catalyst for webinars and podcasts.”

The use of online collaboration tools has increased significantly during 2020 in both teaching and research and this could be further developed to foster engagement with India. Students and scholars can engage with their Indian counterparts without travel to initiate as well as to progress established research and teaching projects.

The use of digital technologies during COVID-19 might also create opportunities for capacity building.

**RECOMMENDATION 6:** Australia based researchers should harness new communication technologies to continue and to instigate research focused on India and with India based colleagues.

**GOOD PRACTICE 7: Visibility and consolidation of Australia’s research strengths and focus on India**

“I think there is a lack of clarity about what the other side is doing. People in India, academics in India, don’t know very much about the kind of work that is going on in Australia and vice versa.”

“the more that the average Australian understands how important India is... then that alone can create a lot of ... opportunities for ... peer learning, for economic investments and entrepreneurialism and also for some academic affiliations and ... collaborations that can lead to the production of knowledge.”

In many of the case studies, interviewees emphasise the importance of increasing the visibility of Australian research and research strengths in India.

International collaborations benefit from visibility and strengthening of Australia’s research strengths. This does not just involve promoting established research strengths, but also increasing research efforts, maintaining research infrastructure, and improving outreach to international partners.

Good practice includes attracting and retaining PhD candidates, early career researchers, and early-stage research projects, as well as established collaborations.

Research collaborations would benefit from increased focus on India studies: “One of the things is, that to have more collaboration, people in India need to look at Australia as a place that does research on India. And so, I think we need the visibility.”

**RECOMMENDATION 7.1:** Australian universities should integrate a focus on India in curricula across multiple disciplines to generate interest in studying India or conducting research with Indian colleagues.

**RECOMMENDATION 7.2:** Australian universities and researchers should make use of the digital platform being developed by the Australia India Institute for the Department of Education, Skills and Employment, to showcase research expertise and highlight research successes.





# Case Studies

## Dr Alok Adholeya

### TERI-Deakin Nanobiotechnology Centre

Dr Adholeya is Director of the TERI-Deakin Nanobiotechnology Centre, Senior Director of Sustainable Agriculture at TERI (The Energy Resource Institute), and an Honorary Professor of Deakin University. Dr Adholeya was awarded his PhD from GB Pant University of Agriculture and Jiwaji University in India, before commencing a postdoctoral fellowship at the United States Department of Agriculture in Philadelphia. His research focuses on finding and developing ways to harness the power of microbes to increase the productivity of crop plants and restore degraded lands. He received the Young Scientist Award in 1999 and the Biotech Product and Process Development and Commercialization Award in 2004 from the Ministry of Science and Technology, Government of India.

Dr Adholeya played a central role in founding the TERI-Deakin Nanobiotechnology Centre in 2011. He had strong professional ties with Ravneet Pawha, Deputy Vice President of Global Engagement and CEO (South

Asia) at Deakin, with whom he worked to develop an institutional partnership to create opportunities for collaborative research.

The TERI-Deakin Nanobiotechnology Centre was established with the mandate of developing innovative nanobiotechnology-based solutions to address environmental and agricultural challenges. The expertise of researchers at TERI in fields of agriculture, biotechnology, green energy, bioremediation and nanotechnology is drawn together with Deakin researchers with expertise in material, chemical and physical sciences. In doing so, the Centre is able to “add value” to create initiatives that neither institute would be able to do alone.

One of the key features of the TERI-Deakin Nanobiotechnology Centre is its joint PhD program. Students are enrolled at the Centre and are jointly supervised by a scholar in India and a scholar in Australia. Students also participate in an exchange whereby students based in TERI at Delhi or Gurgaon visit Deakin for up to twelve months during their candidature. Upon completion of their degree, selected students are awarded a PhD jointly badged by TERI and Deakin.



Key to the success of the joint PhD program is clear lines of communication. Dr Adholeya explained that PhD candidates must participate in a joint meeting with supervisors each month. The Centre also utilises electronic systems of data management that supervisors can access to monitor students' progress and ensure that they are being adequately supported. This element of the Centre's activity reflects Dr Adholeya's personal interest in capacity building. Throughout his career, he has supervised 22 doctoral students and many Masters students to the completion of their degrees.

The Centre aims to extend opportunities for collaboration among scholars based in Australia and India. It aims to support joint research projects by pursuing grant opportunities and also procuring funding from industry, which TERI has done quite successfully. One strategy for this is using internal seed funding to develop a project and then demonstrate to a prospective funder how that project can be extended with additional monies.

Dr Adholeya observed that the TERI-Deakin Nanobiotechnology Centre has advanced both the reputation of TERI and of Deakin in India. This institutional collaboration is therefore mutually beneficial and helps promote strong bilateral ties.

# Dr Ali Reza Alaei

## Southern Cross University

Dr Alaei has worked at the Southern Cross University School of Business and Tourism since 2018. His disciplinary background is in information technology (IT) and computer science and his research focuses on artificial intelligence, data analysis, document image analysis and recognition, pattern recognition, and biometrics. Prior to coming to Australia, he obtained a PhD in computer science from the University of Mysore in 2012. He then secured a postdoctoral fellowship at the Université François Rabelais de Tours in France, where he worked until 2015. He has been a research fellow at the Griffith University School of Information and Communication Technology, and at the Griffith Institute for Tourism.

Dr Alaei's initial interest in his discipline was stimulated by his supervisor who oversaw his Masters and doctoral study in India. His work was also supported and nurtured by scholars with similar interests in India. Specifically, he met a well-known professor at a conference who was based at the Indian Institute of Statistics. Dr Alaei discussed his own research and was subsequently mentored by this professor. While he has worked in different countries since earning his PhD, Dr Alaei still has a working relationship with his mentor, and this has resulted in numerous co-authored publications.

When it comes to collaborating with Indian colleagues, Dr Alaei is convinced that personal ties are most important and that “mutual interests and mutual understanding” help him work efficiently. Strong working relationships have helped him ensure he has agreed time frames with collaborators, and that their work plan is detailed and well organised. He also emphasised the importance of cultural understanding and long term relationships for developing productive ties with Indian collaborators. He advised that all parties involved in collaborations “should be very mindful about how they want to continue on and how they want to [conduct research], and how we can make it work.”

One of the ways in which Dr Alaei's activities work to strengthen ties between Australia and India is through capacity building. While completing his postdoctoral research, Dr Alaei informally supervised a PhD student from an Indian background who was conducting research in a similar field. He has also developed working relationships with Indian nationals who are enrolled in Australian undergraduate and Masters degrees at Southern Cross University and offers them advice about their studies. Dr Alaei would welcome initiatives that extend opportunities to PhD students from India to study in Australia and that create more scope for researchers from Australia and India to network.

# Associate Professor Adrian Athique

University of Queensland

Associate Professor Athique received his PhD from the Centre for Asia Pacific Social Transformation Studies at the University of Wollongong in 2005, followed by a postdoctoral fellowship at the University of Queensland. He subsequently taught Sociology at the University of Essex and was Chair of the School of Arts at the University of Waikato from 2010-2015. During his six years in New Zealand, Adrian was an active member of the New Zealand India Research Institute. Associate Professor Athique returned to Australia in 2015 to the Faculty of Humanities and Social Sciences, University of Queensland.

Prior to his academic career, Associate Professor Athique travelled extensively throughout India and the wider region, developing a keen interest in its changing media landscape. He completed an undergraduate degree in the United Kingdom, writing an honours thesis examining the history of India media. Considering that his learning in the United Kingdom was based on a very “transatlantic curriculum”, Adrian was attracted to Australia due to its unique combination of strengths in Asian Studies and Media Studies.

A feature of Associate Professor Athique's career is that he has fostered a number of deep and lasting relationships with Indian colleagues across multiple institutions. As he states, “I've always done research on India, and in India, and with Indian colleagues, throughout my career.” This capability has supported various joint funding initiatives and cemented strong personal ties with Indian scholars in reputed institutions such as the Indian Institute of Technology (IIT) Bombay, IIT Delhi and Jamia Millia Islamia. Adrian explains that these connections have expanded over twenty years, enabling him to lead an informal network of more than 30 Indian media scholars since 2013. He states that:

*... having done the research, and then followed up on the research, in India ... there's now a couple of dozen active collaborations across the network.*



This research footprint has allowed Associate Professor Athique to develop sustained bilateral projects, publish four edited volumes of collaborative research and lead a book series for Oxford University Press (India). Adrian has also convened annual research symposiums focused on the India media economy since 2014. He has jointly supervised PhD students at the Mudra Institute of Communication and IIT Delhi, held four visiting fellowships in Indian universities, and taught courses in leading Indian institutions. While Associate Professor Athique notes that there are only very limited funding opportunities for internationally-focused HASS scholars in Australia, he recently secured a Government of India SPARC grant with collaborators at IIT Bombay and IIT Delhi (2019). This current research project is centred on the growth of the platform economy and the sociology of

digital transactions in India.

He has previously held grants from the University Grants Commission of India, the New Zealand Department of Education and Department of Foreign Affairs and Trade (DFAT).

Associate Professor Athique's work has sought to enhance the bilateral relationship through capacity building and sharing knowledge. He is a strong advocate for actively pursuing increased opportunities for Australia's HASS scholars and higher education institutions in India due to the mandated expansion of liberal arts teaching and research across India. This will drive demand for international researchers, teachers and academic leaders with relevant expertise. He also emphasises the urgent need for a renewed focus on teaching about India in Australian universities.

# Professor Aniruddha Desai

## La Trobe University

Professor Desai is Director and Research Professor at the Centre for Technology Infusion, La Trobe University, as well as the co-director of the La Trobe - IIT Kanpur Research Academy. Professor Desai's disciplinary background is in electronics engineering and computer science. He completed his undergraduate studies in India and arrived in Australia in the early 2000s for further study. He did a Masters in microelectronics from Victoria University and a PhD in computer science from La Trobe University. His academic work involves combining engineering and computer science for applied research projects in areas such as transport, food logistics, energy management, health care and agriculture.

Professor Desai's family owned a business in electronics engineering and manufacturing in India and this stimulated his interest in the discipline:

*From class seven, I remember going to the factory. It was a family owned business, about 50 people supplying products to the defence, telecom and automotive sectors. We had a large manufacturing and associated R&D capacity there, so I grew up with interest in R&D to begin with, and that was in electronics engineering, so that's how I started.*

In July 2020, Professor Desai founded the Asian Smart Cities Research and Innovation Network (ASCRIN) in partnership with IIT Kanpur and the Birla Institute of Technology and Science in Pilani (BITS Pilani). It has a research program that includes ten multidisciplinary themes and 160 academic members and is funded collaboratively with founding universities. ASCRIN also includes an Industry Champion Network, which consists of over fifteen senior executives from industry and government.

These executives:

*Have agreed to be an advisor or a champion of our network, and potentially provide projects, or mentorship, or guidance, or even providing data, for the conduct of this research. And they're all from this Smart Cities space, including the Smart City Mission of India, from the Federal Ministry of Urban Development, down to the local [small to medium enterprises] who are working in Smart Cities.*

ASCRIN has 50 jointly funded PhD scholarships where students will be concurrently enrolled at La Trobe University and one of the Indian partner institutions. Their degrees will include one year at La Trobe University and two years at either IIT Kanpur or BITS Pilani. Australian based academics who supervise Indian based students will need to commit to spending two to four weeks in India at partner institutions during their students' candidature. This is designed to enhance relationships between students and faculty and give them an opportunity to participate in initiatives of partner institutions.

A corresponding initiative is the creation of the La Trobe - IIT Kanpur Research Academy. Professor Desai is the La Trobe based co-director of the research academy which he states is the largest internationalisation initiative that La Trobe has created with an overseas institution. Research will focus on industry engagement. The Research Academy has recently hosted joint conferences and other forms of engagement.



# Professor Assa Doron

## Australian National University

Professor Doron is Professor of Anthropology and South Asia at the School of Culture, History and Language, Australian National University and was the founding Director of the South Asia Research Institute until 2017. He completed his undergraduate studies in Asian Studies at the Hebrew University of Jerusalem and then completed a PhD at La Trobe University. His main research interests include urban anthropology, the environment, media and public health. His recent research investigates the way that global forces, local economies and cultural practices influence and shape health-seeking behaviour and public health concerns in India.

He developed an interest in India by travelling throughout the country and reported being drawn to Indian philosophy and culture. These interests led to initial research in Varanasi that investigated environmental issues on the Ganges. His work progressed onto issues related to media literacy, media communication technologies, particularly mobile phones, and how they are bound up with broader social issues such as gender relations and infrastructure. He has collaborated with several scholars throughout his career, including Indian colleagues based at the University of Delhi.

The collaborations in which Professor Doron has participated have resulted in various outputs and engagements including publications, conferences, seminars and workshops. Strong relationships with India based colleagues have helped him overcome difficulties with conducting research. For example, collaborators at IIT Hyderabad played a key role in facilitating research and assisting Professor Doron in gaining access to field sites, such as hospitals.

Professor Doron has instigated collaborations by reading scholars' work and through approaching them directly. He places strong value on personal ties and recommends an emphasis on exchange between scholars for strengthening collaborations. He states that it would be beneficial to:

*provide funding for bringing Indian PhD students and postdocs from India to Australia to facilitate the interchange of ideas, research practices and approaches.*

This would be part of a broader attempt to rebuild Asian Studies in Australia and generate more interest in India's society and culture.

Alongside student exchange, Professor Doron also suggests that partnering with civil society organisations may help scholars advance their research agendas and make positive impacts. He suggested that universities could invite activists, scholars and researchers from Indian civil society organisations to Australia so that we can learn from them about how to promote interventions, such as public health campaigns, and how to distribute and disseminate information about global economic problems and inequalities in India.

# Dr Georgina Drew

## University of Adelaide

Dr Drew is an Anthropologist in the School of Social Sciences in the Faculty of Arts. Dr Drew completed a PhD in 2011 at the University of North Carolina at Chapel Hill and subsequently worked as a postdoctoral research fellow at the India China Institute (ICI) at The New School in New York City. After two years at ICI, she commenced her appointment at the University of Adelaide in 2013. In 2016, Dr Drew secured a Discovery Early Career Researcher Award (DECRA) from the Australian Research Council (ARC) to investigate the cultural politics of urban rainwater harvesting in South Asia.

Relationships and ties with Indian scholars have shaped her career trajectory. In 2003, Dr Drew met a prominent Indian environmental activist, Vandana Shiva, at the World Social Forum meeting in Mexico. This meeting was a significant factor in coupling her research interest in environmental social movements with a geographical focus on India. Dr Drew believes her ability to speak Hindi has been especially helpful for conducting research and forging strong connections in India. She learned Hindi at Landour Language School in north India during her doctoral research, and stated this has been very productive for “formalising affiliations and endearing myself to Indian colleagues and collaborators.”

Dr Drew has conducted extensive fieldwork in India on multiple projects over a fifteen-year period. A main focus of her research has been to examine the cultural politics of resource management with a particular focus on inclusive and culturally sensitive resource management. Her research has been supported by a number of grants and her affiliations were crucial in obtaining some of these grants. For example, Dr Drew received financial assistance during her doctoral research from the National Science Foundation and Fulbright-Hays in the United States, which “would not have been possible” without a letter of support from a university in north India.

One difficulty Dr Drew reported in terms of conducting research in India, was obtaining a formal affiliation with an Indian university. Documentation attesting to Indian institutional support is necessary to apply for a research visa application, and this can take some time to secure. A second difficulty that Dr Drew reported related to the discipline of anthropology and its methods of data collection. She reported that it was sometimes difficult for her to gain legitimacy as an ethnographer because some Indian universities favour quantitative research as the main method of data collection in the social sciences.

Dr Drew has recently developed affiliations with Amrita University and Azim Premji University which have helped foster collaborative research projects. The former affiliation has resulted in a co-authored publication with Indian colleagues and a co-authored a piece in the Conversation. Dr Drew also engaged Masters students at Amrita University to assist in data collection. She argues that there is an urgent need for collaborative research that addresses infrastructural projects and ensures they

are sustainable and socio-ecologically appropriate. Such collaborative research would be aided by a broad reorientation in Australia toward the diversity and richness of India and increased student exchange and hubs where scholars can connect.



# Dr Amanda Gilbertson

## University of Melbourne

Dr Gilbertson is an ARC DECRA fellow in the School of Social and Political Sciences at the University of Melbourne. She earned a PhD in anthropology from Oxford University and subsequently secured a McKenzie postdoctoral position at the University of Melbourne. She commenced a second position at the Australia India Institute before starting her current position in 2018. Dr Gilbertson's research focuses on education, class, gender and inequality in contemporary India.

Dr Gilbertson first developed an interest in anthropology when she started a Bachelor of Arts at Victoria University of Wellington in New Zealand. Her interest in India developed during her Masters study and was cultivated through close acquaintances that had spent substantial amounts of time in India. Dr Gilbertson was drawn to the prospect of doing academic research in India in part because of the diversity and complexity of its urban centres as well as its growing international significance.

Much of Dr Gilbertson's early work was conducted without strong relationships in India. She recalled arriving in Hyderabad to conduct fieldwork during her PhD without having any contacts to support her research. But since then she has developed several informal collaborations with scholars based in India and elsewhere. For example, she received a Dyason grant from the University of Melbourne and conducted a project about the history of gender sensitisation training in Delhi in partnership with Professor Rukmini Sen, based at Ambedkar University. She is also engaged with another research collaboration funded by the Melbourne Social Equity Institute.

Professional connections have made a strong contribution to Dr Gilbertson's research. She credits research assistants in particular for helping identify participants, set up interviews, conduct translation work and accompany her generally throughout the research. She has developed a strong working relationship with one of these research assistants, Joyeeta Dey, who she characterises as an "intellectual partner." Dr Gilbertson and Ms Dey have ongoing discussions about what the research should look like and what should come out of it. Dr Gilbertson also stated that she and Ms Dey will co-author publications that emerge from her DECRA project.



Dr Gilbertson has also placed significant emphasis on capacity building for Indian researchers. She stated that it is important to ensure “you’re making the most of their skills and finding opportunities for them to be involved in substantial ways.” Two research assistants with whom she worked have since gone on to commence doctoral studies of their own at the University of Cambridge and the London School of Economics. During 2020, Dr Gilbertson is working on a collaborative project that provides opportunities for research assistants in India to develop their skills. This recent project included three days of online training for selected research assistants, who have since put this training into practice by conducting telephone interviews in India.

Dr Gilbertson emphasised the importance of informal connections, and professional and personal ties for collaborating with Indian scholars, and welcomed funding opportunities that have supported her research.

# Professor Chenupatti Jagadish

## Australian National University

Professor Jagadish is Head of the Semiconductor Optoelectronics and Nanotechnology Group in the Research School of Physical Sciences and Engineering at the Australian National University (ANU). He is Director of the Australian National Fabrication Facility, ACT node.

Professor Jagadish obtained his PhD at the University of Delhi in 1986 and became a Lecturer in Physics and Electronics at S.V. College, University of Delhi shortly thereafter. Professor Jagadish sought a job abroad but employment opportunities were advertised in magazines which his university received six months after their publication. He applied for jobs advertised and over a three year period had amassed over 300 rejection letters. He used to joke that there was “not a university in the world” that he did not have a rejection letter from.

Personal connections changed his trajectory. After writing to the Canadian scholar with whom he had a mutual friend, Professor Jagadish secured a two year Postdoctoral Fellowship in Physics. At the completion of his role in Canada, Professor Jagadish was recommended by his supervisor to a colleague at ANU. At that stage, ANU had secured funding to set up a new department in which Professor Jagadish would play a key role. He arrived in Australia in 1990 newly married with a two month old baby. He has been based at ANU since that time and has forged a distinguished career.

Professor Jagadish considers himself very lucky to have had the opportunities he has had, and believes that there are still many talented researchers in developing countries who do not get the same opportunities. This was the main reason that Professor Jagadish and his wife, Vidya Jagadish, set up an Indian endowment fund in 2019. The fund was initially set up with a half million dollar endowment to give students from developing countries the chance to visit ANU’s Research School of Physics and pursue collaborative research. It enables students to develop their networks and enhance their profile.





Based on the success of this program, Professor Jagadish helped initiate the Future Research Talent Award, which similarly gives students from India the opportunity to study at ANU for a twelve-week period. In 2019, this program brought 52 students to Australia from India. This year, the award was offered to 60 Indian students, but it was deferred because of COVID-19 and the international border closures.

Professor Jagadish argues that collaborating can offer a “win-win” situation for scholars if it is done well. He stated that:

*If a student goes back to India, then I will always have a friend there, if they stay, then they are advancing research here, contributing the economy and paying taxes also.*

But Professor Jagadish warned that collaboration is not successful when scholars approach it thinking “what can I get out of this?”

For Professor Jagadish, collaborating with other scholars has been the most rewarding aspect of his career. He considers his greatest achievement to have helped facilitate the success of people around him, including PhD students, postdoctoral researchers, and collaborators from over thirty countries.



# Professor Robin Jeffrey

**Institute of South Asian Studies,  
National University of Singapore**

**Emeritus Professor, Australian National  
University and La Trobe University**

Professor Jeffrey's interest in India spans more than five decades. He lived in Chandigarh in 1967-69 while he was a volunteer teacher with the Canadian University Service Overseas. He then went to Sussex University in the United Kingdom where his interest in further study was stimulated by the collection of remarkable scholars of India teaching there at the time. He went on to complete a PhD at Sussex University in modern history which remains his key area of interest. His research specialisation within modern history includes politics, Indian telecommunications and media change, and he is well known internationally among scholars of modern India.

Professor Jeffrey has been a key advocate for the study of India in Australian universities for several decades. He worked at La Trobe University for 25 years and has been involved in countless events that encourage exchange between Australia and India. He has facilitated conferences which helped build connections between scholars and led to a better understanding of the possibilities of doing research about India in Australian institutions.

Professor Jeffrey played a large part in engineering a formal linkage between La Trobe University and Lady Shri Ram College at Delhi University which from 1996 fostered student exchange at the undergraduate level.

Frequent visits to India throughout his career have enabled Professor Jeffrey to establish and maintain strong personal relationships with academics, journalists and other professionals.

Small decentralised grant schemes administered by universities made a "huge difference" to Professor Jeffrey's work. Grants in the vicinity of \$5,000 AUD enabled him to "go and live in India during the summer break [and paid] for a research assistant to chase down newspaper references . . . during the academic teaching year". In contrast to larger grant schemes, these grants schemes were streamlined so as to ensure a quick transition from application to approval and gave Professor Jeffrey discretion over the terms of spending the funds. Small funding schemes of this kind were thus important for maintaining the momentum of his work and for capacity building.

Although he has recently collaborated with Professor Doron at ANU, Professor Jeffrey notes that history is a discipline that researchers typically undertake alone. He says that his collaborations are "flukes" that rely on personal connections with individuals with whom one has established a confident, cooperative relationship. He suggests this



may be characteristic of the social sciences more generally. He contrasts this with STEM disciplines which tend to be more collaborative in nature, and produce more co-authored publications.

In Professor Jeffrey's view, much of the promise for future collaborations lies in projects of mutual interest that promote reciprocity. Student exchange at the undergraduate level and more opportunities for joint PhDs would be especially welcome. Professor Jeffrey suggests that joint research focus might productively focus on issues such

as electrification and water management – questions with a policy focus. Greater involvement with Indian institutions among Australia-based researchers may be made possible by changes laid out in India's recent National Education Policy, and these changes may be consolidated by small, readily accessible grants to support Australian scholars working on India.

# Professor Raghendra Jha

## Australian National University

Professor Jha is Professor of Economics and Executive Director, Australia South Asia Research Centre, in the Arndt-Corden Department of Economics at ANU's Crawford School of Public Policy. He completed his undergraduate and MA in economics at the University of Delhi before pursuing an MPhil and PhD at Columbia University in the United States. His research interests include public economics, macroeconomics, development economics with a particular focus on India.

Professor Jha has been internationally mobile throughout his career. After finishing his PhD, he taught at Columbia University and Williams College in the United States before returning to India to teach at the Delhi School of Economics. He then went to Queens University in Canada where he spent three and a half years in two different time periods. He subsequently taught at the Indian Institute of Management (IIM) Bangalore, the University of Warwick, and the Indira Gandhi Institute of Development Research in Mumbai before commencing his position at ANU in 2001.

Many of the collaborations that Professor Jha is involved in have emerged organically throughout his career. He has developed many contacts throughout his career with Indian colleagues and they have produced research projects together. As well as acknowledging how being of Indian origin has aided these collaborations, Professor Jha stated that:

*It is a fact that I have actually worked there for so long and I know most of the significant economists in India and I've collaborated with several of them in research papers, had a good working relationship with them, so that's also very important . . .*

The collaborations which Professor Jha has are not limited to India, but include scholars working in other countries such as Australia, Canada, Japan, the United Kingdom and the United States. He emphasises that conferences are important for meeting colleagues, but spending significant periods working in institutions has helped him develop strong ties.

An important feature of Professor Jha's collaborations is capacity building among PhD researchers. He has supervised PhD students at Indian institutions as well as the ANU. In some instances, he has helped his students secure postdoctoral positions. He has also supervised students of different nationalities, some of whom have completed research on India.

Professor Jha has also secured funding from the ARC, as well as foreign governments and agencies to collaborate with scholars based in India and other countries. For example, he led a project in partnership with the Asian Development Bank examining public debt sustainability in developing Asia. His various collaborations have resulted in many joint publications with scholars from a number of institutions including Indian institutions.

One of the main ways that Professor Jha suggests more scholars could collaborate is by developing stronger relationships and learning about each other's work. This could be achieved by inviting leading academics from Australia and India to visit each other's institutions and discuss their research.

Professor Jha emphasises that collaborations need to be purposeful:

*I think that collaboration, if it is a collaboration for the sake of collaboration is not good, it should have a very defined purpose. So if it is clear what the collaboration is going to achieve, okay, we are going to work on this project, and the goal of the project is clear and the deliverables have been identified and so on, then I think collaboration is natural and symbiotic and therefore it flowers. This is what I have seen.*

Professor Jha suggests that digital technologies could be harnessed to strengthen relationships and to coordinate regular seminars and workshops between institutions.



# Dr Dhanisha Jhaveri

## University of Queensland

Dr Jhaveri has a joint appointment at Mater Research Institute and the Queensland Brain Institute, University of Queensland where she leads a research program in the field of neuroscience. Dr Jhaveri received her PhD in developmental neurobiology from the Tata Institute of Fundamental Research (TIFR) in Mumbai, where her research focused on understanding how neural circuitry for odour detection develops in the fruitfly (*Drosophila*) brain. She was awarded the Indian National Science Academy medal for Young Scientist of the Year in 2003.

Having completed her tertiary studies in India, Dr Jhaveri wrote to Professor Berry Bartlett, then based at the Walter and Eliza Hall Institute in Melbourne, to express her interest in working with him. Dr Jhaveri was specifically interested in emerging neuroscience research that suggested that the adult brain had capacity to regenerate neurons. This “was pretty much contrary to the dogma that existed in the first half of the last century.” Dr Jhaveri came to Australia funded by the Human Frontier Science Program to work with Professor Bartlett on neuroplasticity mechanisms mediated by adult-born neurons, who by that time had founded the Queensland Brain Institute.

After commencing her postdoctoral position, Dr Jhaveri then reconnected with TIFR to instigate a collaborative research project. This collaboration included a memorandum of understanding (MOU) between the two institutions, and was set up based on mutual interest and personal connections. As she states, there are “some fantastic scientists and strong presence of neuroscientists in the field.” Dr Jhaveri wrote to Professor Vidita Vaidya and the two scholars successfully applied for an Indo-Queensland Biotechnology grant, which funded their collaboration for three years.

Securing this grant meant that researchers on either end were able to advance their aims:

*We had complementary skills and approaches in our respective laboratories which we could harness to advance our research on mechanisms regulating generation of new neurons in the adult brain. But it also involved exchange of students and visits which were reciprocal in terms of either me or [my colleague] going to India and visiting TIFR or Vidita coming here to the Queensland Brain Institute. So it facilitated interaction at multiple levels, from advancing research to building and strengthening interactions with the Indian institute.*



Dr Jhaveri has supervised PhD students of Indian origin at the University of Queensland, and has also facilitated student exchanges whereby PhD students enrolled at TIFR have spent three to four months learning skills and techniques in laboratories in Australia. The collaboration also led to high-impact publications and the scholars involved shared their findings at international conferences.

Dr Jhaveri's collaborations were with high ranking institutes in India and Australia, but limited access to grants has made it difficult to generate further collaborations. Dr Jhaveri suggested that a global network to link scholars "to progress our ideas and research" coupled with "support for mobility" across Australia and India would help generate and sustain future collaborations.

# Professor Neena Mitter

## University of Queensland

Professor Neena Mitter is Director, Centre for Horticultural Science at the Queensland Alliance for Agriculture and Food Innovation. She is also the Director of the ARC Industrial Transformational Research Hub for Sustainable Crop Protection. She has developed innovative platform technologies that impact agricultural production, environmental sustainability and the socio-economic dynamics of farming communities. Over the last ten years, Professor Mitter has been at the forefront of increasing the University of Queensland's international presence in India. She has also been involved with several high-level engagements aimed at advancing the Australia-India bilateral, and received numerous awards for her achievements and leadership.

After completing a PhD at the Indian Agricultural Research Institute in Delhi, Professor Mitter worked for ten years in the same institute as an agricultural scientist. Her passion for the social, economic, political and environmental significance of agriculture can be traced to her experiences growing up in India. She “grew up hearing stories from [her] grandfather about the importance of food on the plate.”

Another “key moment” that shaped her career was a meeting with farmers when she began working as a scientist:

*I still remember the day talking to a very wise old farmer and telling him, “Biotechnology can solve all the problems in the world. That’s the only golden thing”. And he listens to me and then pats me on my shoulder and says to me, “Daughter, if you can give me a handful of good seeds, I can do the rest.”*

Throughout her career, Professor Mitter has been focused on “delivering those good seeds and good technologies which can make a difference on the ground.” She ensures that her work translates well for farmers and that she builds strong relationships with industry partners so as to enhance impact.



Professor Mitter arrived in Australia in 2000 and commenced a position at the University of Queensland. She has been a strong advocate for enhancing the Australia-India bilateral relationship. She was part of the Prime Minister's delegation to India in 2017, after which the university signed an MOU with the Indian Council of Agricultural Research (ICAR) which oversees 101 institutes including 71 agricultural institutes. Within the MOU, there is a staff mobility plan to develop more relationships, which Professor Mitter views as a way to build confidence and trust between scholars, and foster shared understanding and mutually beneficial collaborations.

In 2018, Professor Mitter worked closely with senior management at the University of Queensland to establish the UQIIT Delhi Academy of Research. The Academy is a joint academy between IIT Delhi and the university, offering scholarships to PhD students working on multidisciplinary projects in India and Australia, who Professor Mitter describes as the “game changers of tomorrow.” PhD students based in either country will spend one year at the overseas institution, and a key requirement of their enrolment is joint supervision by a scholar at IIT Delhi and a scholar at the University of Queensland. At the completion of their course, students' doctorates will be jointly awarded by both institutions. The UQIIT Delhi Academy of Research will allow for scale and sustainability establishing culturally diverse research networks, and is expected to graduate more than 360 students in the next ten years.



Underpinning Professor Mitter's engagements with partners is an ethic of respect, patience, trust, communication and cultural understanding. As Professor Mitter states, scholars must engage with India “with the feeling that we are here to work with you together and learn from you as well.”



# Professor Anushka Patel

## The George Institute for Global Health, UNSW, and Royal Prince Alfred Hospital

Professor Patel is Vice Principal Director and Chief Scientist, the George Institute for Global Health, and Professor of Medicine, UNSW. She received a medical degree from the University of Queensland, a Masters degree from Harvard University and a PhD from the University of Sydney, and is a practicing cardiologist. Her disciplinary focus is on the prevention and treatment of chronic non-communicable diseases, particularly cardiovascular diseases.

As Chief Scientist of the George Institute for Global Health, Professor Patel plays a key role in developing and supporting global strategic initiatives. The George Institute's first formalised partnership with India was developed in 2002 when it jointly established the Andhra Pradesh Rural Health Initiative with the Centre for Chronic Disease Control in New Delhi. The George Institute connected with scholars in India who recognised chronic and non-communicable diseases as a global health issue and were interested in conducting joint projects in India and developing research capacity. This led to the establishment of an office in Hyderabad in 2007, where Professor Patel served as Interim Director from 2009 to 2013. The George Institute's India headquarters is now based in New Delhi and employs over 100 staff. The entire organisation has approximately

800 employees around the world and partnerships in over 40 countries.

Professor Patel reported that initial projects were predominately conceptualised in Australia and then developed jointly by scholars in Australia and India. But a significant success of the Institute's contemporary working model is India-led or joint research design and production of knowledge between national contexts. The George Institute brought a critical mass of senior researchers together in India and there has since been a balance of research being conceptualised in India and Australia. This has placed the Institute in a strong position to harness the strengths of each nation and for the exchange of knowledge and skills.

A strength of the George Institute's collaborations in India and elsewhere is that they are driven by strong local leadership. Professor Patel explained that each office has an Executive Director who develops their own research and collaborations, and directors ordinarily have conjoint appointments at Indian institutions. The George Institute's key affiliation in Australia is with UNSW and it has an institutional affiliation in India with the Manipal Academy of Health Education.



Strong local leadership and close working relationships across national contexts have helped overcome impediments to research. For example, the George Institute recently secured a large grant for a clinical trial from the Australian Government's Medical Research Future Fund (MRFF). The trial intended to assess the effectiveness of a therapeutic drug to treat complications of COVID-19 but there was an insufficient caseload based in Australia. While the MRFF was established to focus on the health needs of Australians, the Australian Government approved the Institute's request to include partners in India, and the Director of the India office was able to engage partners very quickly.

Professor Patel notes that their collaborations have also been strongly supported by funding opportunities. Forty percent of the Institute's funding comes from government grants, while the remaining funds come from foundation grants and commercial

operations. The George Institute's work in India has also been the beneficiary of grants from the Global Alliance for Chronic Diseases, which is funded by medical councils around the world, as well as a small number of grants from India, Australia and the United Kingdom.

The George Institute engages with multiple stakeholders for its collaborations including government, industry and universities. They conduct trials in partnership with the pharmaceutical industry and the biotech industry, and work closely with universities in research and engagement. Professor Patel observed that being a not for profit independent organisation has advantages for working in international contexts, while at the same time, partnerships with universities can provide wider access to research expertise and provide additional leverage in certain circumstances.

# Professor Anu Rammohan

## University of Western Australia


Professor Rammohan is Professor of Economics and Associate Dean International for the Faculty of Arts, Business, Law and Education at the University of Western Australia. She plays a key role in the Australia India Institute node at the university and serves as a member of the ARC's College of Experts. Her areas of expertise include household level socio-economic factors that influence maternal and child health outcomes, and gender and food security issues in South and South East Asia.

Professor Rammohan earned an undergraduate degree in economics at Mount Carmel College (Bangalore) in India and briefly worked in a data collection role for a research project before moving abroad. Having grown up in a large city, this role gave her an opportunity to experience what life was like in rural settings. Her experience of growing up in a developing country also stimulated her interest in development economics and thinking about the challenges such countries face. Professor Rammohan had not always planned to migrate abroad, but there were limited employment opportunities for women graduates in India when she graduated. This encouraged her to move to Canada to complete a Masters degree and then Australia to complete her PhD.

After earning a PhD in economics from La Trobe University in the 1990s, Professor Rammohan worked at the University of Sydney. One of Professor Rammohan's first collaborative projects was at the University of Sydney in partnership with colleagues in the Tata Institute of Social Sciences. This collaboration was instigated when Professor Rammohan and her Australian colleague met an Indian scholar at a conference. It resulted in several publications and workshops.

She believes that being of Indian origin has helped her navigate Indian institutions and develop strong ties. However, with regards to data collection in India, she sometimes encountered difficulties with ensuring the integrity of the data without having a physical presence in the field. Specifically, it was challenging to ensure that field researchers were asking participants the correct questions and recording responses accurately. Professor Rammohan has helped manage this through capacity building. Where possible, Professor Rammohan has created opportunities for postdoctoral researchers to work in the field to manage the integrity of data collection.

Since 2009, Professor Rammohan has been based at the University of Western Australia and has received several grants from the ARC and other funding bodies. For the last ten years, her work has focused mainly on maternal and child health, gender, and food insecurity.



One of her recent activities as Associate Dean International has been to facilitate exchange and collaboration between Australia and India. For example, she helped coordinate a student visit to India whereby sixteen Masters of Business Administration (MBA) students went to a business school in Mumbai. The students attended lectures, visited Indian businesses and were involved in other activities. Professor Rammohan helps facilitate similar programs in other departments, such as in Medicine and the School of Education. This work complements her responsibilities for the Australia India Institute where she is working alongside Early Career Researchers as well as bringing together scholars at the University of Western Australia who are working on India, or those who are interested in doing so in the future.

# Scientia Professor Veena Sahajwalla

University of New South Wales

Professor Sahajwalla is founding Director of the Centre for Sustainable Materials Research and Technology (SMART Centre) at UNSW and also heads the NESP Sustainable Communities and Waste Hub, and the ARC Industrial Transformation Research Hub for Microrecycling. She is the pioneer of recycling science and is producing new green materials, products and resources made from waste.

Professor Sahajwalla grew up in Mumbai and her interest in her area of expertise began with an interest in sustainability and a focus on people. Having witnessed the challenges faced by some people living in Mumbai, she became interested in questions of equity and how science, technology and engineering can be harnessed to make positive impacts in communities and on people's lives.

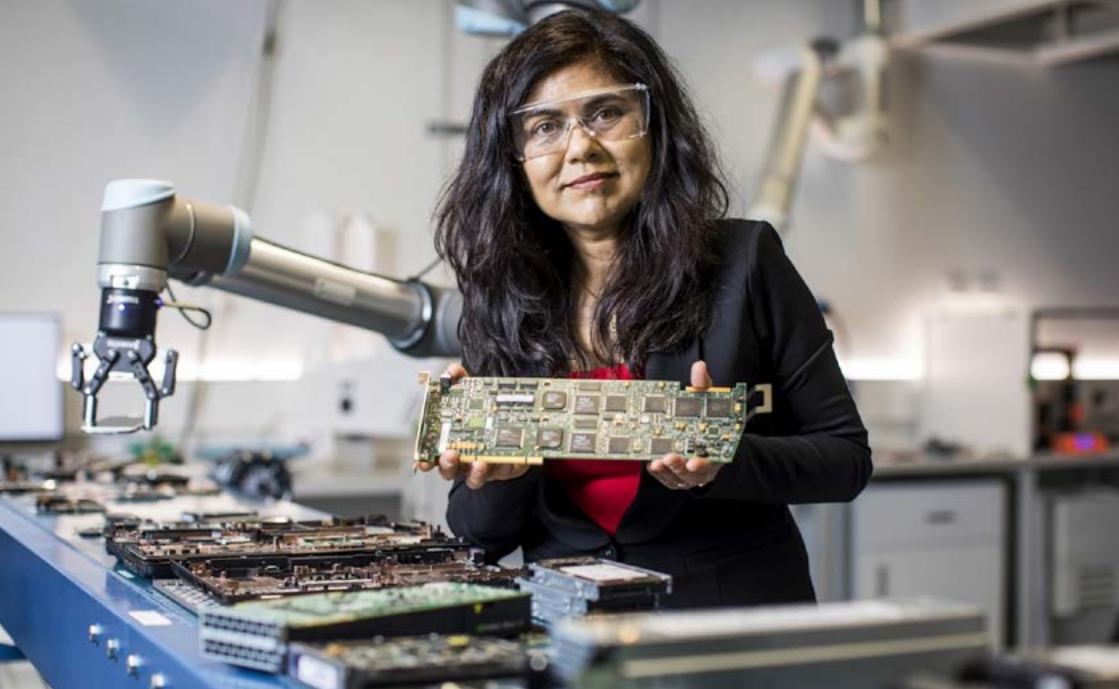
After completing her undergraduate degree at IIT Kanpur in India, she travelled to Canada for Masters study and completed her PhD at the University of Michigan. At the completion of these studies she arrived in Australia to take up a position at UNSW.

Professor Sahajwalla has been involved in many collaborative research projects and has and is leading a number of national research and industrial transformation programs.

In 2020, she was engaged on a research project led by the Commonwealth Scientific Industrial Research Organisation (CSIRO) with investigators in Australia and India to help transform waste management so waste can be used as a renewable resource and input for manufacturing. She observed that working in India requires a strong understanding of the social context. While recommending visits to India to strengthen bilateral ties with research partners and industry representatives, Professor Sahajwalla noted that in her discipline scholars need to visit disadvantaged communities to develop an understanding of practical challenges of dealing with waste, especially e-waste and textiles waste. Her view is that researchers need to “broadly understand that landscape” and work on solutions for practical application.

Professor Sahajwalla emphasised the importance of building strong relationships with multiple stakeholders, and that, to do so:

*You have to see it from their point of view, you have to understand how, I guess, from their perspective, what's important and really ... how committed you are to that partnership, and it's more than, if you're talking research, jointly publishing papers together. So, I think to be part of that sort of bigger picture, there is much more than just in the science and publishing papers. It's how can we effect lasting change and work with industry, government and community stakeholders.*



According to Professor Sahajwalla, strong relationships enable researchers to successfully convert their scientific interventions into practice. They do so by creating a dialogue between researchers who develop technologies and the communities in which they are implemented. Strong relationships with institutions also generate further collaborations and help researchers broaden their horizons. Professor Sahajwalla has supervised PhD students who she met while visiting India. When she visits institutes for lectures, she makes a commitment to:

*... spend a day at that institute. Then I literally immerse myself that day, go around walking through the place, chatting to people, and the collaborations will logically flow out of that ...*

Professor Sahajwalla argues that Australia and India collaborations can be successful because the two nations share “core values”:

*... how we care for people, how respect people, and how we believe that it is our responsibility as a community, as a society, to care for our people, our planet, ... all of these things ... to bring about better outcomes for us all.*

# Professor Kadambot Siddique

## University of Western Australia

Professor Siddique is Hackett Professor of Agriculture Chair and Director of the UWA Institute of Agriculture at the University of Western Australia. He completed undergraduate and Masters study in India in the late 1970s, before moving to Australia to complete his PhD in the early 1980s. After receiving his PhD from the University of Western Australia in 1985, he began working for the then Western Australian Department of Agriculture and Food. In 2001, he became Director of the Centre for Legumes in Mediterranean Agriculture (CLIMA) at the University of Western Australia and in 2006 he was appointed to establish and lead the UWA Institute of Agriculture.

Professor Siddique has collaborated with many scholars throughout his career from a large number of countries. He holds a visiting Professorship at Amity University in India as well as several other honorary appointments throughout the world. He has published over five hundred academic works and has supervised more than 50 PhD students. Professor Siddique lays emphasis on the personal ties and mutual interests for instigating many of his collaborations. For example, he has met scholars at conferences from Indian universities, and subsequently began collaborating with them.

For collaborations to gather momentum and mature, they “need a champion on both sides.” For Professor Siddique, champions build trust, open doors, and facilitate clear communication. Professor Siddique has been a champion of collaborations himself. As well as working on numerous collaborative projects, Professor Siddique has helped colleagues in other areas at the University of Western Australia establish connections with Indian colleagues. On occasion scholars from other universities have approached him for advice on how to gain access to Indian institutions. He argues that a champion can play a “gatekeeper” role where they facilitate connections with Indian scholars and institutions that scholars without the necessary connections cannot.

Personal connections have helped Professor Siddique maintain and strengthen collaborations. He has facilitated workshops in India and elsewhere which bring scholars together to plan research projects. He finds workshops to be a useful way to outline a clear agenda including “the objectives, the key people, the deliverables and methodology” and to designate responsibilities for each collaborator. He also emphasised that such workshops are often social occasions, where scholars will get to know each other personally and develop strong ties.





Workshops are just part of what underpins a “genuine partnership.” Professor Siddique notes that mutual benefits need to be made clear to both parties. For collaborations to be justifiable, scholars need to ask themselves “What is the impact?” He encourages scholars to think about good quality publications, but also about other impacts such as training and capacity building and policy reform. Not everything is achievable in a single project and there needs to be a long term relationship.

When asked about the components of a successful collaboration, Professor Siddique observed:

*funding is essential, champions are essential, a team is essential, institutional support is essential ...*

*The elements of success include: leadership, passion and commitment, focus, trust, mutual respect, reality checks and communication.*



# Professor Claire Smith

## Flinders University

Professor Smith is an archaeologist recognised internationally for her research with Australian Aboriginal communities in the Northern Territory. She earned her doctorate from the University of New England in 1996 and has worked at Flinders University since 1998. She is editor of the 18-volume Encyclopedia of Global Archaeology (2nd edition) and was formerly President of the World Archaeological Congress (WAC) (2003-2014).

Professor Smith has developed several collaborations throughout her career with scholars from the United States, South Africa, Japan and India. She first visited India in 1994 to conduct a comparative study on body art of Aboriginal Australians and Adivasi peoples in India. In the same year, she attended the World Archaeological Conference in New Delhi where she met Assistant Professor Alok Kanungo, from IIT Gandhinagar. The pair kept in close contact and met again in 2003 at the WAC Conference in Washington D.C.

Professor Smith and Assistant Professor Kanungo have developed a longstanding collaboration and have recently secured a SPARC grant. Their collaboration is underpinned by shared values, with Professor Smith stating that “our philosophy is to learn from each other and to do the research together.” Developing trust over long periods has also been fundamental to their success. Professor Smith states that: “People need to meet each other and get to know each other well ... And you embed that relationship through time and through shared project and co-writing publications in that time.” In Professor Smith’s view, getting to know people well and developing trust between parties leads to a comfortable research relationship that helps overcome the difficulties of distance, and meet the objectives of the research.

In early 2020, Professor Smith visited IIT Gandhinagar for a two month visiting scholar position. This was also facilitated by IIT Gandhinagar’s commitment to internationalisation as evidenced in their visiting scholars program and their support of the SPARC application. Assistant Professor Kanungo will also teach at Flinders University when the easing of COVID-19 restrictions permit him to do so. Professor Smith described her collaboration with Assistant Professor Kanungo as “interwoven at every level.”



Their collaboration has involved doing fieldwork together in India, visits by research teams to field sites in India, and co-authored outputs. Professor Smith emphasised the need for enduring relationships:

*I think if you get good people together, they will generate great outputs, but you have to have them together long enough and sustain them over time to move things forward.*

A focus of Professor Smith's research collaboration is capacity building and "opening doors" for junior researchers. Together with Assistant Professor Kanungo, she has sourced funds to support two postdoctoral researchers based at IIT Gandhinagar, who Professor Smith and Assistant Professor Kanungo jointly supervise. Professor Smith suggests that collaborations between Australia and India would be further strengthened by an exchange program that encourages collaboration between Indian and Australian researchers, particularly PhD students and postdoctoral researchers, and institutional mechanisms led by Australian universities to enable partners in Indian institutions to access library resources.

# Professor Erica Smith

## Federation University

Professor Smith is Professor of Vocational Education and Training in the School of Education, Federation University. Professor Smith is the convenor of Federation University's Researching Adult and Vocational Education Group. She completed an undergraduate and Masters degree in arts in the United Kingdom. After working in industry and VET, she commenced her academic career in 1993 and gained a Masters in human resource management in 1995 and a PhD in adult education from the University of Technology Sydney in 2000. She held senior positions at Charles Sturt University and joined the University of Ballarat, which became Federation University, in 2008. Her areas of research expertise include VET policy, workplace training, young people's school to work transitions, apprenticeships and traineeships and competency-based training.

Professor's Smith's expertise on apprenticeships led to her first projects on India. An Australian contact who was based at the International Labour Organization (ILO) advised her of an upcoming research project that aligned with her areas of expertise. The project, titled *Possible Futures for the Indian Apprenticeship System* was funded by the ILO and the World Bank, and Professor Smith, with a colleague, was selected. In 2012, the project reported challenges in the Indian apprenticeships system and made recommendations informed by analysis of other countries' systems.

Professor Smith presented the findings at a large workshop in New Delhi that included government officials, and stakeholder groups including trade unions, employers and training providers. Some of the project's suggestions have been evident in legislation and have affected the ways that the apprenticeship system is organised. A senior official had reported that it was "partly our work that contributed to their choice, which was great. It's always great to think that you make a difference and did something useful."

This initial research project led to subsequent VET projects for the ILO and the Organisation for Economic Development (OECD) about India, as well as projects in South East Asia which align with her focus on vocational education, management and apprenticeships. Unlike some academic work, these projects have involved strong engagement with industry, trade unions and peak body organisations. Professor Smith welcomed the opportunity for such collaborations because she was focused on policy, practice and impact in the VET sector.

One of the challenges that Professor Smith reported was the limited opportunities to discuss India-focused research in Australia. For this reason, she suggested that developing a network of scholars who work in India in a range of discipline areas would assist scholars building connections and instigating collaborations. This might help scholars learn more about the diversity of India and what it is like working in different parts of the country. Professor Smith also suggested that it would be beneficial for organisations to create funding opportunities for those wanting to work in and about India.



# Emeritus Professor Tamarapu Sridhar AO

## Monash University

Professor Sridhar came to Australia in 1974 to complete a PhD in chemical engineering. He had previously completed a Bachelor of Engineering at the University of Madras in South India and a Masters degree at the Indian Institute of Science (IISc) in Bangalore. Except for a two year teaching position in the United States, he has remained at Monash University, becoming a Professor in 1992 and Head of the Department of Chemical Engineering. In 2003, he was appointed a Sir John Monash Distinguished Professor. He subsequently became Dean of the Faculty of Engineering and Vice President of the University's Indian and Chinese Initiative.

Professor Sridhar has instigated a number of successful research collaborations during his career. His initial engagement with Indian researchers began when he was attempting to hire senior academics to fill positions in the Department of Chemical Engineering. This initial collaboration was not about “collaborating with India, but with a particular Indian academic who had similar interests.” He and Professor Sharma, from the University of Bombay, who was president of the Indian National Science Academy commenced a ten-year program of collaboration through

which they shared laboratory facilities and each made regular visits to each other's institutions.

Strong personal ties, regular visits and harnessing the strengths of students were keys to the success of this collaboration. Professor Sridhar described the collaboration as a rich mingling of the academic workforce. They trained many PhD students in Australia who went on to become senior academics in India and Australia. However, one limitation of this was that chemical engineering depended on large laboratories and at that stage most Indian institutions were not well equipped. This meant that most of the laboratory work needed to be completed in Australia. At the same time, it put those working in Australian institutions in an advantageous position because it meant they could often attract talented scholars from Indian institutions.

Professor Sridhar's subsequent collaborations were focused on establishing links between scientists in Australia and India more generally. In 2008, Professor Sridhar played a key role in establishing the IITB Monash Research Academy. The Academy is an Australian-Indian research collaboration institution formed between India's top-ranked IIT Bombay and Monash University. It trains PhD students with a solutions-driven approach to addressing global problems. It offers a joint PhD program “with the seal of



two universities on the same parchment” and has long been regarded as a model for institutional collaboration. Professor Sridhar observed that part of its success lies in the way that it nurtures “institutional collaborations and individual collaborations in an effective and efficient manner.” This venture continues and has graduated nearly 250 PhD students, with a similar number enrolled.

Despite its success, Professor Sridhar noted that the context around collaboration has changed. He has since assisted other Australian universities in setting up similar ventures with Indian institutions, and says that rather than try and emulate the IITB Monash model, collaborators should think about “other more innovative mechanisms” for collaboration.

# Professor Amanda Thrift

## Monash University

Professor Thrift is head of Epidemiology and Prevention Division, Stroke and Ageing Research in the School of Clinical Sciences at Monash University. She is a Director of the National Stroke Foundation and a past President of the Stroke Society of Australasia. Professor Thrift earned a degree in epidemiology from Monash University in 1995 and developed an international reputation for her expertise in the epidemiology of stroke.

Professor Thrift's interest in India began at an early age and was consolidated when she was able to travel to India. Her mother was born in India and left around the time of independence so, Professor Thrift had "grown up hearing stories about India" and took a year off her university studies to travel there. She stated that India "just kind of seeped into me immediately, and I just didn't want to come home."

Personal ties that Professor Thrift had developed helped her begin working in India. One of her previous PhD students had family members who had set up a medical practice in the Rishi Valley in Andhra Pradesh. In the

early 2000s, Professor Thrift visited the clinic and was able to gather information around risk factors for hypertension. A research project developed which was initially self-funded by Professor Thrift and two of her colleagues, but was later supported by the National Health and Medical Research Council (NHMRC). The project involved training staff in India to run the study to determine whether there are different risk factors for hypertension in the Rishi Valley than there are in less disadvantaged settings.

This initial project led to the development of another project funded by the Global Alliance of Chronic Diseases to implement strategies to improve control of hypertension. This larger study continued with the work in Rishi Valley but also included research sites in other parts of India. Professor Thrift instigated a collaboration with other scholars in Australia from the George Institute and from Monash University, who also had established collaborations in India. For Professor Thrift, engaging additional partners was important because it enabled the researchers to reach a much broader group of the population. It enabled them to conduct large scale analyses of the barriers for people having their blood pressure checked and managed and then to design an intervention to overcome those barriers.





The project also involved consultation with health experts and government officials in India, and recruitment and training of health workers in villages to implement the intervention. The involvement of health workers in India was crucial to the program's success. Strong buy-in from local health workers led to a decrease in blood pressure for patients within the communities and improved control of hypertension. Professor Thrift credits the success of this program in part to strong working relationships on the ground, listening to the needs of communities and being open

and transparent about their intentions. The project also involved capacity-building in Australia. Five PhD students and two postdoctoral researchers visited India and assisted with the program.



# Professor Piyush Tiwari

University of Melbourne

Professor Tiwari is Professor in Property, Faculty of Architecture, Building and Planning at the University of Melbourne. He completed a Bachelor of Technology in civil engineering at the National Institute of Technology, Kurukshetra (Haryana) and a PhD in development economics at Indira Gandhi Institute of Development Research, Mumbai. Professor Tiwari's research interests include infrastructure policy, housing economics and mortgages, commercial real estate investment, and financing infrastructure in developing countries.

Professor Tiwari's career has spanned multiple countries, academic institutions, industry and government. He has developed collaborations with numerous Indian higher education institutions and organisations through different pathways. He emphasises the importance of mutual interests and ties between researchers as a strong foundation for collaboration. For example, his collaboration with the School of Planning and Architecture, Delhi, was developed by leveraging personal connections and working on joint research projects. He also leveraged personal connections to form collaborations with World Vision India, and the Indian Council for Research on International Economic Relations.

World Vision is a partner in an ongoing collaboration with the School of Planning and Architecture, Vijayawada and the University of Melbourne involving co-teaching a subject in humanitarian design which is funded under the New Colombo Plan. The subject aims to identify design solutions for built environment problems that communities face. A feature of this program is student exchange from Australia to India. Over the last four years, Professor Tiwari has accompanied 65 students from the University of Melbourne's Bachelor of Design to India as part of the subject. This subject has since been the catalyst for further collaborations with World Vision, including a recent project funded by the Royal Institution of Chartered Surveyors to examine the challenges that displaced peoples face when they move from one location to another.

Other aspects of Professor Tiwari's India engagement includes conferences, teaching and doctoral supervision and examinations. In 2016, he jointly organised a conference with the Indian Institute of Management Bengaluru. He was able to leverage his position as President of the Asian Real Estate Society to forge a relationship between parties and organise the conference. During the COVID-19 pandemic, Professor Tiwari taught a class at the Indian Institute of Management Trichy using digital technologies. Professor Tiwari has also externally supervised several PhD scholars based in Indian institutions and has examined numerous PhDs.

Many of these collaborations have been built up over a long period of time. Some collaborations began with personal connections, in areas of mutual interest, and then were institutionalised in the form of MOUs. Professor Tiwari suggested that future collaborations between Australia and India could invite Indian research students to spend time in Australian universities. This should be accompanied by more focus on India in Australian universities and a proactive approach to developing co-teaching and joint PhD programs.

# Conclusion

Research engagement and collaboration between Australia and India has grown over the past decade, an upward trend that has been boosted by recent developments in government policy in both countries supporting increased bilateral research.

The 21 case studies set out in this report are a small sample of the many researchers in Australia who work on India and the growing number of productive research collaborations between the two countries. Some of the case studies demonstrated how researchers from the Indian diaspora use their networks to drive collaborations. Other case studies showed how researchers who are not from Indian backgrounds have developed ties and advanced their research agendas by engaging with Indian researchers and institutions. Taken together, they reveal a number of common practices that underpin successful research engagement and collaboration.

Seven good practices have been distilled from the case studies that offer insights into how to better support scholars working on India and how to stimulate and sustain productive research collaborations. The eight recommendations in this report set out some of the ways those good practices can be supported. They provide considerations for government, universities and researchers.

The good practices and recommendations seek to remove some of the barriers to bilateral research and to generate new scholarly knowledge and research collaborations between researchers in Australia and India. They may also provide a springboard for fostering new institutional collaborations between Australian and Indian institutions. More broadly, they serve as a vector for building stronger ties between Australia and India.

# Appendix A - List of Interviewees

Dr Alok Adholeya  
TERI Deakin Nanobiotechnology Centre

Dr Ali Reza Alaei  
Southern Cross University

Associate Professor Adrian Athique,  
University of Queensland

Professor Suresh Bhargava  
RMIT University

Professor Aniruddha Desai  
La Trobe University

Professor Assa Doron  
Australian National University

Dr Georgina Drew  
University of Adelaide

Dr Amanda Gilbertson  
University of Melbourne

Professor Chennupati Jagadish  
Australian National University

Professor Robin Jeffrey  
La Trobe University, Australian National  
University and National University of  
Singapore

Professor Raghbendra Jha  
Australian National University

Dr Dhanisha Jhaveri  
University of Queensland

Professor Neena Mitter  
University of Queensland

Professor Anushka Patel  
UNSW and The George Institute

Ravneet Pawha  
Deakin University

Professor Anu Rammohan  
University of Western Australia

Professor Veena Sahajwalla  
University of New South Wales

Professor Kadambot Siddique  
University of Western Australia

Professor Claire Smith  
Flinders University

Professor Erica Smith  
Federation University

Emeritus Professor Tamarapu Sridhar AO  
Monash University

Professor Amanda Thrift  
Monash University

Professor Piyush Tiwari  
University of Melbourne





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