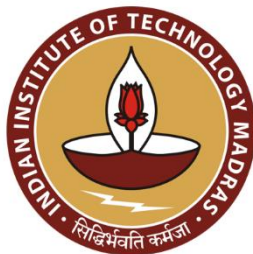


Melbourne India Postgraduate Academy (MIPA)





THE UNIVERSITY OF

MELBOURNE

Message from the Director



It's been an absolute honour to serve as Director of Melbourne India Postgraduate Academy – MIPA since its inception. I feel privileged to share my thoughts and reflections on the remarkable journey we have undertaken with the joint PhD candidates and distinguished academics from Melbourne as well as from our partner organisations.

MIPA is a testament to the power of collaborations for impact. Our focus has never been about numbers; it has always been about nurturing the next generation of outstanding research talent. MIPA provides them with a unique opportunity to access expertise and world-class facilities at the two top institutions, develop their networks, and work on projects that push the disciplinary boundaries to tackle some of the most pressing global challenges.

It has been heartening to witness the tremendous growth and achievements of this initiative over the years, even during the pandemic. Our academics stayed connected virtually, and our graduates are already making significant contributions in academia, research, industry, and government, not only in Australia and India but across the globe. The collaborations MIPA has nurtured, the young minds it has empowered, and the research we have conducted together are making a tangible contribution to the world.

As the Director of MIPA, I am extremely grateful for the ongoing support from all levels of leadership at The University of Melbourne and our MIPA partners. I would also like to acknowledge all my academic colleagues who have contributed immensely to making this program a success.

I am excited about the future of MIPA and our continued partnerships with Indian institutions. I am confident that we will continue to push the boundaries, seek innovative solutions, and make a lasting impact. Together, we can address the most pressing global challenges and contribute to a sustainable future for all.

Associate Prof. Meenakshi Arora

Director, Melbourne India Postgraduate Academy (MIPA)

Academic Lead, Faculty of Engineering & Information Technology

Messages from Leadership at The University of Melbourne



The University of Melbourne has long been a foundational institution in the life of Australia. In more recent decades it has come to play a growing role internationally as well, particularly through its international partnerships in India, and other key regions of the world. Our maturing relationships with leading scientific and higher education institutions in India – of which there is no finer illustration than the great work of the Melbourne India Postgraduate Academy – are extremely important for both our nations. In both India and Australia, the PhD candidates and the staff members who participate in MIPA are making an important contribution now to the future of the world. The importance of this contribution can only grow in years to come.

Professor Duncan Maskell | Vice-Chancellor, The University of Melbourne



Supporting international research collaboration is a strategic priority for the University of Melbourne. The opportunities provided through MIPA give PhD candidates the chance to tackle some of the biggest and most complex global challenges. These candidates access expertise, resources and world-class training at Melbourne and at the campuses of our partner institutions in India and become part of two high-quality research environments and cultures. Through MIPA, we are pushing boundaries as we seek to develop the next generation of researchers, innovators and entrepreneurs that discover new knowledge that benefits society at a global level.

Professor Mark Hargreaves | Deputy Vice-Chancellor Research



Prime Minister Narendra Modi and Prime Minister Anthony Albanese met twice in 2023, reaffirming the strength of the multifaceted bilateral ties between our countries that have deepened under the India-Australia Comprehensive Strategic Partnership which was established in 2020. Key joint programs such as MIPA are integral drivers of this strategic partnership. By bringing together early career researchers from our MIPA partners with their peers at the University of Melbourne, and by forging or deepening relationships between their supervisors, MIPA facilitates the people-to-people connections which bring a strategy to life. MIPA does not only support research collaboration and innovation in a wide range of disciplines, but also fosters mutual understanding and trust which are crucial for taking the Australia-India relationship to the next level.

Professor Michael Wesley | Deputy Vice-Chancellor Global, Culture and Engagement



Our research partnerships enhance our collective research and research training opportunities and instil a truly global perspective into the research we do. We benefit from each other's complementary expertise. The MIPA initiative has created wonderful opportunities for Melbourne researchers to collaborate with researchers across India's top research institutions to supervise high quality joint PhD candidates. As the program matures and candidates complete their projects, we are starting to see some of the impact of this joint work, which only leads to the strengthening of our relationships with our Indian colleagues.

Professor Justin Zobel | Pro Vice-Chancellor, Graduate and International Research

Messages from Leadership at The University of Melbourne



The Faculty of Medicine, Dentistry and Health Sciences has strong ties with India through research, clinical training, teaching, and leadership programs. By collaborating on key global health challenges, we enhance our impact and benefit the health and wellbeing of our global community. We are delighted to now expand our work through the Melbourne India Postgraduate Academy program. We look forward to welcoming our first cohort of joint PhD candidates, to nurture their ideas and together with our MIPA partners prepare them to drive transformative outcomes in health research in their communities.

Professor Jane Gunn | Dean, Faculty of Medicine, Dentistry and Health Sciences



The Melbourne India Postgraduate Academy is a wonderful example of collaboration and a demonstration of the power of working together for impact. Since its creation, the program has facilitated ongoing collaborations through joint PhD candidates enrolled in a joint program with the University of Melbourne and one of our four partners from India. PhD researchers are the key to a thriving University, able to address challenges related to climate, energy, sustainability water and infrastructure. MIPA empowers our next generation of outstanding research talent to join international networks and gain experience in two cultures, while working on projects that drive technology and care for our planet further.

I am immensely proud of our faculty's involvement in MIPA, capably led by Associate Professor Meenakshi Arora. Programs like MIPA are vital for international collaboration and advancing research and teaching.

Professor Mark Cassidy | Dean, Faculty of Engineering and IT



The world is facing many great challenges, including in the areas of climate change, health and the need to preserve biodiversity. To address these challenges, and to grasp the associated opportunities, it is essential that we work across discipline boundaries and with the most talented PhD candidates and academics, regardless of where they reside. It is for this reason, partnerships with Indian institutions, including through MIPA, are a high priority for the Faculty of Science. As proven by history, such partnerships have been extraordinarily successful. It is also a great joy and honour to work with such talented Indian colleagues.

Professor Moira O'Bryan | Dean, Faculty of Science



The Australia-India relationship is a most important international relationship for the University of Melbourne. MIPA serves as one of the key platforms to foster this relationship. As the ADVCI and former Director of MIPP/MIPA, I am proud to see the continuing growth of this program by attracting highly talented future leaders who choose to find sustainable solutions to major problems that benefit the global community. I have also had the opportunity to supervise several MIPP/MIPA joint PhD candidates that has led to ongoing research collaborations with Indian partner institutions. I wish for the continuing success of MIPA as one of the flagship programs for Melbourne-India partnerships.

Professor Muthupandian Ashokkumar | Assistant Deputy Vice-Chancellor International

Messages from MIPA Partners



We have always been committed to fostering excellence in teaching and research at IIT Kanpur, and our partnership with MIPA reflects this shared commitment. Together, we have created an extraordinary platform that bridges the gap between India and Australia, offering unparalleled opportunities for intellectual growth and cultural enrichment. MIPA believes in the value of meaningful collaboration, broadening perspectives, and empowering future leaders. As a University of Melbourne partner, IIT Kanpur is honoured to be a part of this incredible endeavour, providing joint PhD candidates an opportunity to create an impact at the global level.

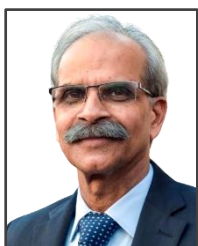
MIPA is a transformative journey that spans borders and redefines possibilities. It is designed to maximise individual potential with a focus on global perspectives and multidisciplinary teamwork. Our persistent commitment to cutting-edge research, academia, and personal development ensures that every graduate researcher's experience at MIPA is nothing short of exceptional.

Professor Abhay Karandikar | Director, Indian Institute of Technology, Kanpur



The partnership between IIT Madras and the University of Melbourne through MIPA program will enable faculty from both the institutions to pursue world-class research and train joint PhD candidates to be future leaders in their fields.

Professor V Kamakoti | Director, Indian Institute of Technology, Madras



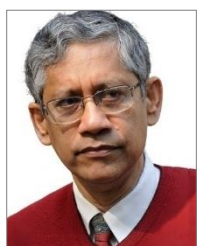
IIT Kharagpur expresses our great appreciation for the MIPA partnership which has strengthened continually since 2018. This program is a testament to the synergy and mutual capabilities that defines our partnership with University of Melbourne. As we move forward, IITKGP remains fully committed to enhancing our collaboration and camaraderie through exchange of new ideas, opportunities and strategies that will benefit both our institutions.

Professor Virendra K Tewari | Director, Indian Institute of Technology, Kharagpur



Indian Institute of Science (IISc) greatly values its long-term cooperation with the University of Melbourne. In the beginning of 2021, we signed our Joint PhD Program agreement as a part of the Melbourne-India Postgraduate Academy. Under the program, we look forward to strengthening this relationship through joint mentorship of PhD researchers, exchange of best scientific ideas and practices at both sides. We expect our young minds to take these collaborative efforts further in the coming years.

Professor Govindan Rangarajan | Director, Indian Institute of Science, Bangalore



IISER Tirupati is happy to join with the University of Melbourne in nurturing young researchers in a scientifically rich, culturally diverse and sustainable environment through the MIPA (Joint-PhD) program. As the faculty, staff, and PhD candidates from both the institutions embark into this journey, I envision that their collaborative learning and research efforts will greatly contribute towards addressing the unmet global challenges.

Professor Santanu Bhattacharya | Director, Indian Institutes of Science Education and Research, Tirupati

Message from the Faculty Leads



It's been a great pleasure and privilege to serve as the Deputy Director of MIPA and Academic Lead for the Faculty of Science. MIPA is a unique program offering wonderful opportunities to University of Melbourne academics and Indian researchers to develop collaborations and joint supervision of excellent PhD candidates leading to high-impact research and innovation. At the Faculty of Science, we are keen to engage with high-quality research institutions in India and we strongly believe that MIPA will provide ongoing opportunities to attract high-quality joint PhD candidates. We look forward to continuing working with our Indian colleagues to enhance the collaborations and promote internationalisation of our research.

Dr Surinder Singh Chauhan

Deputy Director of MIPA

Academic Lead, Faculty of Science



Serving as the Academic Lead of Melbourne-India Postgraduate Academy from the Faculty of Medicine, Dentistry, and Health Sciences (FMDHS) has been an incredibly rewarding experience. MIPA offers an exceptional platform for University of Melbourne academics and researchers to engage with Indian counterparts and jointly supervise outstanding PhD students. Ever since its inception, MIPA has been instrumental in promoting collaborative and innovative research to address global challenges, facilitating the exchange of ideas and expertise, and nurturing a truly international community of next-generation researchers who are making a positive global impact. We are thrilled that the FMDHS has recently joined MIPA and recruited its first cohort of students. We are excited to be a part of this remarkable program and eagerly anticipate its continued growth and success.

Dr Debnath Ghosal

Academic Lead, Faculty of Medicine, Dentistry and Health Sciences

Elevating Research Excellence: The MIPA Way

The Melbourne-India Postgraduate Academy is a pioneering initiative jointly established by The University of Melbourne and premier Indian research institutions, including the Indian Institutes of Technology Madras (IITM), Kanpur (IITK), Kharagpur (IITKGP), Indian Institutes of Science Education and Research (IISER), Tirupati, and the Indian Institute of Science Bangalore (IISC). Focused on nurturing research collaboration and academic excellence, MIPA serves as a beacon of international collaboration between Australia and India.



Signing of MIPA MoU with IIT Kharagpur in April 2018

MIPA provides a unique opportunity for joint PhD candidates enrolled in both programs. These candidates benefit from an enriching international joint-training experience within an elite research community. Key highlights include:

- Exposure to diverse cultural and research environments.
- Guidance and mentorship from field experts.
- Access to cutting-edge facilities and equipment at two esteemed institutions.
- Establishment of robust international networks, promoting research exchange and facilitating high-quality publications.

In 2014, the University of Melbourne established a jointly supervised PhD program called Melbourne India Postgraduate Program (MIPP). This was superseded by the current jointly awarded program, the Melbourne India Postgraduate Academy (MIPA), from April 2018. Continuous investment is pivotal to uphold the excellence of MIPA and achieve its intended outcomes. In addition to supporting 32 MIPP candidates, the University of Melbourne has invested over AUD 10 million to fund 37 MIPA PhD living stipends, fee remission scholarships, and support for research exchange with our Indian partners and collaboration and bi-annual conferences. Simultaneously, our Indian partners have contributed significant resources and talent through their respective PhD scholarship, annual workshops, and research support programs.

The returns from these substantial investments continue to be highly favourable, including

- Attracting exceptional candidates to the University of Melbourne and Indian partner institutions and achieving a remarkable increase in both quantity and quality of research engagement between Melbourne & India.
- Development and sustenance of research collaborations among participating academics, leveraging complementary skills, world-class expertise, and state-of-the-art infrastructure.
- Establishment of a more competitive and impactful platform from which to address critical scientific questions and global challenges.

MIPA has served as a conduit for several long-term networks and collaborations between the University of Melbourne researchers and MIPA partners leading to new research projects and Industry engagement through several initiatives including SPARC (Scheme for Promotion of Academic and Research Collaboration), Projects funded by Government of India, Australia India Strategic Research Fund AISRF Grant, Global Initiative for Academic Network (GIAN) Fellowships for the University of Melbourne faculty, Visiting Advanced Joint Research Faculty Scheme (VAJRA) Fellowship.

MIPA stands as a testament to the unwavering commitment of The University of Melbourne and its Indian partner institutions to foster international research collaboration and cultivate the next generation of global researchers. This initiative not only empowers the joint PhD candidates but also propels academic supervisors towards addressing the most pressing scientific inquiries and global challenges of our time through shared expertise and resources.



IIT Kanpur delegation in Melbourne in March 2023

5

Indian Partner Institutions

7

MIPA Candidates Graduated

30

Current MIPA Researchers

MIPA Candidates

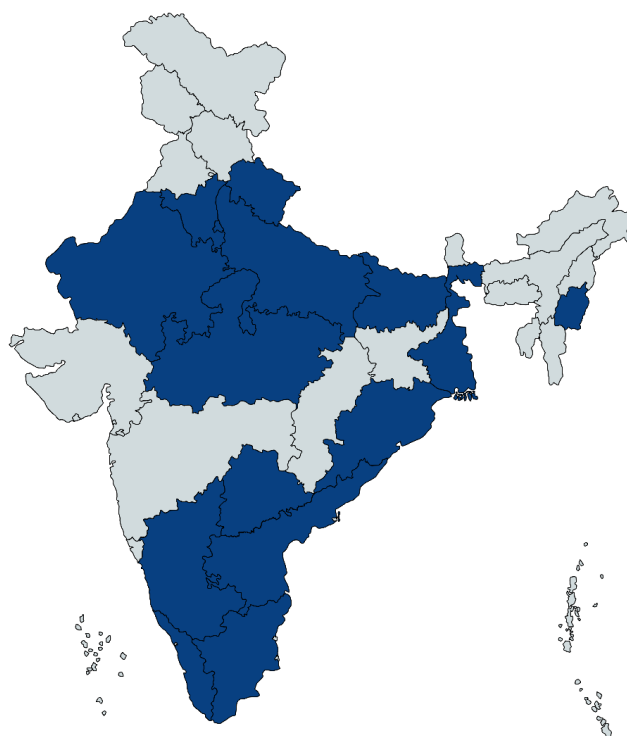
Within the realms of our collaborations with our MIPA partners, we have enrolled 37 exceptional joint PhD candidates since its inception in 2018. The program has proudly enrolled 26 emerging stars thriving in the Faculty of Engineering and Information Technology (FEIT) and an additional 10 in the Faculty of Science (FoS) including first cohort of 2 candidates from IISER Tirupati. In 2023, the Faculty of Medicine, Dentistry and Health Sciences (MDHS) also joined MIPA and enrolled their first joint candidate with IISc Bangalore.

The first MIPA candidate between University of Melbourne and IIT Kanpur, Dr. Salil Goel graduated in 2019 and is now working as Assistant Professor at IIT Kanpur. Salil is currently collaborating with his Melbourne counterparts and also jointly supervising his own cohort of MIPA candidates. Several other MIPA candidates (both graduated and current) have inspiring stories to tell (see page 14-15). The growing cohort of MIPA alumni is a significant resource for our current and future MIPA candidates to tap into for guidance, mentoring and networking.

This is a cohort that embodies India's rich diversity, representing an impressive 15 states across the country, as eloquently showcased on the map below. While we take immense pride in this diversity, our commitment to growth and innovation remains unwavering. As MIPA continues to evolve, the University of Melbourne is steadfast in its mission to broaden the horizons of this exceptional cohort. We aspire to motivate more of our domestic PhD cohort to embrace the opportunity to engage with our esteemed Indian partners, enriching their academic journeys with unparalleled global knowledge exchange.

Hand in hand with our esteemed Indian collaborators, we share a vision that transcends borders. MIPA is a testament to our shared commitment to nurturing the next generation of researchers, innovators, and entrepreneurs in both India and Australia. Together, we are forging pathways to unparalleled research and training opportunities in both nations, ultimately shaping the future of academic collaboration and innovation. MIPA is not just an academic initiative; it's a transformational journey that's redefining the landscape of academic excellence, one visionary joint PhD candidate at a time.

MIPA cohort of joint PhD candidates brings in the diversity of India, representing an impressive 15 states of the country.



MIPA Candidates and Academic Supervisors

MIPA Graduate	The University of Melbourne		Partner Institution in India	
Research Candidate	Dept.	Supervisor(s)	Institute	Supervisor(s)
Salil Goel	FEIT	Allison Kealy	IITK	Bharat Lohani
Pooja Pandey	FEIT	Greg Martin, Muthupandian Ashokkumar	IITKgp	Hari Niwas Mishra
Joydip Mondal	FoS	Muthupandian Ashokkumar	IITKgp	Parthasarathi Ghosal
Pawan Kumar	FEIT	Greg Martin	IITKgp	HN Mishra
Abhisek Mondal	FEIT	Meenakshi Arora, Kathryn Mumford	IITKgp	Brajesh K Dubey
Mayank Bhasin	FoS	Trevor Smith	IITKgp	Pawan Goyal
Padma Naveena Ganapam	FEIT	Marcus Pandy	IITM	Sujatha Srinivasan
Shreshtha Kumar Gupta	FEIT	Robert Gordon	IITK	Vaibhav Arghode
Shubham	FEIT	Richard Sandberg	IITK	Abhijit Kushari
Dibbendu Roy	FEIT	Tansu Alpcan	IITKgp	Goutam Das
Chinglen M. Tensubam	FEIT	Alexander Babanin	IITKgp	Mihir Kumar Dash
Snigdha Sarita Mohapatra	FEIT	Meenakshi Arora, Wenyan Wu	IITKgp	Manoj Kumar Tiwari
Ananth S. Malathi	FEIT	Richard Sandberg, Mohsen Talei	IITM	Vadlamani N. Rao
Ankit Bhadouriya	FEIT	Bishakhdata Gayen	IITK	Rakesh Kumar
Soumendu Sarkar	Fos	David Phillips	IITKgp	Sujoy Kanti Ghosh
Sourav Ghosh	FEIT	Christian Brandl	IITK	Rajdip Mukherjee
Subhajit Chakraborty	Fos	Trevor Smith	IITK	Debabrata Goswami
Anirban Ghosh	FoS	Andy Martin	IITKgp	Sonjoy Majunder
Asif Ahmed Sardar	FEIT	Mariumuthu Palaniswami	IITKgp	Goutam Das
Chesta	FoS	David Jones	IISc	Sampath Srinivasan
Joydeep Baral	FoS	Elizabeth Hinde, Isabelle Rouiller	IITKgp	Amit Kumar Das
Aditya	FEIT	Jagannath Aryal	IITK	Bharat Lohani
Ashwani Kumar	FEIT	Kourosh Koshelham	IITK	Salil Goel
Kunwar Abhishek Singh	FEIT	Meenakshi Arora, Dongryeol Ryu	IITKgp	Manoj Kumar Tiwari
Mehdi Alam	FEIT	Mahdi Miri Disfani	IITK	Arghya Das
Sri Priyanka	FEIT	Dongryeol Ryu	IITK	Bharat Lohani
Zain Torres	FEIT	Alexander Babanin	IITM	Sannasiraj S A
Anita Gautam	FEIT	Jagannath Aryal	IITKgp	Bharath H Aithal
Hema Jha	FEIT	Kathryn Mumford	IITKgp	Brajesh Dubey
K. Sai Keertana	FoS	Alex Idnurm	IISER	Sreenivas Chavali
Latika Joshi	FoS	Alex Johnson	IISER	Annapurna Devi Allu
Nimisha KM	FEIT	Tai Thai	IITKgp	Damodar Maity
Pradeep Ramesh	FoS	Giovanni Turchini	IITKgp	Dibyendu Kamilya
Shilpa Koyyan	FEIT	Dongryeol Ryu	IISc	D Nagesh Kumar
Ayyappan Murugesan	FEIT	Tesfaye Molla	IITKgp	Koushik Biswas
Jagat Narayan Prajapati	MDHS	Stuart Mazzone	IISc	Arnab Barik
Subham Verma	FEIT	Greg Qiao	IITKgp	Nikhil Kumar Singha

32 candidates enrolled through Melbourne India Postgraduate Program (MIPP) and 7 MIPA candidates have now graduated and making significant contributions in academia, industry, and government organisations.

MIPA Candidates



Salil Goel
Unimelb and IIT Kanpur
(Graduated: 2019)



Dibbendu Roy
Unimelb and IIT Kharagpur
(Graduated: 2022)



Joydip Mondal
Unimelb and IIT Kharagpur
(Graduated: 2022)



Pooja Pandey
Unimelb and IIT Kharagpur
(Graduated: 2022)



Ananth S. Malathi
Unimelb and IIT Madras
(Graduated 2023)



Padma N. Ganapam
Unimelb and IIT Madras
(Graduated 2023)



Pawan Kumar
Unimelb and IIT Kharagpur
(Graduated: 2023)



Abhisek Mondal
Unimelb and IIT Kharagpur
Commenced: Dec-2018



Mayank Bahsin
Unimelb and IIT Kharagpur
Commenced: Aug-2018



Shreshtha K. Gupta
Unimelb and IIT Kanpur
Commenced: Aug-2018



Shubham
Unimelb and IIT Kanpur
Commenced: Aug-2018



Chinglen M. Tensubam
Unimelb and IIT Kharagpur
Commenced: Feb-2019



Arunjunai R. S. Kumar
Unimelb and IIT Kharagpur
Commenced: Oct-2019



Snigdha S. Mohapatra
Unimelb and IIT Kharagpur
Commenced: Nov-2019



Ankit Bhadouriya
Unimelb and IIT Kanpur
Commenced: Sep-2020



Soumendu Sarkar
Unimelb and IIT Kharagpur
Commenced: Mar-2020

MIPA Candidates



Sourav Ghosh

Unimelb and IIT Kanpur
Commenced: Jul-2020



Subhajit Chakraborty

Unimelb and IIT Kanpur
Commenced: Jun-2020



Anirban Ghosh

Unimelb and IIT Kharagpur
Commenced: Feb-2021



Asif Ahmed Sardar

Unimelb and IIT Kharagpur
Commenced: Jan-2021



Chesta

Unimelb and IISc
Commenced: Nov-2021



Joydeep Baral

Unimelb and IIT Kharagpur
Commenced: May-2021



Aditya

Unimelb and IIT Kanpur
Commenced: Mar-2022



Ashwani Kumar

Unimelb and IIT Kanpur
Commenced: Apr-2022



K. Abhishek Singh

Unimelb and IIT Kharagpur
Commenced: Jan-2022



Mehdi Alam

Unimelb and IIT Kanpur
Commenced: Feb-2022



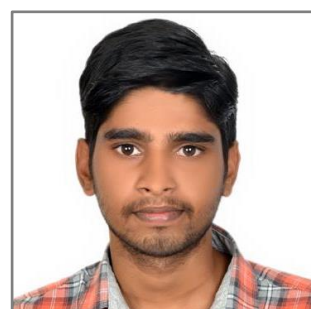
Sri Priyanka

Unimelb and IIT Kanpur
Commenced: Mar-2022



Zain Torres

Unimelb and IIT Madras
Commenced: Jul-2022



Ayyappan Murugesan

Unimelb and IIT Kharagpur



K Sai Keeratana

Unimelb and IISER Tirupati



Pradeep Ramesh

Unimelb and IIT Kharagpur



Shilpa Koyyan

Unimelb and IISc Bangalore

MIPA Alumni Sharing Their Experiences



Dibbendu Roy

MIPA Graduate (2022)

I am wrapping up my Postdoc Research at KTH Royal Institute of Technology, Stockholm Sweden to join IIT Indore from Nov-2023 as Assistant Professor.

MIPA has been the cornerstone of my academic and research journey, offering a deeply fulfilling experience. Guided by esteemed experts in their respective fields, I flourished, pioneering cutting-edge research. Collaborations with industry partners provided invaluable insights into future directions. Special thanks go to the program coordinators for their unwavering support during challenging times. Post-PhD, I secured competitive roles as a Postdoc researcher and faculty member, a testament to the profound impact MIPA had in shaping my academic and professional trajectory."



Pooja Pandey

MIPA Graduate (2022)

Graduating in December 2022, I embarked on this academic adventure, harnessing the knowledge and expertise from two distinguished institutions – University of Melbourne and IIT Kharagpur, India. The know-how and hands-on skills acquired during my PhD has helped me getting my dream job at Phaslo Global, Brisbane, where I am at the forefront of formulating a Phase Change Formula (PCF) that is fully recyclable and food-safe, hence presents as a superior alternative to dry ice and polystyrene.

My MIPA experience at the University of Melbourne has been a remarkable journey of growth, innovation, and impact. The program's commitment to fostering scientific innovation and creativity, resilience, and teamwork has propelled me to new heights in my quest to revolutionize the world of food engineering and safety.



Joydip Mondal

MIPA Graduate (2022)

I am currently doing my postdoc assignment with CSIRO, Melbourne, working in the field of multiphase flow relevant to the biomedical and energy sectors. in Melbourne.

MIPA signifies the unique collaboration that brings together the academic excellence of both institutions, creating a dynamic platform for cross-continental research and innovation. MIPA offered me the extraordinary opportunity to draw from the combined strengths of two esteemed universities, fostering a global perspective and facilitating groundbreaking research. It also provided me an initial platform to interact and network with professionals from diverse fields. This greatly helped to shape my career goals in Australia.

The unique collaboration between the University of Melbourne and Indian partner institutions brings together the academic excellence of both institutions, creating a dynamic platform for cross-continental research and innovation.

Current MIPA Candidates Sharing Experiences



My journey as a MIPA candidate has been nothing short of extraordinary. Being part of this joint Ph.D. program, bridging the excellence of IIT Kharagpur and the University of Melbourne, has been a profound educational adventure.

The program has seamlessly connected me with renowned mentors, granting invaluable insights and access to world-class resources from both institutions. As I navigate this unique academic odyssey, I am confident that MIPA is equipping me with the tools to not only achieve scholarly success but also to evolve into a well-rounded individual.

Kunwar Abhishek Singh | PhD Candidate, MIPA



I am deeply grateful to MIPA for this exceptional opportunity, which has been an enriching and transformative experience. The collaboration between The University of Melbourne and the Indian Institute of Technology Kanpur has broadened my horizons and provided

access to world-class research opportunities. The cultural exchange and networking have enriched my academic experience, and the knowledge and connections gained will shape my future contributions to my field and society.

Sri Priyanka | PhD Candidate, MIPA



I embarked on my research journey in 2019 in the Department of Biotechnology at IIT Kharagpur, under the MIPA program. This joint PhD program has significantly enhanced and enriched my doctoral experience, offering me the unique

opportunity to conduct my research at two prestigious institutions. By merging the expertise and resources of both institutions, I gained access to a wide array of academic perspectives and state-of-the-art research facilities. The program has broadened my perspective on a global scale, allowing me to engage with diverse research environments and academic communities. This has proven to be exceptionally beneficial in shaping my academic and research journey. My experience with the MIPA program has been immensely valuable, providing me with a multifaceted and globally oriented doctoral education.

Joydeep Baral | PhD Candidate, MIPA



The unique collaboration between these two prestigious institutions has allowed me to tap into a diverse pool of knowledge and expertise. Studying under the guidance of professors from the University of Melbourne has been a transformative experience. Their insights

and research acumen have broadened my horizons and provided me with a global perspective on my field of study.

Melbourne, with its vibrant culture and thriving research community, fosters innovation and collaboration, making every day of my research journey truly enjoyable. MIPA program has been an awesome experience that has expanded my knowledge, enhanced my research skills, and exposed me to the best of both Indian and Australian academic worlds.

Anirban Ghosh | PhD Candidate, MIPA

MIPA Academic Supervisors' Experiences



Professor Andrew Western

Head of Infrastructure
Engineering, University of
Melbourne

"I previously supervised Dr Chinchu Mohan with Prof Madan Jha at IIT Kharagpur and am now at the beginning of the road with two new joint PhD candidates from IISc. I've also chaired PhD advisory panels in the program. MIPA has been a fantastic opportunity to develop collaborative relationships and, also for me to learn more about India and the commonalities and differences in water issues between Australia and India. I feel it has also provided a great opportunity for the graduate researchers to develop a broader understanding."



A/Prof Annapurna Devi Allu

Biology, Indian Institute of
Science Education and Research
(IISER), Tirupati

"I am thrilled that the MIPA program with IISER Tirupati has successfully commenced with two joint PhD candidates this year. This program provides an unparalleled opportunity to train young researchers in a scientifically dynamic and stimulating environment, while also significantly strengthening research collaborations. I and Dr Alex Johnson jointly supervise a graduate researcher who will work towards unravelling the mechanisms underlying plant response to the combination of drought and heat stress. We envisage that the outcomes of this research will lay the foundation towards developing climate-smart crops for food security."



Professor Sujatha Sreenivasan

Department of Mechanical
Engineering, Indian Institute of
Technology Madras

"The MIPA program has been a great way to collaborate with the University of Melbourne, and Prof. Marcus Pandey. Over the course of guiding our PhD student, Dr. G. Padma Naveena (who graduated this year), Marcus and I have had the opportunity to make mutual visits - Marcus through the Indian government's GIAN and VAJRA programs, and myself through Unimelb's MSE Visiting Fellowship. These visits have further helped us expand our interactions and activities with other faculty. The joint PhD was a great experience for Naveena as well. I look forward to expanded associations with Unimelb, especially through the MIPA program."

MIPA Academic Supervisors' Experiences



MIPA has helped me to attract one PhD candidate from IIT Kanpur and lead the proposals on Australia-India joint calls along with academics from multiple IITs. In addition, MIPA helped

me to establish a strong academic partnership with IITs and IISc colleagues in generating research outputs.

A/Prof Jagannath Aryal

Department of Infrastructure Engineering,
University of Melbourne



MIPA has allowed me to reach out and expand my research profile, bring Chesta into my group." Chesta works on photo-rechargeable batteries, which is an excellent complement to my core research in organic solar cells.

Chesta is halfway through her stay in my research group and is an excellent addition. I am looking forward to expanding our collaboration with IISc Bangalore.

A/Prof David Jones

School of Chemistry, University of Melbourne

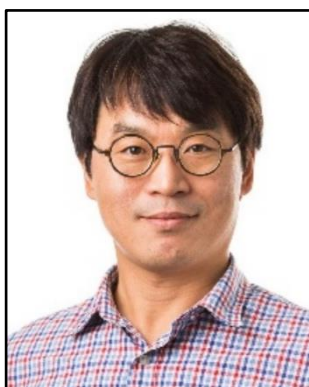


We have been largely involved in delineating the impact of protein segments with compositional bias on the physiology of individual species such as yeast and humans. The MIPA program has provided

us with an opportunity to expand our horizons and investigate the role of such protein segments in inter-species interactions, specifically fungal pathogenesis in humans. MIPA has facilitated joint supervision of a graduate researcher by me and Dr. Alexander Idnurm, University of Melbourne, opening new avenues to understand and tackle deadly fungal diseases.

A/Prof Sreenivas Chavali

Biology, Indian Institute of Science Education and Research (IISER), Tirupati



MIPA has created great opportunities to work with some of the brightest minds from the partner institutions of India. I am privileged to work with three MIPA PhD candidates who brought talents and energy to Melbourne. As

a member of strong international collaborative team, they tackle three exciting challenges in achieving sustainable water use and management using innovative remote sensing techniques at global coverage.

Professor Dongryeol Ryu

Department of Infrastructure Engineering, University of Melbourne

The MIPA program stands as a beacon of collaboration between two academic powerhouses, fostering the exchange of knowledge and innovation. Working with Indian talents and premier research organizations has enriched our research landscape, paving the way for transformative breakthroughs.

MIPA Activities

Since commencement, MIPA has been actively collaborating with partner Indian institutions and producing high quality research. MIPA has signed new MoUs with IISc and IISERT during pandemic, organised various workshops – in person as well as online, and hosted delegates from partner institutes. Through MIPA conferences, MIPA has provided a platform for research collaborations without boundaries.

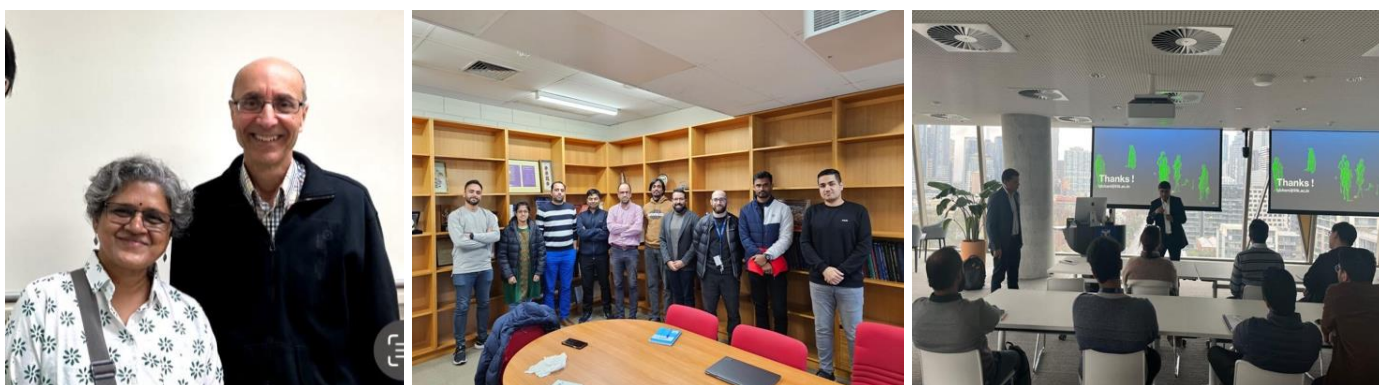


MIPA Activities

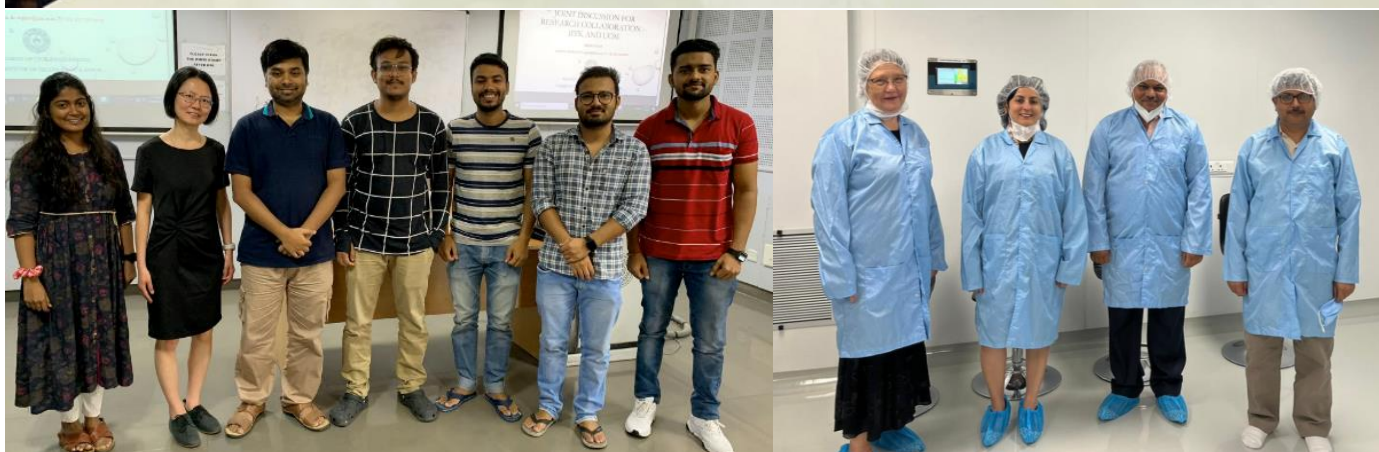
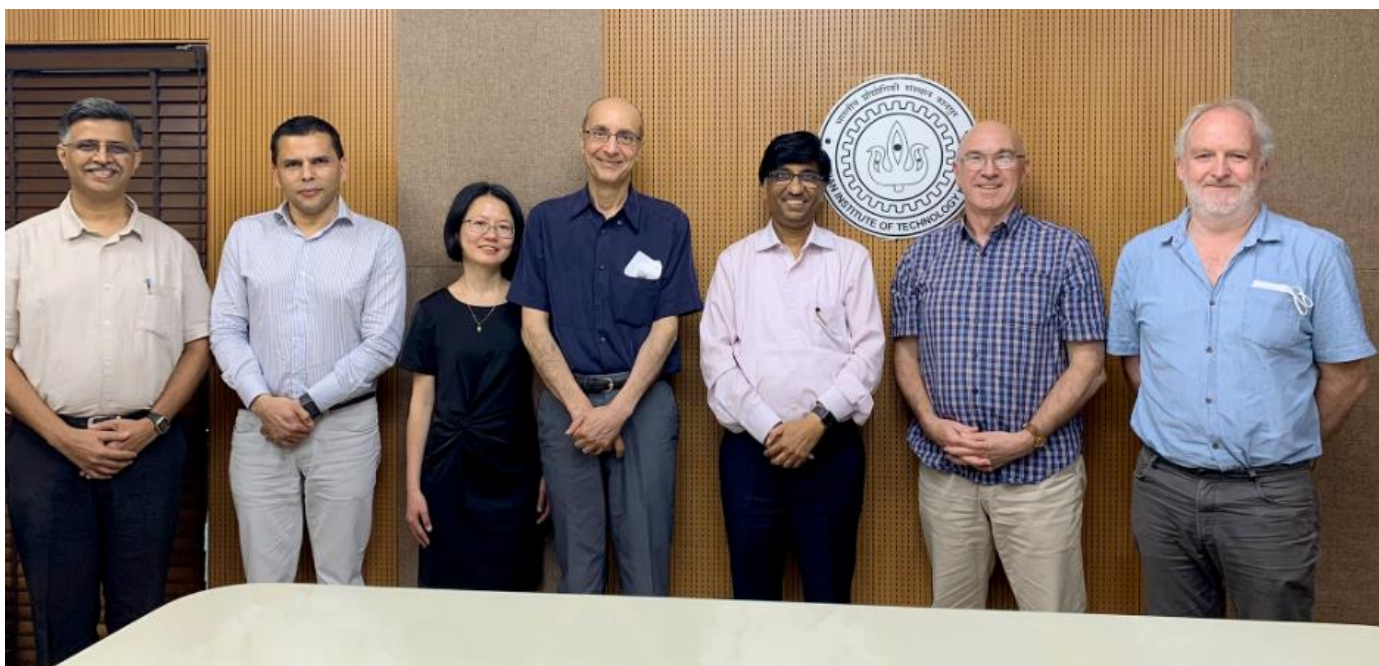


IIT Kanpur delegation in Melbourne, March 2023

MIPA Activities



Professor Sujatha Sreenivasan from IIT Madras, Professor Arghaya Das from IIT Kanpur and Professor Bharat Lohani from IIT Kanpur visiting University of Melbourne in 2023



University of Melbourne delegation visit to IIT Kanpur in 2022

MIPA Activities



University of Melbourne delegation visit to IIT Kharagpur in September 2022



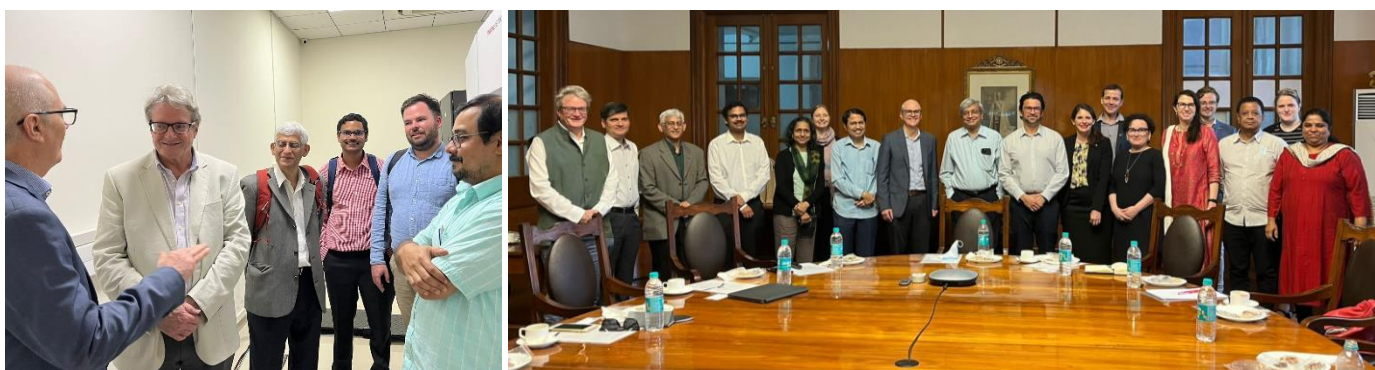
Visit to IISER Tirupati in September 2022

Visit to IIT Madras in September 2022



University of Melbourne delegation visit to IISc Bangalore in September 2022

MIPA Activities



Research engagement at IISc: Faculty of Medicine, Dentistry and Health Sciences (The University of Melbourne) delegation visit to IISc in September 2022



MIPA team is enjoying local cuisine during their visit to IIT Madras in September 2022



MIPA team with the University of Melbourne delegation visit to IIT Delhi in 2022

MIPA OUTREACH

Indian Institute of Technology Alumni, Victoria (IITaV)

Indian Institute of Technology Alumni, Victoria (IITaV) is a professional organisation established in October 2010 to provide a common platform for community of alumni of Indian Institutes of Technology based in Victoria (IITaV), Australia. The University of Melbourne is a Gold Sponsor for IITaV, as this collaboration provides MIPA graduate researchers with a platform to interact and network with IIT alumni in Victoria who are making significant contributions to the Australian economy through their work in academic, industrial and government sectors in science and technology domains. IITaV provides support to our graduate researchers through organising annual Professional Development events, mentoring opportunities and range of social events.



MIPA GR's and Staff enjoying Diwali celebration with IITaV. IITaV members delivering Careers panel at MIPAC 2019

I2G

I2G (Indian Institutes Graduates) is a social and professional group that serves as a networking platform for research scholars with Indian heritage at the University of Melbourne. With a mission to foster a strong sense of community and to promote cohesive bonding among Indian students, I2G hosts a variety of cultural and professional events throughout the year that facilitates regular interaction among our members. These events also provide opportunities for academic and professional development, contributing to the long-term success of our members.



Current executive committee of I2G.



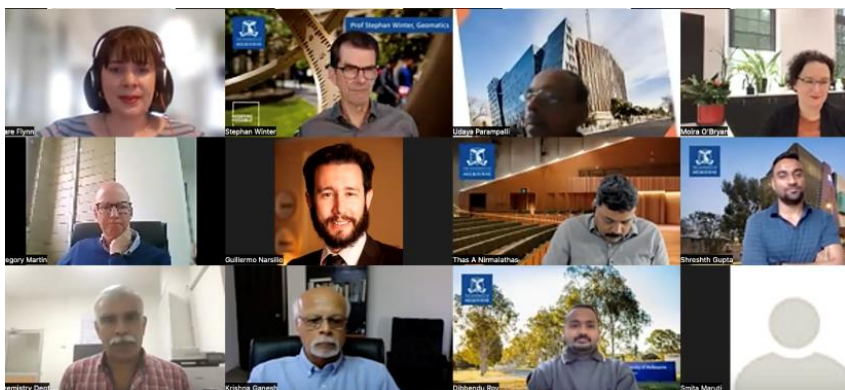
Independence Day celebration by I2G in 2023.

Past MIPA Conferences

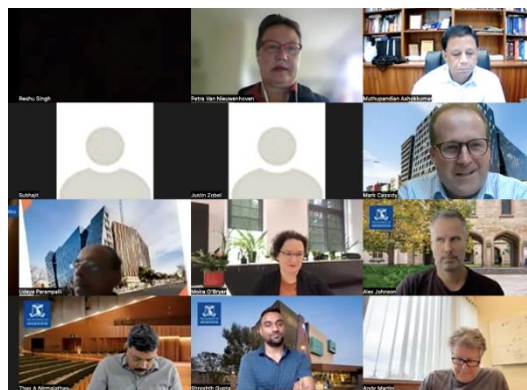
MIPA Conference is held in Melbourne every two years to provide all MIPA candidates an opportunity to present their joint research to peers and broader academy. The conference also brings the Indian supervisors from partner institutions to Melbourne for further networking and research exchange with the Melbourne academics, meeting new colleagues, visiting facilities and delivering seminars in respective departments. The MIPA conferences have been very well supported by University of Melbourne leadership, Melbourne Consul office and members of IITaV. The 2022 conference was held fully online due to COVID-19 lockdowns.



Snippets of MIPAC 2019



Snippets of MIPAC 2022



MIPA Conference 2023

The fourth MIPA Conference (MIPAC-23) is scheduled to be held during 16-17 November 2023 in Melbourne, with a pre-conference academic workshop on 15 November.

MIPAC-23 will be held at the University of Melbourne's new purpose-built precinct for innovation and digital transformation, Melbourne Connect. The two-day conference will provide an excellent platform for graduate researchers to expand their academic networks and share research with the community from the University of Melbourne and the collaborating Indian Institutes of Technology: Kharagpur (IIT-KGP), Kanpur (IIT-K), Madras (IIT-M), the Indian Institute of Science, Bangalore (IISc) and the Indian Institute of Education and Research Tirupati (IISERT). This diverse program offers an enriching environment for the exchange of ideas and multi-disciplinary collaborations. We look forward to seeing you all in Melbourne in November.

Due to the joint nature of MIPA, we have joint PhD candidates at various Indian partner institutions at any given time, therefore the conference will be organised in a hybrid mode, with delegates attending in-person at the University of Melbourne and some candidates and academics via online platforms from India.

Organising Committee



From the top (left to right): [MIPA candidates] Aditya, Anirban Ghosh, Asif Ahmed Sardar, Chesta, Kunwar Abhishek Singh, Mehdi Alam, Sri Priyanka, Subhajit Chakraborty; [Advisory] Dr Meenakshi Arora, Dr Surinder Singh Chauhan, Dr Debnath Ghoshal; [Supported by] Dr Krishna Chandra Somalettha, Daniella Reichert, and Dr Mukesh Soni; [Not in picture] Rebecca Whitsed, Maria Han and Bridget Nelthropp

MIPA: Awards and Achievements



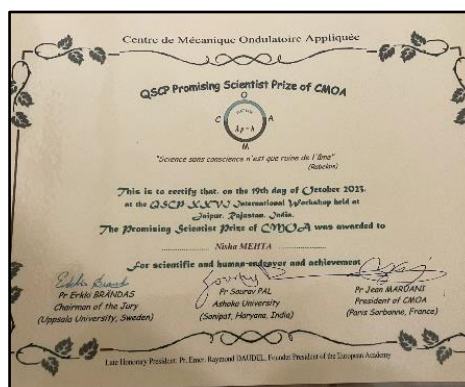
Graduate researcher **Kunwar Abhishek Singh** won the best Paper Award in the VII ISEES International Conference on "Sustainable Energy and Environmental Challenges (SEEC- 2022)."



MIPA Director, **Dr Meenakshi Arora** got featured on the cover page of 'Women Entrepreneur India' magazine in their special issue on '[Top 10 Indian Women Leaders from Australia 2023.](#)'



MIPA was awarded the Australia India Impact Award by the India Australia Business and Community Alliance (2022) for its impact on fostering scientific collaborations between India and Australia.



Nisha Mehta, a MIPA graduate received the Quantum Systems in Chemistry, Physics and Biology (QSCP) Promising Scientist Prize of Centre de Mécanique Ondulatoire Appliquée (CMOA) in 2023.

Publications from MIPA Candidates 2019-2023

- [1]. A Pandey, DK Thapa, SK Saha. "Electron condensation in a jellium coupled to a finite photonic cavity." US Patent US20200402686A1. Published on 24-12-2020.
- [2]. A. A. Sardar, D. Roy, W.U. Mondal and G. Das, "Queuing Analysis of QoS Aware Microwave Power Transfer Enabled CR-IoT Network"; accepted IEEE TWC 2022.
- [3]. A. A. Sardar, D. Roy, W.U. Mondal and G. Das, "Sustainability Analysis of Opportunistic CR-IoT Network Employing Microwave Power Transfer"; accepted IEEE TCCN 2022.
- [4]. Ahmad, K., Gupta, S.K. and Arghode, V.K., 2023. Investigation of a low emission peripheral vortex reverse flow combustor fuelled by LPG & ethylene. *Journal of the Energy Institute*, 108, p.101200.
- [5]. Alam, M., Parol, V. and Das, A. (2022) 'A DEM study on microstructural behaviour of soluble granular materials subjected to chemo-mechanical loading', *Geomechanics for Energy and the Environment*, 32, p. 100390.
- [6]. Ananth, S.M., Nardini, M., Vaid, A., Sandberg, R.D. and Vadlamani, N.R., 2022, June. Profile Loss Reduction of High Lift Turbine Blades with Rough and Ribbed Surfaces. In *Turbo Expo: Power for Land, Sea, and Air* (Vol. 86106, p. V10BT30A026). American Society of Mechanical Engineers.
- [7]. Arghode, V.K. and Gupta, S.K., 2019. Investigation of a reverse-cross flow combustor with varying fuel injection momentum.
- [8]. Baral, J., Bhattacharje, G., Dash, S., Samanta, D., Hinde, E., Rouiller, I. and Das, A.K., 2023. In silico and in vitro characterization of the mycobacterial protein Ku to unravel its role in non-homologous end-joining DNA repair. *bioRxiv*, pp.2023-06.
- [9]. Bhar, R., Mondal, A., Dubey, B.K. and Ghangrekar, M.M., 2023. A review on the scope of remediating chlorinated paraffin contaminated water bodies and soils/sediments. *Science of The Total Environment*, p.163941.
- [10]. Chakraborty, R., Bhattacharje, G., Baral, J., Manna, B., Mullick, J., Mathapati, B.S., Abraham, P., Madhumathi, J., Hasija, Y., Ghosh, A. and Das, A.K., 2022. In-silico screening and in-vitro assay show the antiviral effect of Indomethacin against SARS-CoV-2. *Computers in Biology and Medicine*, 147, p.105788.
- [11]. Chakraborty, S., Mishra, A.K., Rawat, A.K. and Goswami, D., 2021, November. Understanding the photothermal response of CBNP nanofluids using thermal lens spectroscopic techniques. In *Laser Science* (pp. JTU1A-99). Optica Publishing Group.
- [12]. Chakraborty, S., Mishra, A.K., Rawat, A.K. and Goswami, D., 2022, October. Diluting Convective Effects in Femtosecond Laser Induced Thermal Lens Measurements with Thermally Active Constituents. In *Laser Science* (pp. JW5A-25). Optica Publishing Group.
- [13]. Chakraborty, S., Rawat, A.K. and Goswami, D., 2019, December. Sensing the molecular properties in methanol and its binary mixtures using time-resolved thermal lens spectrometer. In *2019 Workshop on Recent Advances in Photonics (WRAP)* (pp. 1-3). IEEE.
- [14]. Chakraborty, S., Rawat, A.K., Mishra, A.K. and Goswami, D., 2023. Quality assessment of the commercially available alcohol-based hand sanitizers with femtosecond thermal lens spectroscopy. *PeerJ Analytical Chemistry*, 5, p.e25.
- [15]. Chakraborty, S., Xu, Y., Roberts, A., Goswami, D. and Smith, T.A., 2022. An investigation of evanescent wave-induced fluorescence spectroscopy for exploring high refractive index media. *Physica Scripta*, 98(1), p.015014.
- [16]. D. Roy, A. S. Rao, T. Alpcan, G. Das and M. Palaniswami, "Achieving AI-Enabled Robust End-to-End Quality of Experience Over Backhaul Radio Access Networks," in *IEEE Transactions on Cognitive Communications and Networking*, vol. 8, no. 3, pp. 1468-1481, Sept. 2022,
- [17]. Das, P., Maity, P.P., Ganguly, S., Ghosh, S., Baral, J., Bose, M., Choudhary, S., Gangopadhyay, S., Dhara, S., Das, A.K. and Banerjee, S., 2019. Biocompatible carbon dots derived from κ -carrageenan and

phenyl boronic acid for dual modality sensing platform of sugar and its anti-diabetic drug release behavior. *International journal of biological macromolecules*, 132, pp.316-329.

- [18]. Dayal, S., Goel, S., Lohani, B., Mittal, N. and Mishra, R.K., 2021. Comprehensive airborne laser scanning (ALS) simulation. *Journal of the Indian Society of Remote Sensing*, 49, pp.1603-1622.
- [19]. Dey, S., Goel, S., Tomko, M. and Winter, S., 2021. 13 Mapping Parking Spaces Using Crowd-Sourced Trajectories. *SMART PARKING IN FAST-GROWING CITIES*, p.184.
- [20]. Dey, S., Winter, S., Goel, S. and Tomko, M., 2021. Identification of parking spaces from multi-modal trajectory data. *Transactions in GIS*, 25(6), pp.3088-3118.
- [21]. Dibbendu Roy, Aravinda S. Rao, Tansu Alpcan, Goutam Das, and Marimuthu Palaniswami, "Achieving QoS for bursty uRLLC applications over passive optical networks," *J. Opt. Commun. Netw.* 14, 411-425 (2022)
- [22]. Dutta, S., Roy, D. and Das, G., 2019. A 1-approximation algorithm for energy-efficient TDM-PON guaranteeing SLA of up-stream and down-stream traffic. *arXiv preprint arXiv:1902.04004*.
- [23]. Dutta, S., Roy, D. and Das, G., 2019. Protocol design for energy efficient OLT transmitter in TWDM-PON guaranteeing SLA of up-stream and down-stream traffic. *arXiv preprint arXiv:1909.10918*.
- [24]. Dutta, S., Roy, D. and Das, G., 2021. Protocol Design for Energy Efficient OLT in TWDM-EPON Supporting Diverse Delay Bounds. *IEEE Transactions on Green Communications and Networking*, 5(3), pp.1438-1450.
- [25]. Dutta, S., Roy, D. and Das, G., 2021. SLA-aware protocol design for energy-efficient OLT transmitter in TWDM-EPON. *IEEE Transactions on Green Communications and Networking*, 5(4), pp.1961-1973.
- [26]. Dutta, S., Roy, D. and Das, G., 2022, September. XR-specific C-DRX Enhancement for UE power saving in 5G NR. In *2022 IEEE 33rd Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)* (pp. 1-6). IEEE.
- [27]. Dutta, S., Roy, D. and Das, G., 2023. Modified Split-Rendering Architecture to enable AI-assisted Application-aware MAC for XR Slice. *IEEE Networking Letters*.
- [28]. Gabela, J., Retscher, G., Goel, S., Perakis, H., Masiero, A., Toth, C., Gikas, V., Kealy, A., Koppányi, Z., Błaszczak-Bąk, W. and Li, Y., 2019. Experimental evaluation of a UWB-based cooperative positioning system for pedestrians in GNSS-denied environment. *Sensors*, 19(23), p.5274.
- [29]. Ganesh, N., Ananth, S.M., Vadlamani, N.R., Sriram, R. and Kontis, K., 2020. Eddy resolving simulations of shear layer instabilities in open cavity flows.
- [30]. Ghosh, A., Martin, A.M. and Majumder, S., 2023. Quench dynamics of edge states in a finite extended Su-Schrieffer-Heeger system. *arXiv preprint arXiv:2303.00269*.
- [31]. Ghosh, S., Das, P., Ganguly, S., Remanan, S., Das, T.K., Bhattacharyya, S.K., Baral, J., Das, A.K., Laha, T. and Das, N.C., 2019. 3D-enhanced, high-performing, super-hydrophobic and electromagnetic-interference shielding fabrics based on silver paint and their use in antibacterial applications. *ChemistrySelect*, 4(40), pp.11748-11754.
- [32]. Goel, S., 2021. 4 Navigation in Urban Environments. *Smart parking in fast growing cities*, p.42.
- [33]. Goel, S., Gabela, J., Retscher, G., Toth, C., Masiero, A. and Kealy, A., 2020. UWB Cooperative Localization of Pedestrians along a Constrained Building Hallway. In *International Global Navigation Satellite Systems (IGNSS) 2020* (p. 13).
- [34]. Goel, S., Kealy, A. and Lohani, B., 2019. Posterior cramer rao bounds for cooperative localization in low-cost UAV swarms. *Journal of the Indian Society of Remote Sensing*, 47, pp.671-684.
- [35]. Gowd, S. C., Ramesh, P., Vigneswaran, V. S., Barathi, S., & Rajendran, K. (2023). Life cycle assessment of comparing different nutrient recovery systems from municipal wastewater: A path towards self-reliance and sustainability. *Journal of Cleaner Production*, 410, 137331.
- [36]. Gupta, S.K. and Arghode, V.K., 2019. Investigation of a reverse-cross flow combustor with varying fuel injection momentum. *Thermal Science and Engineering Progress*, 10, pp.232-244.
- [37]. Gupta, S.K. and Arghode, V.K., 2019. Investigation of a reverse-cross flow combustor with varying fuel injection momentum. *Thermal Science and Engineering Progress*, 10, pp.232-244.
- [38]. Gupta, S.K. and Arghode, V.K., 2022. Characteristics of Premixed Flames of Hot and Diluted Mixtures. *Combustion Science and Technology*, pp.1-22.

- [39]. Gupta, S.K., Kushwaha, A.K. and Arghode, V.K., 2020. Investigation of peripheral vortex reverse flow (PVRF) combustor for gas turbine engines. *Energy*, 193, p.116766.
- [40]. Gupta, S.K., Palulli, R., Talei, M. and Gordon, R., 2020. Displacement speed characteristics during head-on quenching of premixed methane/air flames.
- [41]. Gupta, S.K., Palulli, R., Talei, M., Gordon, R.L. and Arghode, V.K., 2022. CO modelling of premixed head-on quenching flame in the context of Large-Eddy Simulation. *International Journal of Heat and Fluid Flow*, 93, p.108895.
- [42]. Gupta, S.K., Pramanik, S., Arghode, V. and Ravikrishna, R.V., 2019. Reaction Zone Characterization of a Low Emission Reverse-Cross Flow Combustor. In *AIAA Propulsion and Energy 2019 Forum* (p. 4369).
- [43]. Gupta, S.K., Pramanik, S., Gordon, R.L., Ravikrishna, R.V. and Arghode, V.K., 2022. Combustion characteristics of a reverse-cross-flow combustor. *Journal of the Energy Institute*, 103, pp.1-16.
- [44]. Islam, Saurav, Rekha Mahadevu, Subham Kumar Saha, Phanibhusan Singha Mahapatra, Biswajit Bhattacharyya, Dev Kumar Thapa, T. Phanindra Sai, Satish Patil, Anshu Pandey, and Arindam Ghosh. "Current-voltage characteristics in Ag/Au nanostructures at resistive transitions." *arXiv preprint arXiv:1906.02291* (2019).
- [45]. Jasmin, Ayesha, Pradeep Ramesh, and Mohammad Tanveer. "Development of Artificial Intelligence-based chatbot for smart aquafarm practices." *Expert Systems* (2022).
- [46]. Jasmin, S. Ayesha, Pradeep Ramesh, and Mohammad Tanveer. "An intelligent framework for prediction and forecasting of dissolved oxygen level and biofloc amount in a shrimp culture system using machine learning techniques." *Expert Systems with Applications* 199 (2022): 117160.
- [47]. Kasa, V.P., Mondal, A., Cheela, V. and Dubey, B.K., 2022. Occurrences, impacts, and characterization of microplastics in terrestrial ecosystem to aid policy. *Current Opinion in Environmental Science & Health*, 27, p.100361.
- [48]. Kealy, A., Retscher, G., Li, Y., Gonzales, T., Goel, S. and Gabela, J., 2019. Robust Positioning Performance in Indoor Environments. In *E3S Web of Conferences* (Vol. 94, p. 02001). EDP Sciences.
- [49]. Kumar, A., Singh, N., Singh, D.K. and Goel, S., Zero Velocity Detection in Foot-mounted Inertial Sensors: Novel method for generating zero velocity labels and a comparative analysis of data driven methods.
- [50]. Kumar, A.R.S., Padmakumar, A., Kalita, U., Samanta, S., Baral, A., Singha, N.K., Ashokkumar, M. and Qiao, G., 2023. Ultrasonics in Polymer Science; Applications and Challenges. *Progress in Materials Science*, p.101113.
- [51]. Kundu, S., Chatterjee, N., Chakraborty, S., Gupta, A., Goswami, D. and Misra, S.K., 2022. Poly-lysinated nanoscale carbon probe for low power two-photon bioimaging. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 270, p.120778.
- [52]. Laha, M., Roy, D., Dutta, S. and Das, G., 2023. AI-assisted Improved Service Provisioning for Low-latency XR over 5G NR. *arXiv preprint arXiv:2307.08987*.
- [53]. Mahapatra, Phanibhusan S., Subham Kumar Saha, Rekha Mahadevu, Saurav Islam, Pritha Mondal, Shreya Kumbhakar, T. Phanindra Sai et al. "Observation of excess resistance anomaly at resistive transitions in Ag/Au nanostructures." *arXiv preprint arXiv:1912.05428* (2019).
- [54]. Malathi Ananth, S., Nardini, M., Vaid, A., Kozul, M., Rao Vadlamani, N. and Sandberg, R.D., 2023. Riblet Performance Beneath Transitional and Turbulent Boundary Layers at Low Reynolds Numbers. *AIAA Journal*, 61(5), pp.1986-2001.
- [55]. Masiero, A., Dabove, P., Di Pietra, V., Piragnolo, M., Vettore, A., Cucchiaro, S., Guarnieri, A., Tarolli, P., Toth, C., Gikas, V. and Perakis, H., 2021. A case study of pedestrian positioning with UWB and UAV cameras. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences-ISPRS Archives*.
- [56]. Masiero, A., Dabove, P., Di Pietra, V., Piragnolo, M., Vettore, A., Guarnieri, A., Toth, C., Gikas, V., Perakis, H., Chiang, K.W. and Ruotsalainen, L.M., 2022. A Comparison Between Uwb and Laser-based Pedestrian Tracking. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 43, pp.839-844.

- [57]. Masiero, A., Perakis, H., Gabela, J., Toth, C., Gikas, V., Retscher, G., Goel, S., Kealy, A., Koppányi, Z., Blaszcak-Bak, W. and Li, Y., 2020. Indoor navigation and mapping: Performance analysis of UWB-based platform positioning.
- [58]. Mishra, A., Mondal, J., Roy, A., Lakkaraju, R. and Ghosh, P., 2020, March. Effect of curved rigid surface on the collapsing cavitating bubble in cryogenic environment. In IOP Conference Series: Materials Science and Engineering (Vol. 755, No. 1, p. 012067). IOP Publishing.
- [59]. Mishra, A., Mondal, J., Roy, A., Lakkaraju, R. and Ghosh, P., 2020. Jet and shock characteristics of collapsing cavitating bubble in cryogenic environment.
- [60]. Misra, S., Kumar, S., Pandey, P., Mandliya, S., Ghosh, M., Srivastava, S. and Mahato, D.K., 2023. Occurrence, Production, Determination, Toxicity, and Control Strategies of Cyclopiazonic Acid in Food Products. In *Mycotoxins in Food and Feed* (pp. 265-286). CRC Press.
- [61]. Misra, S., Mandliya, S., Pandey, P., Panigrahi, C., Dalbhagat, C.G. and Mishra, H.N., 2023. Effect of Spray-and Freeze-Dried Microcapsules Containing Probiotics and γ -Aminobutyric Acid on Nutritional, Physicochemical, Textural, Pasting, Rheological, and Microstructural Characteristics of Composite Dough. *Food and Bioprocess Technology*, pp.1-15.
- [62]. Misra, S., Pandey, P. and Mishra, H.N., 2021. Novel approaches for co-encapsulation of probiotic bacteria with bioactive compounds, their health benefits and functional food product development: A review. *Trends in Food Science & Technology*, 109, pp.340-351.
- [63]. Misra, S., Pandey, P. and Mishra, H.N., 2023. Probiotication in multigrain dough and biscuits with the incorporation of erythritol: Evaluation of techno-functional properties using chemometric approach. *Food Science and Technology International*, p.10820132231188631.
- [64]. Misra, S., Pandey, P., Dalbhagat, C.G. and Mishra, H.N., 2022. Emerging technologies and coating materials for improved probiotication in food products: A review. *Food and Bioprocess Technology*, 15(5), pp.998-1039.
- [65]. Misra, S., Pandey, P., Panigrahi, C. and Mishra, H.N., 2023. A comparative approach on the spray and freeze drying of probiotic and Gamma-aminobutyric acid as a single entity: Characterization and evaluation of stability in simulated gastrointestinal conditions. *Food Chemistry Advances*, 3, p.100385.
- [66]. Misra, S., Pandey, P., Panigrahi, C. and Mishra, H.N., 2023. Evaluation of potentiality of erythritol on improving the physicochemical, functional, and pasting properties, along with the storability of multigrain flour using chemometric approach. *Journal of Stored Products Research*, 101, p.102088.
- [67]. Mohapatra, S.S., Wu, W., Tiwari, M.K. and Arora, M., 2022. An IUWM incorporated model to improve water supply reliability in intermittent and no service areas. *Resources, Conservation and Recycling*, 181, p.106248.
- [68]. Mondal, A., Arora, M., Dubey, B.K. and Mumford, K., 2022. Comparative assessment of the characteristics and Cr (VI) removal activity of the bimetallic Fe/Cu nanoparticles pre-and post-coated with carboxymethyl cellulose. *Chemical Engineering Journal*, 444, p.136343.
- [69]. Mondal, A., Dubey, B.K., Arora, M. and Mumford, K., 2021. Porous media transport of iron nanoparticles for site remediation application: A review of lab scale column study, transport modelling and field-scale application. *Journal of Hazardous Materials*, 403, p.123443.
- [70]. Mondal, J., Lakkaraju, R., Ghosh, P. and Ashokkumar, M., 2021. Acoustic cavitation-induced shear: a mini-review. *Biophysical Reviews*, pp.1-15.
- [71]. Mondal, J., Li, W., Rezk, A.R., Yeo, L.Y., Lakkaraju, R., Ghosh, P. and Ashokkumar, M., 2021. Acoustic cavitation at low gas pressures in PZT-based ultrasonic systems. *Ultrasonics Sonochemistry*, 73, p.105493.
- [72]. Mondal, J., Mishra, A., Lakkaraju, R., Ashokkumar, M. and Ghosh, P., 2020, March. Effect of solid surface in vicinity of multi-bubble array in cryogenic environment. In IOP Conference Series: Materials Science and Engineering (Vol. 755, No. 1, p. 012066). IOP Publishing.
- [73]. Mondal, Pritha, Subham Kumar Saha, Awadhesh Narayan, and Anshu Pandey. "Electron condensation in a jellium coupled to a finite photonic cavity." *arXiv preprint arXiv:2011.13155* (2020).

- [74]. Mondal, W.U., Roy, D., Dutta, S. and Das, G., 2019. Economic analysis of TWDM PONs: A sustainability and policy-making perspective. *Journal of Optical Communications and Networking*, 11(3), pp.79-94.
- [75]. Mondal, W.U., Roy, D., Dutta, S. and Das, G., 2020. Economics of Resilient TWDM PONs. *Journal of Lightwave Technology*, 38(8), pp.2114-2126.
- [76]. Mondal, W.U., Sardar, A.A. and Das, G., 2021. Economic analysis of cognitive underlay networks: A Nash bargaining based approach. *IEEE Transactions on Vehicular Technology*, 70(2), pp.2024-2029.
- [77]. Mondal, W.U., Sardar, A.A., Biswas, N. and Das, G., 2019, May. Nash bargaining based economic analysis of cognitive cellular networks. In *ICC 2019-2019 IEEE International Conference on Communications (ICC)* (pp. 1-6). IEEE.
- [78]. Mondal, W.U., Sardar, A.A., Biswas, N. and Das, G., 2019. Nash bargaining-based economic analysis of opportunistic cognitive cellular networks. *IEEE Transactions on Cognitive Communications and Networking*, 6(1), pp.242-255.
- [79]. Nampelly, G., Malathi, A.S., Vaid, A., Vadlamani, N.R., Rengarajan, S. and Kontis, K., 2022. Surface roughness effects on cavity flows. *Flow, Turbulence and Combustion*, 109(4), pp.1215-1239.
- [80]. Nampelly, G., Sivaramakrishnan Malathi, A., Vadlamani, N.R., Rengarajan, S. and Kontis, K., 2022. Surface roughness benefits in open cavity flows. In *AIAA SCITECH 2022 Forum* (p. 0473).
- [81]. Padmakumar, A.K., Kumar, A.R.S., Allison-Logan, S., Ashokkumar, M., Singha, N.K. and Qiao, G.G., 2022. High chain-end fidelity in sono-RAFT polymerization. *Polymer Chemistry*, 13(43), pp.6140-6148.
- [82]. Pandey, P. and Mishra, H.N., 2021. Co-microencapsulation of γ -aminobutyric acid (GABA) and probiotic bacteria in thermostable and biocompatible exopolysaccharides matrix. *Lwt*, 136, p.110293.
- [83]. Pandey, P. and Srivastava, S., 2020. Excluding the excluded: India's response to the education of children with disabilities during COVID-19. *Times of India*.
- [84]. Pandey, P., 2022. Encapsulation of Lactic Acid Bacteria and γ -Amino Butyric Acid using Exopolysaccharides for Food Applications (Doctoral dissertation, IIT Kharagpur).
- [85]. Pandey, P., Mettu, S., Mishra, H.N., Ashokkumar, M. and Martin, G.J., 2021. Multilayer co-encapsulation of probiotics and γ -amino butyric acid (GABA) using ultrasound for functional food applications. *LWT*, 146, p.111432.
- [86]. Pattnaik, M., Pandey, P., Martin, G.J., Mishra, H.N. and Ashokkumar, M., 2021. Innovative technologies for extraction and microencapsulation of bioactives from plant-based food waste and their applications in functional food development. *Foods*, 10(2), p.279.
- [87]. Pradeep, R., K. Rathnakumar, and P. Karthickumar. "Optimization of Process Variables of Twin-Screw Extruder Using Response Surface Methodology for the Production of Fish Added Extruded Snack Product." *Next Generation Materials and Processing Technologies: Select Proceedings of RDMPMC 2020*. Singapore: Springer Singapore, 2021. 459-474.
- [88]. Ragasudha, R., P. Karthickumar, S. Murali, R. Pradeep, K. Rathnakumar, C. Mercy Amrita, D. Babiyola, and N. Manimehalai. "Design and performance analysis of a PV-powered solar-infrared hybrid dryer for anchovy fish drying." *Biomass Conversion and Biorefinery* (2023): 1-12.
- [89]. Ramesh, P., Tanveer, M., Shrree, R. D., & Gokul, R. (2022). A Comparative Study on Environmental Impact Assessment of Recirculating Aquaculture System and Raceway System. In *Advanced Modelling and Innovations in Water Resources Engineering: Select Proceedings of AMIWRE 2021* (pp. 667-677). Springer Singapore.
- [90]. Ramesh, Pradeep, S. Ayesha Jasmin, U. T. Puja, Dharani Shrree RS, and Mohammad Tanveer. "Development of AI Enabled Smart Feeding System for Aquaculture Farm—A State-of-Art Approach." (2021).
- [91]. Rawat, A.K., Chakraborty, S. and Goswami, D., 2019, December. Thermal Inflection Study of Methanol-Hexane Mixtures using Time-Resolved Thermal Lens Technique. In *2019 Workshop on Recent Advances in Photonics (WRAP)* (pp. 1-3). IEEE.
- [92]. Rawat, A.K., Chakraborty, S., Mishra, A.K. and Goswami, D., 2021. Unraveling molecular interactions in binary liquid mixtures with time-resolved thermal-lens-spectroscopy. *Journal of Molecular Liquids*, 336, p.116322.

- [93]. Rawat, A.K., Chakraborty, S., Mishra, A.K. and Goswami, D., 2022. Achieving molecular distinction in alcohols with femtosecond thermal lens spectroscopy. *Chemical Physics*, 561, p.111596.
- [94]. Rawat, A.K., Chakraborty, S., Mishra, A.K. and Goswami, D., 2023. Investigating the pH dependence of thermal signatures in monohydric and polyhydric alcohols using time-resolved thermal lens spectroscopy. *Optical Materials*, 137, p.113623.
- [95]. Retscher, G., Kealy, A., Gabela, J., Li, Y., Goel, S., Toth, C.K., Masiero, A., Błaszczak-Bąk, W., Gikas, V., Perakis, H. and Koppanyi, Z., 2020. A benchmarking measurement campaign in GNSS-denied/challenged indoor/outdoor and transitional environments. *Journal of Applied Geodesy*, 14(2), pp.215-229.
- [96]. Retscher, G., Kealy, A., Gabela, J., Li, Y., Goel, S., Toth, C.K., Masiero, A., Błaszczak-Bąk, W., Gikas, V., Perakis, H. and Koppanyi, Z., 2020. A benchmarking measurement campaign in GNSS-denied/challenged indoor/outdoor and transitional environments. *Journal of Applied Geodesy*, 14(2), pp.215-229.
- [97]. Retscher, G., Kealy, A., Gikas, V., Gabela, J., Goel, S., Li, Y., Masiero, A., Toth, C.K., Perakis, H., Błaszczak-Bąk, W. and Koppanyi, Z., 2019. A Benchmarking Measurement Campaign to Support Ubiquitous Cooperative Platform Localization in GNSS Denied and Indoor Environments.
- [98]. Retscher, G., Kealy, A., Gikas, V., Gabela, J., Goel, S., Li, Y., Masiero, A., Toth, C.K., Perakis, H., Błaszczak-Bąk, W. and Koppanyi, Z., 2020. A Benchmarking Measurement Campaign to Support Ubiquitous Localization in GNSS Denied and Indoor Environments. In *Beyond 100: The Next Century in Geodesy: Proceedings of the IAG General Assembly, Montreal, Canada, July 8-18, 2019* (pp. 123-128). Cham: Springer International Publishing.
- [99]. Rezk, A.R., Ahmed, H., Brain, T.L., Castro, J.O., Tan, M.K., Langley, J., Cox, N., Mondal, J., Li, W., Ashokkumar, M. and Yeo, L.Y., 2020. Free radical generation from high-frequency electromechanical dissociation of pure water. *The journal of physical chemistry letters*, 11(12), pp.4655-4661.
- [100]. Roy, D., Dutta, S., Datta, A. and Das, G., 2020. A cost-effective architecture and throughput efficient dynamic bandwidth allocation protocol for fog computing over EPON. *IEEE Transactions on Green Communications and Networking*, 4(4), pp.998-1009.
- [101]. Roy, D., Rao, A. S., Alpcan, T., Wick, A., Das, G., and Palaniswami, M., "Online Slice Reconfiguration for End-to-End QoE in 6G Applications", e-prints, 2022. doi:10.48550/arXiv.2201.05187.
- [102]. Roy, D., Rao, A.S., Alpcan, T., Das, G. and Palaniswami, M., 2022. Achieving AI-Enabled Robust End-to-End Quality of Experience Over Backhaul Radio Access Networks. *IEEE Transactions on Cognitive Communications and Networking*, 8(3), pp.1468-1481.
- [103]. Roy, D., Rao, A.S., Alpcan, T., Das, G. and Palaniswami, M., 2022. Achieving QoS for bursty uRLLC applications over passive optical networks. *Journal of Optical Communications and Networking*, 14(5), pp.411-425.
- [104]. Roy, D., Rao, A.S., Alpcan, T., Wick, A., Das, G. and Palaniswami, M., 2022. Online Slice Reconfiguration for End-to-End QoE in 6G Applications. *arXiv preprint arXiv:2201.05187*.
- [105]. Roy, N., Sarkar, S., Kuna, K.K. and Ghosh, S.K., 2021. Effect of coarse aggregate mineralogy on micro-texture deterioration and polished stone value. *Construction and Building Materials*, 296, p.123716.
- [106]. S. Dutta, D. Roy and G. Das, "Modified Split-Rendering Architecture to enable AI-assisted Application-aware MAC for XR Slice," in *IEEE Networking Letters*, doi: 10.1109/LNET.2023.3283701.
- [107]. S. Dutta, D. Roy and G. Das, "SLA-Aware Protocol Design for Energy-Efficient OLT Transmitter in TWDM-EPON," in *IEEE Transactions on Green Communications and Networking*, vol. 5, no. 4, pp. 1961-1973, Dec. 2021, doi: 10.1109/TGCN.2021.3089746.
- [108]. S. Dutta, D. Roy and G. Das, "XR-specific C-DRX Enhancement for UE power saving in 5G NR," 2022 IEEE 33rd Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Kyoto, Japan, 2022, pp. 1-6, doi: 10.1109/PIMRC54779.2022.9977925.
- [109]. Saha, Subham Kumar, Pritha Mondal, Navyashree Vasudeva, Rekha Mahadevu, Dev Kumar Thapa, Biswajit Bhattacharyya, Anand Sharma et al. "Unconventional properties of engineered Au–Ag nanostructures." *Superconductor Science and Technology* 35, no. 8 (2022): 084001.

- [110]. Saha, Subham Kumar, Pritha Mondal, Samarth A. Channagiri, Rekha Mahadevu, Navyashree Vasudeva, Pavithra Bellare, N. Ravishankar, and Anshu Pandey. "Investigation of the dissipative properties of Au-Ag nanostructures through Electron Energy Loss Spectroscopy." (2022).
- [111]. Saha, Subham Kumar, Rekha Mahadevu, Pritha Mondal, Anand Sharma, Navyashree Vasudeva, and Anshu Pandey. "Simplified Colloidal Method to Produce Nanostructured Au-Ag Films with Superconductivity in the Ambient." (2021).
- [112]. Santha Kumar, A.R. and Singha, N.K., 2020. Reversible Addition-Fragmentation Chain Transfer (RAFT) Polymerization in Ionic Liquids: A Sustainable Process. *Advances in Sustainable Polymers: Synthesis, Fabrication and Characterization*, pp.183-193.
- [113]. Santha Kumar, A.R., Allison-Logan, S., Finnegan, J.R., Singha, N.K., Ashokkumar, M. and Qiao, G., 2023. Visible Light-Accelerated Photoiniferter Polymerization in Ionic Liquid. *ACS Macro Letters*, 12(8), pp.1012-1018.
- [114]. Santha Kumar, A.R.S. and Singha, N.K., 2019. RAFT polymerization of 2-hydroxyethyl methacrylate in a deep eutectic solvent. *Journal of Polymer Science Part A: Polymer Chemistry*, 57(23), pp.2281-2286.
- [115]. Sardar, A.A., Mondal, W.U. and Das, G., Predation Blocking Strategy in Presence of Fraudulent Incumbent Service Provider.
- [116]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2021. Queuing analysis of opportunistic cognitive radio IoT network with imperfect sensing. *arXiv preprint arXiv:2103.08875*.
- [117]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2021. Queuing analysis of opportunistic cognitive radio IoT network with imperfect sensing. *arXiv preprint arXiv:2103.08875*.
- [118]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2022. Queuing Analysis of QoS Aware Microwave Power Transfer Enabled CR-IoT Network. *IEEE Transactions on Wireless Communications*, 21(9), pp.6834-6846.
- [119]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2022. Queuing Analysis of QoS Aware Microwave Power Transfer Enabled CR-IoT Network. *IEEE Transactions on Wireless Communications*, 21(9), pp.6834-6846.
- [120]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2022. Sustainability Analysis of Opportunistic CR-IoT Network Employing Microwave Power Transfer. *IEEE Transactions on Cognitive Communications and Networking*, 8(3), pp.1411-1421.
- [121]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2022. Sustainability Analysis of Opportunistic CR-IoT Network Employing Microwave Power Transfer. *IEEE Transactions on Cognitive Communications and Networking*, 8(3), pp.1411-1421.
- [122]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2023. Coalition Formation for Outsourced Spectrum Sensing in Cognitive Radio Network. *IEEE Transactions on Cognitive Communications and Networking*.
- [123]. Sardar, A.A., Roy, D., Mondal, W.U. and Das, G., 2023. Coalition Formation for Outsourced Spectrum Sensing in Cognitive Radio Network. *IEEE Transactions on Cognitive Communications and Networking*.
- [124]. Sarkar, S., Giuliani, A., Dalton, H., Phillips, D., Ghosh, S., Misev, S. and Maas, R., 2023. Derivation of Lamproites and Kimberlites from a Common Evolving Source in the Convective Mantle: the Case for Southern African 'Transitional Kimberlites'. *Journal of Petrology*, 64(7), p.egad043.
- [125]. Sarkar, S., Giuliani, A., Ghosh, S. and Phillips, D., 2021. Petrogenesis of coeval lamproites and kimberlites from the Wajrakarur field, Southern India: New insights from olivine compositions. *Lithos*, 406, p.106524.
- [126]. Sarkar, S., Giuliani, A., Phillips, D., Howarth, G.H., Ghosh, S. and Dalton, H., 2022. Sublithospheric melt input in cratonic lamproites. *Geology*, 50(11), pp.1296-1300.
- [127]. Sequeira, N., Mahato, S., Rahl, J.M., Sarkar, S., Bhattacharya, A. and Nance, D., 2020. The anatomy and origin of a synconvergent Grenvillian-age metamorphic core complex, Chottanagpur Gneiss Complex, eastern India. *Lithosphere*, 2020(1).

- [128]. Sivaramakrishnan Malathi, A., Nardini, M., Vaid, A., Rao Vadlamani, N. and Sandberg, R.D., 2023. Profile Loss Reduction of High-Lift Turbine Blades With Rough and Ribbed Surfaces. *Journal of Turbomachinery*, 145(2), p.021001.
- [129]. Sivaramakrishnan Malathi, A., Nardini, M., Vaid, A., Vadlamani, N.R. and Sandberg, R.D., 2022. On the efficacy of riblets toward drag reduction of transitional and turbulent boundary layers. In *AIAA SciTech 2022 Forum* (p. 0472).
- [130]. Srivastava, S., Yadav, A.K., Ghosh, M., Mahato, D.K., Kamle, M., Pandey, P., Chakraborty, S. and Kumar, P., 2023. Fumonisin in Food and Feed: Their Detection and Management Strategies. In *Mycotoxins in Food and Feed* (pp. 29-49). CRC Press.
- [131]. Winter, S. and Goel, S., 2021. 7 Parking as a Challenge for Urban Mobility: Introduction. *SMART PARKING IN FAST-GROWING CITIES*, p.99.
- [132]. Tensubam, C.M. and Babanin, A.V., 2021. Wave induced turbulence effect on oceanic biogeochemistry and study of ocean color response to changing wave climate (No. EGU21-9364). *Copernicus Meetings*.
- [133]. Tensubam, C.M., Raju, N.J., Dash, M.K. and Barskar, H., 2021. Estimation of internal solitary wave propagation speed in the Andaman Sea using multi-satellite images. *Remote Sensing of Environment*, 252, p.112123.
- [134]. Thakur, A., Pandey, P., Dalbhat, C.G. and Mishra, H.N., 2022. Development of grain-based carbonated beverage premix using maize (*Zea Mays*), Bengal gram (*Cicer Arietinum*), and finger millet (*Eleusine Coracana*). *Journal of Food Science and Technology*, 59(4), pp.1637-1648.
- [135]. Thapa, Dev Kumar, Subham Kumar Saha, Biswajit Bhattacharyya, Guru Pratheep Rajasekar, Rekha Mahadevu, and Anshu Pandey. "Unconventional optical response in engineered Au-Ag nanostructures." *arXiv preprint arXiv:1906.05342* (2019).
- [136]. Vaid, A., Vadlamani, N.R. and Sivaramakrishnan Malathi, A., 2022. Dynamics of bypass transition with roughness and pulses of free-stream turbulence. In *AIAA SCITECH 2022 Forum* (p. 0453).
- [137]. Vaid, A., Vadlamani, N.R., Malathi, A.S. and Gupta, V., 2022. Dynamics of bypass transition behind roughness element subjected to pulses of free-stream turbulence. *Physics of Fluids*, 34(11).
- [138]. Washim Uddin Mondal, Dibbendu Roy, Sourav Dutta, and Goutam Das, "Economic Analysis of TWDM PONs: A Sustainability and Policy-Making Perspective," *J. Opt. Commun. Netw.* 11, 79-94 (2019)
- [139]. Winter, S. and Goel, S., 2021. Geospatial Technologies for Urban Mobility: Introduction. In # *PLACEHOLDER_PARENT_METADATA_VALUE#* (pp. 2-6).
- [140]. Winter, S. and Goel, S., 2021. Smart parking in fast-growing cities: Challenges and Solutions (p. 198). *TU Wien Academic Press*.
- [141]. Yadav, A., Goel, S., Lohani, B. and Singh, S., 2021. A uav traffic management system for india: Requirement and preliminary analysis. *Journal of Indian Society of Remote Sensing*, 49, pp.515-525.
- [142]. Yadav, M., Lohani, B. and Goel, S., 2022. Geometric and radiometric constraints-based extraction of urban road manhole covers and their maintenance-related information using mobile laser scanning data. *Geocarto International*, 37(27), pp.16716-16735.
- [143]. Yadav, Ranjana, Biswajit Bhattacharyya, Subham Kumar Saha, Pranab Dutta, Parna Roy, Guru Pratheep Rajasekar, Awadhesh Narayan, and Anshu Pandey. "Electronic Structure Insights into the Tunable Luminescence of CuAl_xFe_{1-x}S₂/ZnS Nanocrystals." *The Journal of Physical Chemistry C* 125, no. 4 (2021): 2511-2518.
- [144]. Arun Pratap Mishra, Sachchidanand Singh, Mohit Jani, Kunwar Abhishek Singh, Chaitanya B. Pande & Abhay M. Varade (2022). Assessment of water quality index using Analytic Hierarchy Process (AHP) and GIS: a case study of a struggling Asan River, *International Journal of Environmental Analytical Chemistry*, DOI: 10.1080/03067319.2022.2032015
- [145]. Paul, A., K.S., V., Sood, A. et al. Suspended Particulate Matter Analysis of Pre and During Covid Lockdown Using Google Earth Engine Cloud Computing: A Case Study of Ukai Reservoir. *Bull Environ Contam Toxicol* 110, 7 (2023). <https://doi.org/10.1007/s00128-022-03638-9>.



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