

ASOKE DEY SARKAR INTERNATIONAL PROGRAMME



ADSIP



ABOUT ASOKE DEY SARKAR INTERNATIONAL PROGRAMME *ADSIP*

In early 2019, IIT Kharagpur launched the Asoke Deysarkar International Program (ADSIP), funded by distinguished alumnus and US-based petrochemical entrepreneur, Dr. Asoke Deysarkar [1968/BSc/CY/VS] [1971/B Tech/CH/VS]. This program supports students and research scholars from SAARC nations to pursue academics and research at IIT Kharagpur

The scholarship is open to both full-time degree seeking students as well as short term visitors from SAARC countries.

ADSIP received 48 applications in 2019, out of which full scholarship was offered to 5 students (4 from Nepal and 1 from Bangladesh). The students are enrolled in the departments of Civil Engineering, Aerospace Engineering, Computer Science and Engineering, Biotechnology and School of Medical Science and Technology for their MTech at IIT Kharagpur. Partial scholarship, pertaining to air trip, local round-trip travel and local hospitality was also provided to two short-term research scholars from Bangladesh.



about **DR ASOKE DEYSARKAR**

Class topper of his batch of 1971 at IIT Kharagpur, Asoke K. Deysarkar is a successful entrepreneur, hailed for his leadership prowess as well as his technical expertise, especially in the areas of Hydraulic Fracturing, Fluid Rheology, Refining and Consumer Products. He completed his Master's degree and Ph.D. (1976) in Chemical Engineering from the University of Greater Manchester (Salford) in UK. He also has an MBA from the University of Houston and has worked as a researcher at the University of Waterloo.

Dr. Deysarkar started his career in industry as Senior Project Engineer at Dresser Industries and thereafter served at Pennzoil as Product Manager. In 2002, he started his own company called "Products for People" in Houston, which formulated products for the automotive after-market. He also developed another line of products based on GUAR—a product used as a thickener for water in fracturing of oil/gas wells. The business is now run under the umbrella of PpP Industries, headquartered in Houston, Texas (USA) with branches in various locations around the United States. Dr. Deysarkar is currently CEO and Chairman of the group.

Not only has Dr. Deysarkar built a successful \$1.5 billion conglomerate from scratch in the oil and gas sector, he has also adopted a vision of creating a new crop of professionals who will be game changers in that industry. Teaming up with his wife, Ruma Acharya-Deysarkar, he has donated \$1 million to IIT Kharagpur towards establishing a one-of-its-kind programme in the country — the trans-disciplinary Programme in Petroleum Engineering.

Dr. Deysarkar is also a committed patron of the arts and culture in Houston, where a statue of Rabindranath Tagore was erected in the city through the family's largesse. In 2015, he and his wife were the principal sponsors of the North American Bengali Conference (NABC) in Houston.

Apart from these, the Deysarkars, both chemical engineers from IIT Kharagpur, with the help of architects from the Institute are busy designing the Tagore Centre coming up at Houston, where the couple reside.

In 2016 Asoke Dey Sarkar and Ruma Acharya Dey Sarkar had pledged \$1 million as seed grant for setting up a Centre for Excellence in Petroleum Engineering at IIT Kharagpur.

STUDENTS' PROFILE

Shivkumar Koiri Maurya
Rupandehi, Nepal



**BTech in Aerospace Engineering from
Hindustan Institute of Technology
and Science, Chennai**
Currently pursuing MTech in
Aerospace Engineering with
specialization in Propulsion
Expected to graduate in 2021



Research Interests

- Combustion characteristics and thermodynamics of the aircraft engine.
- Alternate fuel for aircraft engine with enhanced fuel combustion efficiency.
- Combustion characteristics of n-Butanol & Butyl Butyrate.

Prior Research Experience

- Analysis of dual-mode combustion chamber Ramjet in his B.Tech final year project, at Hindustan Institute of Technology and Science.

First Impression

"I am procuring holistic knowledge in theory, practical and lab facilities and getting equipped to meet the academic standards as expected from an IIT Kharagpur alumnus. The place has the best team of teachers, study environment and research facilities"



Santosh Adhikari
Malangwa, Nepal



**BTech in Biotechnology from Vellore
Institute of Technology, Vellore,
Tamil Nadu**

**Currently pursuing MTech in
Biotechnology and Biochemical
Engineering.**

Expected to graduate in 2021.

Research Interests

- Recombinant DNA Technology and Gene-Environment Interaction
- Devising measures to study present situation of over-population and increasing demands for food

Prior Research Experience

- Worked on a DST funded project titled 'Study of floral diversity in Tamil Nadu coastal region and identification of climate change indicators' for 8 months.

First Impression

"I find well-equipped infrastructure and labs with excellent research support facilities to establish myself in the field of Biotechnology. It is a state-of-the-art campus"

Manish Chandra
Birgunj, Nepal



**BE in Computer Engineering from
Tribhuvan University (Pulchowk
campus), Nepal
Currently pursuing MTech in Computer
Science Engineering
Expected to graduate in 2021**

Research Interests

- Artificial Intelligence and Machine Learning

Prior Research Experience

- Projects in the areas of recommender systems and IT job-résumé matching system, based on Non-negative Matrix Factorization.
- Currently working as a Machine Learning Engineer at Fusemachines involved in projects on Natural Language Processing, Speech Processing and Image Processing.
- Part of Nepali Automatic Speech Recognition project, recognized as one of the most impactful projects in the context of Nepal.



First Impression

“I am delighted to be part of IIT KGP, Given it is one of the best institutions in India for Artificial Intelligence. I’m looking forward to contributing something new to this field. I wish to advance the state of computer science related study and research in academic institutions of Nepal, especially in the field of artificial intelligence, machine learning and data science”

Bikalpa Bomjan Gurung
Kathmandu, Nepal



**BE in Aeronautical Engineering from
Aeronautical Society of India, New
Delhi**
**Currently pursuing MTech in Aerospace
Engineering with specialization in
Aerodynamics**
Expected to graduate in 2021

Research Interests

- Applied computational and experimental aerodynamics and its applications in flight vehicle design.
- Automated Aerodynamics Shape Optimization and development of new numerical methods using Computational Fluid Dynamics (CFD).

Prior Research Experience

- Effects of magneto hydrodynamics on temperature and shock standoff distance in a supersonic flow over a blunt body.
- Characterization of induction and transition methods of oblique detonation waves over dual-angle wedge.



First Impression

“My research experience is being enhanced, working in sophisticated lab and research facilities. I am being equipped with all necessary skills expected out of a qualified Aerospace Engineer. Apart from these, I am in awe of the college environment and reputation”

ADSIP Research Scholars' Profile



Monira Kobra
Bangladesh

Research Scholar in Physics
Rajshahi University

Air trip, local round-trip travel and local hospitality supported by ADSIP

Monira visited IIT Kharagpur for two weeks as part of a collaborative project with Prof. P K Datta, Dept. of Physics. Research included problem identification, working with femtosecond lasers at IIT-KGP in addition to visiting Prof. G Robindra Kumar's peta-Watt power laser facility at TIFR.

Research Interests

- Nuclear Reactions
- Laser-plasma interaction

Research at IIT-KGP

- Expanded the intranuclear cascade model for cluster (deuteron and alpha) induced and cluster production nuclear reactions incorporating break-up of incident particle and deflection of trajectory for incoming and outgoing particles. The expansion of the model has a good interest in dose estimation for heavy-ion cancer treatment and in ADS technology to improve the high-level radioactive waste management in nuclear reactor.
- Articles published in Physical Review C, Journal of nuclear science and technology, and Euro physics letters.

First Impression

"IIT Kharagpur was a good opportunity to expand and explore my scientific knowledge. I could fearlessly work in my lab until midnight as the campus is very safe and secure. The best part was that I could communicate in Bangla. I liked the food too."





Pretam Kr. Das

Bangladesh

Research Scholar in Physics

Pabna University of Science and Technology

Air trip, local round-trip travel and local hospitality supported by ADSIP

Dr. Pretam Kumar Das visited IIT Kharagpur for working with femtosecond laser facility. He detected that the peak power available from the femtosecond laser available from Ultrafast laboratory of IIT Kharagpur is not enough for the generation of intense gamma ray source.



Research Interests

- Gamma Spectroscopy.
- Optical Compton scattering as a means for generating high brightness gamma source through full three-dimensional particle in cell simulations.
- Gamma rays with high conversion efficiency using peta-Watt power lasers.

Research at IIT-KGP

- Worked on thermal neutron capture reaction on natural, ^{155}Gd , ^{157}Gd using Accurate Neutron Nucleus Reaction Measurement Instrument (ANNRI) detector at Materials and Life Science Experimental Facility (MLF), Japan Proton Accelerator Research Complex (J-PARC), Japan.
- Worked on nucleus –nucleus potential and also nucleosynthesis
- Used cern root program to analysis the experimental data.
- Used Geant4 monte Carlo simulation to develop the simulation data of our experiment.
- Developed the Gd model which will be used as an input at neutrino detector superkamiokande in Japan.
- Experienced in generating and detecting gamma rays from different nuclear reactions during his doctoral study in Okayama University Japan.

First Impression

“I feel that research at IIT Kharagpur has helped me grow as a researcher and has equipped me to contribute towards my host institution and its students.

It was the cleanest and organized campuses I have ever come across, coupled with unique teacher-student relationship.

The Central Library would always remain my favourite place.”




The basic right to education needs to seep through all societal strata in order to build a better world.

In an initiative to invite more such brilliant minds to our campus and provide them with a lifetime of memories, we look forward to your support.

IIT Kharagpur is dedicated to the service of the nation.

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