ROBOTICS CLUB

SCIENCE AND TECHNOLOGY COUNCIL
IIT KANPUR

Robotics Club IITKanpur

Opportunities and Experiences in Robotics

Winter Vacation Session

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Opportunities in Robotics

- Tech-Giants
- IITK Professors working in the field of Robotics
- Institute Authorized Robotics Courses
- Robotics Startups & Startup Internship Experience
- Universities & Research Internship Experience
- Open Source Organizations (GSoC)

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Tech-Giants

● BOSTON DYNAMICS

● Google AI

● Amazon Robotics

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Tech-Giants

How easy (or difficult) is it to get into these?

Tech-Giants

For Autonomy Engineer Profile at Boston Dynamics

- 6+ years of experience with perception or motion planning on real-world robots

- BS in Mathematics, Optimization, Computer Science/Engineering, Electrical Engineering, Aerospace, or Mechanical Engineering with 8 + years of relevant experience or MS/PhD related degree with 4 years of relevant experience.

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Professors in IIT Kanpur

Indranil Saha

Assistant Professor

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[**bio** | **awards** | **research** | **teaching** | **activities** | **travel** | **cv**]

researchers and PhD students to work on exciting projects in the areas of AI, formal methods, cyber-physical systems and robotics.

LAXMIDHAR BEHERA

POONAM AND PRABHU GOEL CHAIR PROFESSOR

Department of Electrical Engineering
Indian Institute of Technology - Kanpur
Area of Specialization - Robotics and Artificial Intelligence

Intelligent Systems and Control, Cognitive Robotics, Nano-robotics, Vision based Control, Soft Computing, Information Retrieval in music and language, Semantic Information Processing, Physics of Complex Systems, Cyber Physical Systems, Formation Control of UAVs, Brain-Computer Interface (BCI), Sanskrit Computational Linguistics.

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Bhaskar Dasgupta

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Research Associate: Biswanath Panda, Anupam Sana
Affiliated Center(s):
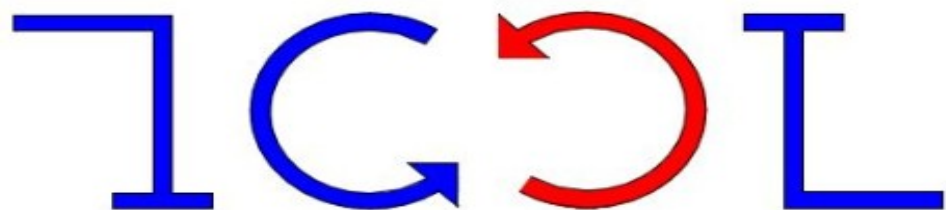- Centre for Mechatronics

Research Interests

Humanoid Robotics: Optimal trajectory planning and design of new energy efficient bipeds using soft sole and springs at the joint.

Intelligent Control Systems: Design, development and optimal control of multi agents systems using the least number of agents. Vision based capture of deforming objects.

Micro-sensors and actuators: Development of sensors for vibration suppression, robot human cooperation, slip detection etc.

Bio-robotics: Optimal design of a finger exoskeleton based on human motion data for rehabilitation of stroke patients and its control using human EMG/EEG signals.

IGCL

Intelligent Guidance & Control Laboratory

Home

Dr. Mangal Kothari

Associate Professor
Department of Aerospace Engineering
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Talented students wanted with experience in (a) embedded C++ (STM32 experience would be helpful) (b) Robot Operating System (ROS) (c) swarm, and (c) robotics. Well-paid positions of 6+ months are also available for capable candidates.

Education:

Ketan Rajawat

Assistant Professor
Associate Editor, *IEEE Communication Letters*
P. K. Kelkar Young Faculty Research Fellow
INSA Young Scientist
INAE Young Engineer

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     +91-8601966020

Prospective students/staff:

- No short term projects/internships are available.
- How to ensure that I write a good recommendation for you
- Talented students wanted with experience in (a) embedded C++ (b) Robot Operating System (ROS),

Institute Authorized Robotics Courses

- **ME762**: Introduction to Robotics - Prof. Bhaskar Dasgupta

  ME766 :Robot Motion Planning - Prof. Ashish Dutta

  CS638: Formal Methods for Robotics and Automation - Prof. Indranil Saha

  EE671: Neural Networks - Prof. Laxmidhar Behera

  AE640: Autonomous Navigation - Prof. Mangal Kothari

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Interdisciplinary Minor in Robotics?

Robotics Startups

Nocca Robotics

Nocca Robotics, which was **founded** in April 2017 by IIT Kanpur alumni Harshit Rathore and Nikhil Kurele, provides waterless **robotic** cleaning solution to utility solar park developers and large rooftop installation companies in India. Sep 11, 2019

IAN Fund backs waterless solar panel cleaning startup Nocca ...

About Featured Snippets   Feedback

Aarav Unmanned Systems

AUS, the first Indian company to develop professional drone solutions for enterprises, is a start-up that originated from IIT Kanpur in the year 2013 and presently headquartered in Bangalore, the technology hub of the country.

In the last 5 years of its existence, drones manufactured at AUS are constantly setting world-class technology benchmarks because of the continuous efforts on Drone Intelligence, Hardware optimization & Design innovation. Having served key players across various verticals both for the private and public sectors, AUS is already the undisputed leader of commercial drones in India.

AUS is backed by some of the most reputed firms and individuals such as GrowX, 500 Startups, StartupXseed, 3one4 capital, Valpro, Mr. Ashok Atluri (Zen technologies) and Mr. Sanjay Jesrani (GoNorth ventures).

Agilo Research

Ahmedabad-based **Agilo Research** was **founded** in July 2016 by three engineering graduates – Abhishek Sharma, Dhrupal Shah and Pankaj Kumar Verma, alumni of IIT Kanpur. Bringing onboard an experience of over 15 years in robotics and embedded systems, they have worked with companies like Reliance and Boeing among others.

Sep 16, 2017

Agilo Research offers a one-stop solution to build anything ...

TechEagle

TechEagle was founded in 2015 by **Vikram** Singh Meena, then a student of the Indian Institute of Technology Kanpur. The company's focus is largely on developing customised unmanned aerial vehicles (UAVs) capable of carrying up to a 5 kilogram payload. Dec 5, 2018

Q qz.com › india › zomato-eyes-drone-delivery-in-india-with-techeagle-ac...

Zomato eyes drone delivery in India with TechEagle ... - Quartz

About Featured Snippets   Feedback

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Some More Startups

- Botsync

  Black Coffee Robotics

  PoboT Labs Private Limited

  Genesis Robotics

  Invento Robotics

  Systemantics India Pvt. Ltd.

Some More Startups

- ShareChat

  Prepleaf

  Skylark Drones

  Cotzero Energy

  Linear Labs (Only ME, EE)

  Greendzine Technology

  Cannecloud Drones Ujjwal

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How to Apply?

- Explore websites of all these startups Search for contact details on their website/ Contact us.

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Why intern at a startup?

To get a flavour of corporate life.
Good starting point for the third year intern.
To know if it suits you !

Perks and Advantages :

You actually hold value there and your work impacts the company.
Fast Learning curve and high demand for quick outputs.

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How to Apply?

Have a **Good Résumé**.
Make a LinkedIn profile.
The Approach :
Online platforms : LinkedIn, angel.co etc.
Offline : SIP, Your Contacts, Alums and their startups, etc.

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Rules and Interview

Rules :

No experience doesn't matter, and don't be afraid of Rejections.

Apply to as many companies as possible.

Get HR contacts.

Make use of the IIT tag. It helps.

Interview:

Mostly telephonic.

They check your knowledge and projects.

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When To Apply ?

Foreign Startups : **November to December**
Indian Startups : **December to March**
Apply as soon as possible.

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How to select a startup?

LinkedIn Top startups for India.
Contact people with similar interests.
Google it! Search for the keywords - Ex:
Autonomous Navigation Startup.
Ask Seniors who have been on the startup internships.
Contact acquaintances from different cities.

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STARTUP - Good or Bad ?

Analyse the questions and Judge the startups :

Are you being paid ? The funding is a Indicator if they're Serious about you.

How Old are they?

Do your skills match with the skills required by the startup?

Employment reviews on Glassdoor

Everything then boils down to : Are you Interested ?

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What to expect?

Interaction with People .
To Know the Intricacies of the Industry and its functioning.
To Learn the things beyond the boundary.
Flexible Work hours and Humble Workspace.
You get best mentors and your work creates impact on the company.
Finally, **Treats** !

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Universities

Open Source Organizations (GSoC)

Contact us if you have any problem/ suggestion:

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