



L'INSTITUT SHASTRI INDO-CANADIAN  
INDO-CANADIEN INSTITUTE

---

**Sign up for SICI's upcoming  
Short-term Virtual Course today!**

Course name: Artificial Intelligence in Robotics

*Starts October 1, 2022*

[Register](#) (avail early bird discount!)

***Start your journey to learn & grow NOW!***



L'INSTITUT SHASTRI INDO-CANADIAN  
INDO-CANADIEN INSTITUTE

#### About Course Director



**Professor D. K. Pratihari**  
Mechanical Engineering Department  
IIT Kharagpur

Prof. Pratihari, IIT Kharagpur, India, obtained his Ph.D. from IIT Kanpur in 2000 & he received University Gold Medal, A.M. Das Memorial Medal, Institution of Engineers' (I) Medal, INSA Teachers' Award 2020, New Code Of Education 2021 Award, Distinguished Alumnus Award 2021 from National Institute of Technology Durgapur, India, and others. He is included among the World's Top 2% Scientists in the areas of Image Analysis and Artificial Intelligence, in a survey carried out by Stanford University, USA. He completed his post-doctoral studies in Japan, and then, in Germany under the Alexander von Humboldt (AvH) Fellowship Programme. He received the Shastri Fellowship (Indo-Canadian Fellowship) to work on humanoid robots. He is working now as a Professor (HAG scale) of IIT Kharagpur, India.

Duration : 6 Weeks Time Slot : 2 hours per week  
Starting : October 1, 2022 (Every Saturday)

#### Course Fee:

##### India

##### Students:

SICI Indian Member Institutions	8,000 INR
Non-member Institutions	10,000 INR

##### Faculty / Working Professionals

SICI Indian Member Institutions	10,000 INR
Non-member Institutions	12,000 INR

##### Canada

##### Students:

SICI Indian Member Institutions	200 CAD
Non-member Institutions	250 CAD

##### Faculty / Working Professionals

SICI Indian Member Institutions	250 CAD
Non-member Institutions	300 CAD

- 10% early bird discount on registration till August 31, 2022
- 10% discount on Group registration of 5 persons and above

## Short-Term Virtual Course on 'Artificial Intelligence in Robotics'

CLICK HERE  
FOR  
MORE DETAILS

### WHO CAN ATTEND

- ❖ Undergraduates
- ❖ Graduates
- ❖ Doctoral & Post-Doctoral Fellows
- ❖ Faculty Members
- ❖ Working Professionals

### COURSE HIGHLIGHTS

- A deep dive into Human Intelligence, Artificial Intelligence and Computational Intelligence (CI);
- The development of intelligent robots using CI's application;
- The merits and demerits of AI and its various potential applications;
- Explanation of the working principles of different types of neural networks with numerical examples;
- Overview of learning algorithms;
- Overview of fuzzy sets and the principle of fuzzy reasoning tools will be explained with numerical examples;
- In-depth introduction to nature-inspired optimization techniques. In particular, Genetic Algorithms (GAs);
- Discussions on the working principles of the combined approaches, namely genetic-fuzzy, genetic-neural, Neuro-fuzzy, and genetic-Neuro-fuzzy systems;
- Familiarity with Robots and robotics;
- Application of AI in robotics to collect information about its environment using cameras and sensors;
- Preparation of an efficient plan while being adaptive and controlling motors efficiently;
- Adaptive Motion Planner, Controller and Vision System will be evolved, and Multi-Sensors data fusion will be achieved using AI for intelligent Robots.
- At the end of this Course, a Video containing the experimental results of one recently developed Agricultural Robot will be displayed.

### COURSE TAKEAWAYS

- Opportunity to learn about robots, and AI/CI tools and techniques;
- An understanding of Neural Networks and Fuzzy Logic-based methods;
- Familiarization with Nature-inspired Optimization Tool;
- Will increase problem-solving skills;
- Induces Creative thinking;
- A launch pad to realize passion;
- Aid to communicate across different technology platforms;
- Prepares for a technological future;
- Provision of foundational skill sets for the future.

