Niladri Das

CONTACT INFORMATION

Intelligent Systems & Control Lab, WL-213
Dept. of Electrical Engineering
Indian Institute of Technology Kanpur
Kanpur 208016, Uttar Pradesh, INDIA

E-Mail : niladridas95@gmail.com
Homepage : niladridas.com
GitHub : niladridas
Website : openproblemswiki

RESEARCH

Control Theory , **Robotics** , **Machine Learning**

EDUCATION

Post-Graduation in Electrical Engineering (M.Tech.)
Indian Institute of Technology Kanpur, India   August 2012 - July 2014
Specialization: Power and Control   CGPA : 7.91/10

Under-Graduation in Electrical Engineering (B.E.E.)
Jadavpur University, Kolkata   2008 - 2012
West Bengal, India   CGPA : 7.84/10

PROJECTS

Graduate Thesis:
Learning to Grasp & Programming by Demonstration
Using a 7-DOF Barrett Arm   (October 2013 - July 2014)
(pdf) (Video 1) (Video 2)
Advisor: *Dr. Lakshmidhar Behera*, IIT Kanpur

- Hand-Eye Calibration
- Parameterization of IK for Redundant Manipulator
- Object Segmentation and Grasping of Known Objects
- Implementation of Deep Network for Grasping of Unknown Objects
- Programming by Demonstration using Symbolic Encoding

Graduate Project:
Tomography: Solving Nonogram Using Heuristics
Advisor: *Dr. Naren Naik*, IIT Kanpur

- Explored and implemented heuristic optimization algorithm (Artificial Bee Colony) for solving a discrete tomography problem (Hanji/Nonogram:NP Complete type of problem)

Main Under-Graduate Project:
Image Processing Based Object Detection
Advisor: *Dr. Amitava Chatterjee*, Jadavpur University

- Vision based feature extraction technique(SIFT) used to identify an object
- Feature extraction for navigational information.

Other Undergraduate Projects:
- **Hardware Design and Software simulation of Sallen-Key Low Pass Filter**
  Advisor: *Prof. Biswajit Bhattacharyya*, Jadavpur University
- **Software Implementation of Voltage Controlled Oscillator**
  Advisor: *Prof. Biswajit Bhattacharyya*, Jadavpur University
- **Neural Compensation of Vector-Voltmeter**
  Advisor: *Dr. Amitava Chatterjee*, Jadavpur University
- **GUI application in Visual Basic(VB) for a Data Acquisition System**
  Advisor: *Dr. Amitava Chatterjee*, Jadavpur University

WORK

Project Associate   (August 2014 - Present)
Dept. of E.E., IIT Kanpur, P.I: Prof. Lakshmidhar Behera

Control System Analysis (EE-250)   Teaching Assistant
Dept. of E.E., IIT Kanpur, Prof. Lakshmidhar Behera   (Spring 2014)

	Introduction to Basic Control Systems (EE-650)	Teaching Assistant
	Dept. of E.E., IIT Kanpur, Prof. Lakshmidhar Behera	(Autumn 2013)

Introduction to Basic Control Systems (EE-650) Teaching Assistant
Dept. of E.E., IIT Kanpur, Prof. Lakshmidhar Behera (Autumn 2013)

Control System Analysis (EE-250) Teaching Assistant
Dept. of E.E., IIT Kanpur, Prof. Ramprasad Potluri (Spring 2013)

MENTORING EXPERIENCE

Currently Mentoring : (ISL Lab)
Sunil Reddy : M.Tech Thesis

Mentored : (ISL Lab) Aug-Nov, 2014
Chandreyee Bhowmick (First Year M.Tech student) : ROS
Akhilesh Raj (First Year M.Tech student) : ROS

IIT Kanpur E.E Third Year UG Summer Interns of ISL Lab May-June, 2014
Tanushree Gupta : Deep Learning
Ankit Pensia : PCL & Barrett WAM programming

TALKS

Quantum Control(IIT Kanpur) 6th May 2013
(seminars conducted by ISL Lab members)

Parallel Computing(Jadavpur University) Feb, 2012
Radio Frequency Identification(Jadavpur University) Nov, 2011

PRESENTATION **A Novel approach for human computer interfacing**
Best Paper award at *All India Student's Science Congress-2010*, Durgapur Chapter at NIT Durgapur

CONFERENCE **Robot learns from human teacher through modified kineasthetic teaching**, ACODS-2014

WORKSHOP **Cryptology Workshop** : Jointly organized by Indian Statistical Institute Kolkata, India and University of Calcutta.

TRAINING **Industrial Training** at Santaldihi Thermal Power Station, WB, India.

ACHIEVEMENTS
- Ranked 218^{th}(top **0.1**%) in **GATE-2012**, the national level entrance test for post-graduate studies at the **IITs & IISC**.
- Ranked 162nd (top **0.1**%) in **WBJEE-2008**, a state level entrance test for under-graduate studies.
- **School topper** in Senior Secondary Board Exams (**WBCHSE-2008**) with 99% marks in maths.
- Recipient of Scholarship under *Scheme of Scholarship for College and University Students of Govt. of India* for State Board Examination performance (N.O: **120** in Merit List).

RELEVANT COURSES

Graduate
- Intelligent Control Systems
- Computational aspect of Tomographic Imaging : Models to Inversion
- Mathematical Structures of Signals and Systems

Undergraduate
- Signals & Systems
- Control System Engineering
- Digital Signal Processing
- Advanced Instumentation-I & II

SKILLS *Programming Languages*: C , C++ , Python, VHDL.

Libraries: Eigen, Boost, OMPL.

Softwares Packages: Matlab, Octave, Autodesk Inventor,LaTeX, Robot Operating System, OpenCV, PCL, Xilinx ISE.