# AKASH SINGH | 07EE1040 IIT KHARAGPUR



### **EDUCATION**

Program	Institution	%/CGPA	Completion
BTech. (Hons.) <b>Electrical Engineering</b>	Indian Institute of Technology Kharagpur	9.27	2011
XII (ISC)	ST. Francis' College, Lucknow	94.75%	2006
X (ICSE)	ST. Francis' College, Lucknow	92%	2004

### ACADEMIC ACHIEVEMENTS

- **Department rank one** (out of 80 students) after the end of six semesters.
- Awarded J.B.Ghosh Memorial Scholarship for academic excellence in undergraduate education.
- Awarded Bhartiya Cutler Hammer Prize for highest CGPA after 6 semesters in Electrical Engineering.
- Secured a State Rank of **51** in All India Engineering Entrance Examination (CBSE).
- Secured a Rank of **18** in the Uttar Pradesh Technical University State Entrance Exam.
- Scored 100 percent marks in Mathematics in the Indian School Certificate Examination.
- Awarded the Academic Honor Award for being the school topper from class VIII to class XII.

## ACADEMIC PROJECTS

# • Digital Restoration of old video films

(BTech Project)

- Automatic detection and removal of blotches, line defects and intensity flickers in old video films for archival.
- Using video processing (optical flow) and image processing.
- Digital Signal Processing for Relay Design

(Feb 2009-March 2010)

- Acquisition and processing of power signal to be fed to the relay system.
- Processing on the NI-Compact Rio Processor and Labview as the software.
- Lane detection and lane departure warning system

(July-Nov 2009)

- System developed to warn the driver when vehicle departs from its lane.
- Implemented in Matlab using image processing and Fuzzy logic.

# SUMMER INTERNSHIPS

MITCAS Globalink Internship at University of Toronto, Canada. (Multimedia Lab)

(May-July 2010)

- Image Similarity Matching based on MPEG-7 Visual descriptors
- MATLAB interface for matching similar images using **Fuzzy Logic** and MPEG-7 content descriptors.
- The interface will be used for **Automatic Image Tagging system** which is in high demand for websites such as **facebook and flickr**. Algorithm can be extended to have **image search and retrieval system**.
- Summer Internship: Bharat Heavy Electricals Limited, Jagdishpur

(May-July 2009)

- Studied the Manufacturing and Testing of Insulators and Ceralins.
- **Proposed the usage of battery back-ups** as an intermediate between switching from power grid to Diesel Generators. I also worked on **optimization of fuel consumption** for diesel generators.

#### RELEVANT COURSES

- Industrial Economics
- Estimation of Signals and Systems
- Fuzzy Logic & Neural Networks

- Machine Learning
- Probability and Stochastic Processes
- Graph Theory and Algorithms

#### POSITIONS OF RESPONSIBILITY

• Member of the Departmental Academic Advisory Committee of my batch.

(2009-2011)

- A **course was added in the curriculum** based on the suggestions of student members from third year.
- Member of the organizing team of 'Crossroads', the annual Inter Collegiate Festival of my school. (2005)
  - For the first time, some of the popular shows were shifted to city auditorium.
  - We generated a revenue of Rs. 86,000 from sponsorships and the sale of tickets for the popular events in the fest.
- Held the post of House Captain in class 11th and College Prefect in class 12th

(2005-2006)

# **EXTRA-CURRICULAR ACTIVITIES**

- Member of the Inter Hall team for Hardware Design. I am involved in the microprocessor coding.
- I was a part of the Rangoli team which won Gold medal in the Inter Hall Rangoli competition 2009.