

# DHARMESH KUMAR

E-mail: dharmesh.iitkgp@gmail.com

## ACADEMIC BACKGROUND

Year	Examination	Institution	Percentage / CGPA
2010(6 <sup>th</sup> sem)	Bachelor of Technology	Indian Institute of Technology Kharagpur	7.18 / 10
2006	AISSCE - All India Senior School Certificate Examination (CBSE)	Sainik School Tilaiya Jharkhand	68.20%
2004	All India Secondary School Examination (CBSE)	Sainik School Tilaiya Jharkhand	86.4 %

[July, 2007 to present ] Indian Institute of Technology, Kharagpur, West Bengal  
Undergraduate Programme, Bachelor of Technology in Manufacturing Science and Engineering

## B.TECH PROJECT

### “Tool optimization and Process Modelling for Friction stir welding”

- Optimize tool geometry by studying the microstructure and investigating the residual stress of resulting weld.
- Built finite element model by studying the heat generation, heat transfer and plastic flow during welding.

Supervisor: Dr. Surjya K. Pal  
Associate Professor, Mechanical Engineering  
IIT Kharagpur

## SUMMER INTERNSHIP

- (May-June 2010)  
"A heuristic to minimize the total weighted tardiness with sequence-dependent setups and problem with quadratic earliness and tardiness penalties"
  - Various improvement procedures and there combination is used to modify the earlier results.
  - A 30% improvement in objective function value is achieved in results.
  - Runtime improves by 1/3<sup>rd</sup> of earlier used heuristics.

Supervisor: Professor Jorge Miguel Silva Valente  
Associate Professor, Faculdade de Economia  
Universidade do Porto, Portugal

- (May - June 2009)  
“Inplant training at ACC Ltd, Chaibasa cement works of duration 4 weeks. Which consisted of:”
  - Plant visits
  - Study of hydraulic unit of vertical roller machine. Vertical roller machine is used to crush the limestone in cement plants, which works on hydraulic system.
  - Fundamentals of conditional monitoring, which is performed periodically to indicate the condition of an item.

## WINTER WORKSHOP(2008)

- Designed a Mechanical Robot for the project titled **Wegged**, during the winter workshop organized by KRAIG (Kharagpur Robotics and Artificial Intelligence Group). The Objective was:

The robot has to climb up an inclined wedge and it has to check its skin from 2 pendulums which will be oscillating over the wedge. And it has to jump off the wedge with the help of a plank. The robot has to land on a rectangular block and run quickly into its victory zone.

## RELEVANT COURSES TAKEN

- Probability and Statistics
- Computer Software
- Transform Calculus
- Marketing Management

## SOFTWARE SKILLS

- C, C++, Visual basic 6.0, MATLAB, AutoCAD, Abaqus FEA, EES, SPSS.

## POSITIONS OF RESPONSIBILITY

- Appointed as **Captain of Hockey team** of RK hall of residence for the session **2010-2011**.
- **President of Web Design team of Mekanika** (Department of Mechanical Engineering Society) for the session **2010-2011**.
- Elected as **Hockey Football secretary** for the RK hall of residence for the session **2008-2009**.
- Appointed as **House captain of Nalanda House** at my school for the session **2005-2006**.

## EXTRA CURRICULAR ACTIVITIES

- Won **Silver in Hockey tournament organized by Shaurya** (Sports event organized by IIT KGP) for the session **2010-2011** as the **Captain of IIT KGP** hockey team.
- Participated in **INTER-IIT Hockey tournament** held at IIT Kanpur for the session **2009-2010**.
- Won **1 Gold and 1 Silver in Hockey tournament organized by Shaurya** (Sports event organized by IIT KGP) for the session **2008-2009** and **2010- 2011** respectively.
- Won **1 Silver and 1 Gold** in Open IIT hockey tournament for the session **2008-2009** and **2010-2011** respectively.
- Won **Bronze** in Inter hall hockey tournament for the session **2008-09**.
- Won 1<sup>st</sup> Prize in Inter house Debate and Declamation for the session 2002-2003 at my school.
- NCC 'A' and 'B' certificate holder.