

CURRICULUM VITAE

Name : Sanjoy Kumar Ghoshal

Current affiliation: Associate Professor in the Department of Mechanical Engineering, Indian Institute of Technology (ISM), Dhanbad-826004.

Date of Joining : 04.10.2007 (in the position of Assistant Professor)

Phone : +91-326-2235647(O), 9431711283 (M)

E-mail: sanjoykghoshal@iitism.ac.in, sanjoy.ghoshal@gmail.com

Academic record:

- **Ph.D. (Doctor of Philosophy in Engineering):** from Machine Dynamics Lab, Indian Institute of Technology, Kharagpur – 721 302, India in the period from June 2003 to March 2007; under the supervision of Prof. Arun K. Samantaray. Title of the thesis: “*Model-based Fault Diagnosis and Accommodation using Analytical Redundancy: A Bond Graph Approach*”
- **M.M.E. (Master of Mechanical Engineering):** from Jadavpur University, Kolkata – 700 032, India in the period from September 2001 to February 2003, with First class in Machine Design specialization (80.36 %).
- **B.M.E. (Bachelor of Mechanical Engineering):** from Jadavpur University, Kolkata – 700 032, India in the period from July 1992 to June 1996, with First class (68.75 %)
- **Higher Secondary (10+2):** from West Bengal Council of Higher Secondary Education (WBCHSE), in the year 1991, with First division (80.2%)
- **Madhyamik (10):** from West Bengal Board of Secondary Education (WBBSE), in the year 1989, with First division (80.4%)

List of Institutional activities in chronological order

Sl. No.	Name of the position hold	Duration	Year
i.	Departmental Library Committee Member	1 year	From 2012 to 2013
ii.	Departmental Faculty-in-Charge of ISM-JRFs	5 years	From September 2012 to June 2017
iii.	Coordinator of M. Tech (Machine Design)	2 years 6 months	From December 2012 to June 2015

iv.	Warden of Jasper Hostel, Block-D	3 years	From June 2013 to June 2016
v.	Member of Institute Journal, (NATURAL RESOURCES & ENGINEERING) Core Committee	2 years	From 2015 to 2017

List of awards, prizes and fellowship (National / International level)

- i. National scholarship in secondary examination in the year 1989
- ii. National scholarship in higher secondary examination in the year 1991
- iii. Best paper award for a conference paper as given below:
P Chattopadhyay, A Majumder, H Dikshit, **S Ghoshal** and A Maity. A bio-inspired climbing robot: design, simulation, and experiments. In: International Conference on Mechanical Materials and Renewable Energy (ICMMRE - 2017) held during 8-10 December 2017 at Sikkim Manipal Institute of Technology, Rangpo, India.

Projects undertaken

- **R&D project:** Fault diagnosis of a servo system using analytical redundancy, funded by SERC Division of the Department of Science & Technology, New Delhi, project value: Rs. 17.4 Lakh (PI), status: completed.
- **Consultancy project:** Design and development of 5 cu.m hydraulic excavator, funded by M/s. Heavy Engineering Corporation (HEC), Ranchi, project value:Rs.64.9 Lakh, (Co-CI). M/s. HEC, Ranchi approached on August 2017 for vetting of their design of a new product 5 cu.m hydraulic excavator whereby theoretical knowledge of fluid power and solid mechanics are being applied in the product development. The project is now ongoing in consultancy mode and expected to be completed by August 2019

Teaching experience:

- From 21.08.2006 to 03.10.2007 in the Department of Mechanical Engineering in Asansol Engineering College, Sen Rayleigh Road, Asansol - 713304 in the post of Assistant Professor.
- From 04.10.2007 to till date in IIT (ISM), Dhanbad.

Courses taught:

- Engineering Mechanics (UG)
- Engineering Graphics (UG)
- Dynamics of Machinery (UG)
- Robotics (UG)
- Mechatronics (UG)
- Mechanical Vibration (UG and PG)
- Advanced Solid Mechanics (UG and PG)

- Automation and Control (PG)
- Simulation of Dynamical systems (PG)

List of courses / Laboratory developed:

1. **Mechatronics** (MME 17102), elective subject for B.Tech in Mechanical Engineering and Mining Machinery Engineering, developed and taught from the year 2009 for consecutive 4 years.
2. **Modeling and Simulation of Dynamical Systems** (MCE 51101), elective subject for M.Tech in Machine Design specialization: introduced the subject in the course curriculum in the year 2013, developed and taught for consecutive 2 years
3. **Automation and control** (MMC 52103), compulsory subject for M.Tech in Machine Design specialization: introduced the subject in the course curriculum in the year 2013, developed and taught till 2017.
4. **Automation and Robotics** (MCE 18102), elective subject for B.Tech in Mechanical Engineering and Mining Machinery Engineering, developed and taught from the year 2014 for consecutive 4 times.
5. **Kinematics & Dynamics of Machinery** (MCC 51111), compulsory subject for M.Tech in Machine Design specialization: introduced the subject in the course curriculum in the year 2013, developed and taught from the year 2015 for consecutive 4 times.
6. Developed Dynamics of Machinery laboratory by introducing three state-of-the-art control experiments and a power hydraulic set-up sponsored by DST-New Delhi.

Industrial experience:

From 15/07/2000 to 31/07/2001: **M/s. KESORAM REFRACTORIES LTD.** (B.K.Birla group of industries), Kulti, Burdwan, West Bengal, India.

In the position of “Maintenance Engineer” responsible for:

Preventive and breakdown maintenance activities of process equipments like Compressor, Frictional Screw Press, Hydraulic Press, Ball Mill, Counter Current Mixer and Work Shop activities.

From 07/10/1997 to 14/07/2000: **M/s. TEXMACO LTD.,** Steel Foundry Division, Belgharia works, Kolkata – 700 056, India.

In the position of “Deputy Superintendent (Project)” responsible for:

- New installation of equipment like Tup Hammer, Sand Plant, Sand Dryer, Heat Treatment Furnace etc.
- Preventive & breakdown maintenance activities of process equipment like Compressor, Simultaneous Jolt-Squeeze Moulding Machine, Arc Furnace, and Intensive Mixer.

From 08/07/1996 to 31/08/1997: **M/s. ESAB INDIA LTD.,** Arc Equipment Division, Taratala, Kolkata – 700 088, India

In the position of “Management Trainee” responsible for:

Project works, which includes design and drawing in AUTO-CAD for fabrication of machine components of special welding systems.