SIDDHARTHA MUKHERJEE

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EDUCATION

Examinations Passed	Year	Institution/University	% of marks obtained/CGPA
M. Tech (Chemical Engineering)	2014-2016	Indian Institute of Technology Kanpur	8.57/10.0
B. E. (Chemical Engineering)	2009-2013	Jadavpur University	8.47/10.0
10+2	2009	West Bengal Council of Higher Secondary Education	86%
10	2007	West Bengal Board of Secondary Education	91.37%

RESEARCH PROJECTS

MASTER'S PROJECT- IIT Kanpur (*December 2014 - May 2016*)

Supervisor: Professor R. P. Chhabra, Department of Chemical Engineering, IIT Kanpur

Title: Non-Newtonian Fluid Flow in Non-Circular Ducts: Pressure Drop and Heat Transfer

Description:

- Study of flow and temperature field characteristics over wide range of parameters (e.g. Power-law index, Bingham number) for different thermal boundary conditions in both developing and fully developed regions.
- Study of fully developed friction factor, momentum flux correction factor, kinetic energy correction factor, incremental pressure drop and Nusselt number for ducts of various cross-sections such as triangular, rectangular, semi-circular, elliptical, rhombic, trapezoidal, sinusoidal and four cusped.
- Effect of types of nanoparticles and their volume fractions on laminar forced convection heat transfer.

Additional Project:

Natural convection from an array of two spheres submerged in power-law fluids.

SENIOR YEAR DISSERTATION- JADAVPUR UNIVERSITY (*July 2012 - April 2013*)

Supervisor: Professor Ranjana Chowdhury, Dept. of Chemical Engineering, Jadavpur University

Title: Experimental studies on mercury removal using bacteria and micro-algal biomass.

Description:

- Study of the mercury removal using initial mercuric ion concentration as parameter.
- Study of the growth kinetics of mercury resistant bacteria.
- Characterization of mercury removal capacity of microalgae.

ACADEMIC PROJECTS

Supervisor: Dr. Naveen Tiwari (*November 2014*)

Title: Flow and slip transition in nanochannels.

Supervisor: Dr. Raj Ganesh S. Pala (*December 2014*)

Title: Modelling and simulation of one dimensional unsteady state heat transfer from papaya pulp to air with and without evaporative cooling effect considering convective boundary conditions.

SUMMER PROJECT

To study the hydrodynamics of a packed bed biofilm reactor via RTD experiments from 10th June 2011 to 1st August 2011.

Supervisor: Professor Ranjana Chowdhury, Department of Chemical Engineering, Jadavpur University.

INDUSTRIAL TRAINING

Summer training project on manufacturing process of purified terephthalic acid (PTA) from 14th May 2012 to 10th June 2012 in MCC PTA India Corp. Pvt. Ltd., Haldia.

JOURNAL PUBLICATIONS

- S. Mukherjee, A. K. Gupta, R. P. Chhabra, Laminar forced convection in power-law and Bingham plastic fluids in ducts of semi-circular and other cross-sections. (*submitted*)
- S. Mukherjee, A. K. Gupta, R. P. Chhabra, Predictions of fully developed parameters in laminar convective duct flows of nano-fluids. (in preparation)

CONFERENCE PROCEEDINGS

Presented a poster on **"Natural convection from an array of two spheres submerged in power-law fluids"** in **CHEMCON 2015**.

POSITION OF RESPONSIBILITY

Task Assistantship Duties:

- DPGC, *Supervisor:* Dr. Sri Sivakumar
- PhD Seminar, *Supervisor:* Professor R. P. Chhabra
- Unit Operation Laboratory, *Supervisor:* Professor Deepak Kunzru

SCHOLASTIC ACHIEVEMENTS

- WBCHSE scholarship in the scheme of scholarship for College & University students. (*2009*)
- MHRD scholarship for qualifying GATE 2014. (*2014-2016*)

COMPUTER SKILLS

CFD Tool	COMSOL Multiphysics, Fluent
Data Processing Software	Tecplot, Origin Pro, Image J
Statistical Software	SigmaPlot 10.0, Plot Digitizer

INTERESTS AND HOBBIES

- Listening and singing music.
- Watching sports matches.

REFERENCES

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