Ankit Jain
Chemical Engineering
Indian Institute of Technology, Bombay

08D02004
Dual Degree (B.Tech+M.Tech.)
Male
DOB: 29/11/1989

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	9.01
Intermediate/+2	CBSE	DAV Public School, Kota	2008	93.40
Matriculation	ICSE	Gokuldham High School, Mumbai	2006	93.80

AWARDS AND ACHIEVEMENTS

- **Ranked 3rd** among Dual Degree students in the Chemical Engineering Department
- Awarded the **Institute Academic Prize** 2012 for excellent academic performance
- Completed a **minor degree** in Computer Science and Engineering
- Awarded the CBSE Merit Scholarship for securing **All India Rank 146** in AIEEE 2008
- **Topper** in Kota city in CBSE XII board; awarded a **Certificate of Merit** for 100% marks in Mathematics
- Recipient of **Brilliant Student Medal** in the All Rajasthan Talent Scholarship Award Examination 2004

INTERNATIONAL EXPERIENCE

TOTAL SUMMER SCHOOL, PARIS, FRANCE [Jul '12]
International Student Conference on key issues and challenges faced by the global energy sector
- **1 of 7 students** sponsored by TOTAL S.A. to **represent India** amidst 125 students from 32 nationalities
- **Won** the 'Take Away' presentation; worked in an 8-member **multinational** & **multidisciplinary** team
- Deliberated with diverse team members over major **challenges in the energy industry** and TOTAL's strategic vision and attended seminars to learn about global energy issues and business environment
- Appointed as spokesperson of the team & interviewed the Head of 'Access to Energy' program of TOTAL

SUMMER INTERNSHIPS

UNIVERSITY OF PADERBORN, GERMANY [May '11 – Jul '11]
Modelling and analysis of bipolar charging of aerosol nanoparticles
- Implemented a model in **MATLAB** to determine the stationary charge distribution of nanoparticles
- Analysed the effect of ion mass and ion mobility on the charge distribution
- **Developed a model** to simulate the decay of ion concentration downstream of the ionizing source and analysed its influence on the charge distribution for different initial conditions
- The work was **presented** at the **European Aerosol Conference 2011**, Manchester, England

GAIL (INDIA) LIMITED, NEW DELHI [May '10 – Jun '10]
Process simulations using DESIGN II software
- Designed a comprehensive **training manual** to use DESIGN II for company employees & future interns
- Developed a process flow diagram for simulating the process for removal of CO_2 from landfill gas using DESIGN II and determined the optimum operating conditions for different equipments (in a team of 2)
- Awarded a **Letter of Appreciation** by the Dy. General Manager for diligent work during the internship

KEY ACADEMIC PROJECTS

PROCESS INTENSIFICATION OF REACTIVE SEPARATIONS, Master's Thesis [May '12–Present]
- Combining reaction & separation to bring **cost-effectiveness & compactness** to a plant & increase yield
- Compared the rate of steam consumption in the production of carboxylic esters for different reactive separation techniques using simulations in **ASPEN Plus**
- Future work involves optimum process design to investigate & recommend the best reactive separation process for carboxylic ester production & implement a reactive chromatography model in MATLAB

MODELLING OF TNF-α SIGNALLING NETWORKS, Supervised Learning Project   [Jan '12 – Apr '12]

- Identified the signalling pathways of TNF-α, which has applications in **cancer prevention and treatment,** in a network with 211 species & 588 interactions
- Developed and simulated a **kinetic model** of the apoptosis (cell death) signalling pathway in MATLAB
- Analysed the effect of perturbations in kinetic parameters & initial conditions on the results of the kinetic model using **sensitivity analysis**

PRODUCTION OF ACETIC ANHYDRIDE, Design Project   [Jan '12 – Apr '12]

- Developed a Process Flow Diagram in **ASPEN Plus** for a plant producing 20,000 MTA Acetic Anhydride
- Designed reactors, heat exchangers & distillation columns in detail & **optimized** production conditions
- Performed a **profitability analysis** using capital and operating costs and calculated the payback period

POSITIONS OF RESPONSIBILITY

OVERALL COORDINATOR, VIRTUAL LABS PROJECT   [Mar '12 – Present]
An MHRD sponsored Pan India initiative to develop web based simulation and remote triggered experiments

- **Leading a handpicked** 2-tier team of 5 managers & 10 coordinators to develop chemical engineering virtual labs designed for remote experimentation
- Pioneered the design & development of 10 simulation & remote triggered experiments using open source software; will be hosted for **open access to colleges across India** as a learning module
- Spearheaded collaboration with over **15 colleges** across India to expand the reach of the project
- Revamped existing virtual labs by introducing additional resources, animations & evaluation criteria

MENTOR, DEPARTMENT ACADEMIC MENTORSHIP PROGRAMME   [Jul '12 – Present]

- Among 17 selected based on good academics & mentoring skills to guide academically underperforming students towards improving their academic standing and clearing backlogs
- Conducted one-to-one **counselling sessions** and facilitated **student-faculty meetings** to improve and monitor the performance of four 3rd year students

COORDINATOR, MOOD INDIGO, *Annual Cultural Festival of IIT Bombay*   [Dec '09]

- Coordinated the **first ever International Music Festival** having performances by 5 foreign bands
- Organised the publicity and performance of Norwegian jazz band 'The Core' and French band 'Moriarty'

EXTRA-CURRICULAR ACTIVITIES

TECHNICAL ACTIVITIES

- AZEOTROPY, annual technical festival of Chemical Engineering Department, IIT Bombay
    - **3rd** in Life Cycle Analysis   ['12]
    - **1st** in phase-I and **3rd** in phase-II of Age of Chempires   ['12]
    - **3rd** in Safengineer   ['11]
    - Selected for the **BASF Industrial Visit** for being in top 30 (out of 550) in BASF quiz   ['12]
- **3rd prize** in Chemophilia, Chemical Engineering Quiz at Exergy, ICT Mumbai   ['12]
- Represented IIT Bombay at the prestigious **inter-collegiate** N.R. Kamath Quiz organised by **IIChE** which saw a participation of over 20 teams from Maharashtra   ['11]

OTHERS

- Taught Mathematics to underprivileged children of 5th & 7th standard as a volunteer for **NGO Akanksha**
- Awarded a certificate for **Excellent** performance on completing basic **Japanese** Communication Course
- **3rd prize** in Impromptu Dramatics competition in Freshiezza, 2008 - the annual freshmen cultural festival and **2nd prize** in Intra-hostel Dramatics competition, 2010
- Was part of **Guinness Book of World Records** event "Most number of people solving a Rubik's cube"
- Completed the **campus cross-country run** at the University of Paderborn, Germany