



Dimple Kochar
Electrical Engineering
Indian Institute of Technology, Bombay
Specialization: Microelectronics and VLSI

16D070010
Dual Degree (B.Tech. + M.Tech.)
Gender: Female
DOB: 01-02-1999

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	

SCHOLASTIC ACHIEVEMENTS

- Completed a **Minor Degree in Computer Science and Engineering** [2017-19]
- Conferred the Desai-Sethi Scholarship, which is awarded to the **top 5** girls admitted to IIT Bombay [2017-19]
- Stood **first** in Maharashtra among girls with AIR **102** in JEE Mains and AIR **295** in JEE Advanced [2016]

INTERNSHIP

- Dipole-Exchange Spin Waves in Ferromagnetic Films** [May '19 - Jul '19]
 TU Delft, Netherlands
 - Calculated the chirality, **wave function**, magnetization & dipolar field profiles for various **magnon** modes
 - Solved Landau-Lifshitz & Maxwells' equations to obtain the **dispersion** relation for a given film thickness

POSITIONS OF RESPONSIBILITY

- Academic Mentor, Electrical Engineering Department** [Apr '19 - Present]
 Department Academic Mentorship Programme, IIT Bombay
 - Selected through extensive **peer reviews** & interviews, to help academically weak & ARP students improve, and identify **problems** of the general student populace & bring them to the notice of **concerned authorities**
 - Responsible for mentoring **11** students and playing a key role in their overall development
- Editor, Insight** [Apr '18 - Mar '19]
 Official Student Print Media Body of IIT Bombay
 - Recipient of **Institute Journalism Special Mention Award** bestowed for outstanding contribution to the field
 - Part of the **22** member team responsible for managing Insight's online presence and newsletter, which is circulated to **10,000+** students and **650+** faculty members with an online readership of over **0.4 million**
 - Led the **University Series** by collecting testimonials from IITB alumni doing their graduate degree abroad
 - Authored an opinion article on the framework for **disciplinary action** in the institute; put across student concerns, bridged communication gap with the administration, & reached out to **10,000+** via print medium
- Convenor, IIT Bombay Broadcasting Channel** [Apr '17 - Mar '18]
 Official Student Multimedia Journalistic Body of IIT Bombay
 - Covered interviews, social drives, protests, interactive sessions and major events across the institute
 - Assisted with scripting, shooting and editing of **Honest Intern**, a video which went **viral** over social media and garnered a Facebook reach of over **0.25 million** and **86,000+** views on YouTube
- Teaching Assistant, IIT Bombay**
 - Probability and Random Processes - Department of Electrical Engineering [Aug '20 - Present]
 - Differential Equations - Department of Mathematics [Mar '18 - Apr '18]
 - Quantum Physics and Applications - Department of Physics [Jul '17 - Nov '17]

RESEARCH PROJECTS

- Modelling of MOS Device Reliability** [May '18 - Present]
 Advisor: Prof. Souvik Mahapatra, Microelectronics, Electrical Engineering Department Master's Thesis
 - Constructed a cell based **oxide percolation** model which generates bulk & interface **traps** with different rates
 - Procured the time to **failure** distribution & analysed the relation of its Weibull slope with oxide **thickness**
 - Modelling the traps generated from **PBTI** stress using the double interface H/H₂ Reaction Diffusion model
- Music Genre Identification** [Feb '18 - May '18]
 Advisor: Prof. Preethi Jyothi, Machine Learning, Computer Science Department Course Project
 - Implemented various Machine Learning algorithms like **Principal Component Analysis**, **Neural Networks** and **Random Forests**, and utilized **Bayesian Optimization** for hyperparameter tuning
 - Achieved an accuracy of **56%** and an F1 score of **50.65%** using the Random Forest algorithm

EXTRACURRICULAR ACTIVITIES

- Awarded **Hostel Cultural Colour** in '18 for exceptional contribution to the field of **film-making** in the institute
- Assisted in setting up **self-defence** workshops for **women empowerment** as social initiative of Techfest '17
- Aided in **SHE** campaign in '17 to promote women's sanitary health in 37 villages, distributing **0.2M** sanitary pads
- Part of the **13** member Institute Women's **Volleyball** Team for the **Inter-IIT** camp, 2016