ROMIL KADIA

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ACADEMIC DETAILS

Year	Qualification	Institute, City	CPI/%
2018	M.Tech - Solid Mechanics and Design	Indian Institute of Technology Kanpur	7.8/10
2015	B.E. - Mechanical Engineering	Gujarat Technological University(LDRP-ITR)	9.02/10
2011	Intermediate/+2 (GSEB)	Amrut school, Ahmedabad	83.33%
2009	Matriculation (GSEB)	Amrut school, Ahmedabad	76.92%

KEY SCHOLASTIC ACHIVEMENTS

- Ranked **1**st in **Bachelor of Engineering** in Department of Mechanical Engineering at LDRP-ITR
- Awarded with **Institute Gold Medal** by Prof. Arvind R. Patel on behalf of Kadva Patidal Kelavni Mandal in 2015.
- Achieved **All India Rank 786** in **GATE, 2016** among 0.21 million mechanical engineering candidates.
- Succeed with **27**th rank in B.E. in Mechanical engineering batch of 2015 at Gujarat Technological University.
- Conferred with **Maneklal M. Patel Memorial Scholarship** for academic year 2014-15 *(given to top 1% student from institute)* for their excellent performance at Kadi Sarva Vishwavidyalaya by President Vallabhbhai M. Patel.

THESIS AND PROJECTS

Study of Dislocation and Disclination Motion of Graphene at zero kelvin **M.Tech Thesis, IIT Kanpur**

MD Simulation, Thesis Supervisors Dr. Anurag Gupta and Dr. Shakti Singh Gupta *Dec'16-present*

- Study of Diclocation and Disclination and their motion of **Fullerene, Torus, CNT, Graphene sheet (Plain and Hollow)**.
- Analysis of each object was done by **Molecular Simulation (Tinker)** and for that input files were generated using **Python**.
- Visualized defects and their energy variation was noted using **Force Field Explorer (FFE)** using **mm-3 (2000) potential**.
- Developed network model of optimization using continuum approach on **Python, MATLAB** and **JAVA** to match MD results.
- Concluded that **Defects are stable at central portion of structure** and they should match object's topology constraints.

Design and Development of Centrifugal Type Positive Frictional Clutch **B.E. Project, LDRP-ITR**

Automotive Engineering, Project Supervisor Prof. D. H. Pandya *May'14-May'15*

- Avoided clutch slip phenomena by using the combination of centrifugal type, positive and frictional type disc clutch.
- Generated model of complete system using **Solidworks** in first phase and analysis of each component and Assembly as well as sub-Assembly was done in second phase **ANSYS Static Structure toolbar**.
- Patent has been filed and communication is going on with **Indian Patent Office** for design related issues.

Analysis of Neo-Hookean material and Solid with Elasto-Plastic behaviour **Course Project IIT Kanpur**

Non-Linear FEM, under guidance of Prof. Sumit Basu *Jan'17-April'17*

- Developed **UMAT** for **ABAQUS**; Tangent stiffness matrix for Neo-Hookean based on free energy function and for Elasto-Plastic material both Continuum and Consistent tangent stiffness were based on Von-Mises yield condition.

Longitudinal vibration of rod **Course Project IIT Kanpur**

FEM, under guidance of Prof. P. M. Dixit *Aug'16-Nov'16*

- FEM code is developed in **MATLAB** with two noded element of Hermitian C^2 continuous shape function of 5 gauss points.
- Solved eigen value problem to find natural frequency of beam with quadratic variation in cross section area.

Axisymmetric Steady State Heat Conduction **Course Project IIT Kanpur**

FEM, under guidance Prof. P. M. Dixit *Aug'16-Nov'16*

- Developed **MATLAB** code for 2D problem with Lagrangian C^0 continuous three noded triangular element of total 3 DOF.

TECHNICAL SKILLS

- **Programming Language:** Python, C/C++, JAVA, HTML/CSS, Fortran-95, Scheme.
- **Software:** Solidworks, ANSYS, ABAQUS, MATLAB, LATEX, Tinker, AutoCAD, Creo-Parametric.

COURSES UNDERTAKEN

- Strength of Material, Solid Mechanics, Molecular Dynamics Simulations, Finite Element Method (Linear, Non-linear), Vibration of Continuous Systems (1D,2D), Advance Dynamics.

STUDENT GOVERNANCE

Department Placement Moderator (ME), Student Placement Office *May'17-Present*

- Integral member of **3-tier team** of **120 members** to facilitate placements of **1200+** graduating students.
- Developing and strengthening contact with **400+** core companies and inviting them for upcoming placement session.
- Responsible for guiding and helping the mechanical engineering students in their placement preparation.

Web Administrator, Association of Mechanical Engineers *July'17-Present*

- Carried out maintenance, planning of content and improved the online presence of IIT Kanpur's AME website.
- Connected **500+** students of mechanical engineering and officials as well as Professors through an informal mean
- Started a web platform (**AME Digital Library**) to enable collaboration of academic literature among students.

EXTRA-CURRICULAR ACTIVITIES

- Secured **3**rd position in **Technical Quiz** among **480+** students at Mad-Labs'12(annual departmental technical festival) at **LDRP-ITR** and awarded with **Bronze medal** by Prof. Kaushal Bhavsar for the same.
- Participated in X-Press and **Presented review paper** at **Xenesis'13(annual inter-collegiate technical festival)**.
- Participated in **Paper Presentation** and presented review paper on reciprocating and centrifugal pumps at Mad-Labs'12
- Attended two day automobile workshop on transmission, braking and engine emission at Xenesis'13.