

## List of Ph.D. & M. Tech Theses

**Accession No.: T01015-T01131**  
**(New Additions in 2023)**

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<b>Ph.D. Theses</b>	
<b>Departments</b>	<b>Total</b>
Biological Sciences and Engineering	4
Chemical Engineering	4
Chemistry	3
Civil Engineering	4
Cognitive and Brain Sciences	2
Computer Science and Engineering	1
Earth Sciences	9
Electrical Engineering	5
Humanities and Social Sciences	4
Materials Engineering	3
Mathematics	7
Mechanical Engineering	1
Physics	26
<b>Total</b>	<b>73</b>

<b>M.Tech Theses</b>	
<b>Departments</b>	<b>Total</b>
Biological Sciences and Engineering	8
Chemical Engineering	6
Civil Engineering	6
Computer Science and Engineering	5
Earth Sciences	2
Electrical Engineering	7
Materials Engineering	3
Mechanical Engineering	7
<b>Total</b>	<b>44</b>

# Table of Contents

<b>List of Ph.D. Theses .....</b>	<b>5-16</b>
Biological Sciences and Engineering .....	5
Chemical Engineering .....	5
Chemistry .....	6
Civil Engineering .....	7
Cognitive and Brain Sciences .....	7
Computer Science and Engineering .....	8
Earth Sciences .....	8
Electrical Engineering .....	9
Humanities and Social Sciences .....	10
Materials Engineering .....	11
Mathematics .....	11
Mechanical Engineering .....	12
Physics .....	13
<b>List of M. Tech Theses .....</b>	<b>18-24</b>
Biological Sciences and Engineering .....	18
Chemical Engineering .....	19
Civil Engineering .....	20
Computer Science and Engineering .....	21
Earth Sciences .....	22
Electrical Engineering .....	22
Materials Engineering .....	23
Mechanical Engineering .....	24

# List of Ph.D. Theses

## List of Ph.D. Thesis

### Biological Sciences and Engineering

- 1**      **Title**            : Role of retrograde motor proteins in regulation of cellular endocytic processes, cell migration and invasion  
**Author**            : Mayya, Chaithra  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**           : 570 MAY  
**Acc. No.**          : T01028
- 2**      **Title**            : Geometry of DNA nanostructures influences cellular and in vivo uptake, stimulating differentiation and cell migration  
**Author**            : Rajwar, Anjali  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**           : 572.86 RAJ  
**Acc. No.**          : T01040
- 3**      **Title**            : Mechanochemical properties and function of Kinesin-3 motors  
**Author**            : Shewale, Dipeshwari  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**           : 572.6 SHE  
**Acc. No.**          : T01041
- 4**      **Title**            : Investigating the conservation and disease association of THAP9 using sequence, structure, and expression data  
**Author**            : Rashmi, Richa  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**           : 660.65 RAS  
**Acc. No.**          : T01046

### Chemical Engineering

- 1**      **Title**            : Cognitive workload analysis of control room operators using Electroencephalography (EEG) and eye-tracking  
**Author**            : Iqbal, Mohd Umair  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**           : 616.891425 IQB  
**Acc. No.**          : T01017
- 2**      **Title**            : Fouling monitoring and foulant identification in heat exchangers and heat exchanger networks  
**Author**            : Shankar, Patil Parag  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**           : 621.4025 SHA  
**Acc. No.**          : T01024

- 3**      **Title**            : Engineered pharmaceutical formulations for improved dry powder inhaler (DPI) performance: particle engineering and mechanistic insights  
**Author**            : Varun, Neetu  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 615.19 VAR  
**Acc. No.**          : T01025
- 4**      **Title**            : Building stimuli~responsive nanoparticle assemblies by tuning charge correlations  
**Author**            : Pothukuchi, Rajesh Pavan  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 620.5 POT  
**Acc. No.**          : T01039

## Chemistry

- 1**      **Title**            : Towards development of plasmonic antenna-reactor based catalytic construct for photo-electrochemical solar to fuel conversion  
**Author**            : Paital, Diptiranjana  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 660.2832 PAI  
**Acc. No.**          : T01042
- 2**      **Title**            : Functional cyanostilbenes: sensing to imaging  
**Author**            : Dahiwadkar, Rahul  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 547.1 DAH  
**Acc. No.**          : T01045
- 3**      **Title**            : Chemical Biology and nanotechnology-based tools for targeting Mitochondria in cancer  
**Author**            : Bajpai, Aman  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 572 BAJ  
**Acc. No.**          : T01086

## Civil Engineering

- 1**      **Title**           : Characteristics and drivers of riverine floods in India  
**Author**           : Nanditha, J. S  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 624 NAN  
**Acc. No.**         : T01018
- 2**      **Title**           : Development of design tools for serviceability design of rigid-faced GRS walls  
**Author**           : Krishna, Kolli Mohan  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 624.17 KRI  
**Acc. No.**         : T01020
- 3**      **Title**           : Analysis of seismically isolated fast reactors considering fluid-structure interaction  
**Author**           : Saboo, Anirudh  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 624.1762 SAB  
**Acc. No.**         : T01026
- 4**      **Title**           : Hydrogeochemical unravelling of land-sea interaction along the Gujarat coast, India  
**Author**           : Bhagat, Chandrashekhar  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**         : 624 BHA  
**Acc. No.**         : T01081

## Cognitive and Brain Sciences

- 1**      **Title**           : Role of priors in audio-visual temporal binding and visuospatial attention  
**Author**           : Jagini, Kishore Kumar  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 153.1 JAG  
**Acc. No.**         : T01019
- 2**      **Title**           : Characterizing active noise control headphones with psychoacoustics of amplitude modulation  
**Author**           : Bandyopadhyay, Sohom  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**         : 153 BAN  
**Acc. No.**         : T01027

## Computer Science and Engineering

- 1      **Title**           : Decoding cognitive states from brain rhythms: insights from media perception and meditation studies  
**Author**            : Pandey, Pankaj  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 616.891425 PAN  
**Acc. No.**         : T01087

## Earth Sciences

- 1      **Title**           : Basin-scale hydrological mass budgeting using dynamics of glacial components and its incorporation in hydrological SWAT model: a regional study from NW Himalaya, India  
**Author**            : Chakravarti, Pritha  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 551.480151 CHA  
**Acc. No.**         : T01030
- 2      **Title**           : Glacial landforms and gully formation on Mars  
**Author**            : Sinha, Rishitosh Kumar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 551.7 SIN  
**Acc. No.**         : T01048
- 3      **Title**           : Geological and geochemical study of martian volcanic provinces: implications for igneous evolution of Mars  
**Author**            : Rani, Alka  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 551.7 RAN  
**Acc. No.**         : T01051
- 4      **Title**           : Oxygen and Hydrogen isotopic characterization of groundwaters of India: insights into hydrogeological processes  
**Author**            : Pandey, Amit  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 551.490954 PAN  
**Acc. No.**         : T01052
- 5      **Title**           : Biological fixation of nitrogen and carbon in the northern Indian ocean  
**Author**            : Saxena, Himanshu  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 589 SAX  
**Acc. No.**         : T01058



- 6      **Title**           : Geochemical and isotopic studies of Sarnu-Dandali-Kamthai Carbonatite-Alkaline complex, India  
**Author**            : Mahala, Milan Kumar  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 551 MAH  
**Acc. No.**         : T01062
- 7      **Title**           : Applications of cosmogenic nuclides in understanding quaternary events  
**Author**           : Jena, Partha Sarathi  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 523.12 JEN  
**Acc. No.**         : T01064
- 8      **Title**           : Aqueous evolution of CM Chondrites  
**Author**           : Baliyan, Shivani  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 523.51 BAL  
**Acc. No.**         : T01071
- 9      **Title**           : Drivers and implications of regional and global flash droughts  
**Author**           : Mahto, Shanti Shwarup  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 551.5773 MAH  
**Acc. No.**         : T01083

## Electrical Engineering

- 1      **Title**           : Deep learning based representation, processing and inverse rendering of curves and surfaces  
**Author**           : Gangopadhyay, Aalok  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 006.37 GAN  
**Acc. No.**         : T01015
- 2      **Title**           : Design improvements in two-phase switched reluctance motors  
**Author**           : Upadhyay, Parth Tarun  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.46 UPA  
**Acc. No.**         : T01029
- 3      **Title**           : Nature-inspired techniques for nanophotonics inverse design  
**Author**           : Panda, Soumyashree S  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2021  
**Call No.**          : 621.36 PAN  
**Acc. No.**         : T01047

- 4      **Title**           : Indigenous technology development of high-voltage MOS transistors for power management applications  
**Author**           : Kaushal, Kumari Neeraj  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 621.381528 KAU  
**Acc. No.**         : T01079
- 5      **Title**           : Robust and sparse-aware adaptive learning strategies for audio signal processing  
**Author**           : Kumar, Krishna  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**         : 621.3822 KUM  
**Acc. No.**         : T01080

## Humanities and Social Sciences

- 1      **Title**           : Metaphors in the visual: a semiotic approach to select intermedial adaptations of the Mahābhārata  
**Author**           : Sharma, Shivani  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**         : 398.20934 SHA  
**Acc. No.**         : T01032
- 2      **Title**           : mHealth in maternal health: the role of autonomy and digital literacy  
**Author**           : Susanna G  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**         : 362.1042 SUS  
**Acc. No.**         : T01033
- 3      **Title**           : Kūṭiyāṭṭam between preservation and transformation investigating the challenges posed by modernity to this traditional performing art of Kerala  
**Author**           : Nair, Ankita  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 792.095483 NAI  
**Acc. No.**         : T01034
- 4      **Title**           : Samuel Beckett and carescapes  
**Author**           : Joshi, Swati Satish  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 848.91409 JOS  
**Acc. No.**         : T01085

## Materials Engineering

- 1**      **Title**            : Functionalization of Cu-centered MOF to enhance its hydrolytic stability and application in PB(II) trapping with high adsorption capacity  
**Author**            : Goyal, Prateek  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 620.18 MIS  
**Acc. No.**          : T01021
- 2**      **Title**            : Fabrication of porous structure through vapor phase dealloying of Mg-Zn alloys  
**Author**            : Behera, Rakesh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 620.381531 BEH  
**Acc. No.**          : T01022
- 3**      **Title**            : High temperature oxidation behavior of high entropy alloys  
**Author**            : Dehury, Ranjit Kumar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 620.16 DEH  
**Acc. No.**          : T01031

## Mathematics

- 1**      **Title**            : Asymptotic analysis of controlled dynamical systems with small random noise and fast sampling  
**Author**            : Dhama, Shivam Singh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 515.35 DHA  
**Acc. No.**          : T01016
- 2**      **Title**            : On d-holomorphic connections and gauge theoretic aspects of parabolic bundles on klein surfaces  
**Author**            : Jaiswal, Ayush  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 516.373 JAI  
**Acc. No.**          : T01036
- 3**      **Title**            : Delta geometry and p-adic Hodge theory  
**Author**            : Pandit, Sudip  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 516.35 PAN  
**Acc. No.**          : T01038

- 4      **Title**           : Cohen-Macaulay graph ideals and the v-number of monomial ideals  
**Author**           : Saha, Kamlesh  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**         : 512.44 SAH  
**Acc. No.**         : T01043
- 5      **Title**           : Projective closure of affine monomial curves  
**Author**           : Srivastava, Pranjal  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**         : 512.44 SRI  
**Acc. No.**         : T01044
- 6      **Title**           : A study of certain affine semigroups and semigroup rings  
**Author**           : Prakash, Om  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 512.44 PRA  
**Acc. No.**         : T01082
- 7      **Title**           : Transformations of generalized Lambert series and analogues of a formula of Ramanujan, Hardy and Littlewood  
**Author**           : Shivajee  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 512.7 SHI  
**Acc. No.**         : T01084

## Mechanical Engineering

- 1      **Title**           : Studying the role of cable-driven leg exoskeleton in altering human-robot interaction for Gait training  
**Author**           : Sanjeevi, N. S. S  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**         : 629.892 SAN  
**Acc. No.**         : T01023

## Physics

- 1**      **Title**            : Chemically active systems as sensors and transducers  
**Author**            : Shukla, Ashish Kumar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 681.2 SHU  
**Acc. No.**          : T01035
- 2**      **Title**            : Free space quantum key distribution: experiments for improving security and key rate  
**Author**            : Biswas, Ayan  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2021  
**Call No.**          : 530.12 BIS  
**Acc. No.**          : T01037
- 3**      **Title**            : Hard X-ray spectro-polarimetric study of black hole binary Cygnus X-1  
**Author**            : Kumar, Abhay  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 523.8875 KUM  
**Acc. No.**          : T01049
- 4**      **Title**            : Population of obscured active galactic nuclei  
**Author**            : Kayal, Abhijit  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 523.112 KAY  
**Acc. No.**          : T01050
- 5**      **Title**            : Investigations on low latitude Ionosphere under varying space weather conditions  
**Author**            : Kumar, Ankit  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 538.767 KUM  
**Acc. No.**          : T01053
- 6**      **Title**            : Phenomenological applications of light cone sum rules  
**Author**            : Bansal, Anshika  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 539.7548 BAN  
**Acc. No.**          : T01054
- 7**      **Title**            : Observational analysis of cometary bodies in the solar system  
**Author**            : Aravind K  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 523.6 ARA  
**Acc. No.**          : T01055

- 8**      **Title**            : Investigating the coronal X-ray characteristics – from Sun as a Star to imaging spectroscopy  
**Author**            : Mondal, Biswajit  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 523.7 MON  
**Acc. No.**         : T01056
- 9**      **Title**            : Properties of strongly interacting matter under extreme conditions  
**Author**            : Kumar, Deepak  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 539.7 KUM  
**Acc. No.**         : T01057
- 10**     **Title**            : Study of the evolution of velocity and magnetic fields in the solar atmosphere  
**Author**            : Kumar, Hirdesh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 523.72 KUM  
**Acc. No.**         : T01059
- 11**     **Title**            : Equilibrium quantum phases and quench dynamics of dipolar bosons in 2D optical lattices  
**Author**            : Sable, Hrushikesh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 530.414 SAB  
**Acc. No.**         : T01060
- 12**     **Title**            : On the role of hall magnetohydrodynamics in magnetic reconnection: astrophysical plasmas  
**Author**            : Bora, Kamlesh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 538.6 BOR  
**Acc. No.**         : T01061
- 13**     **Title**            : Multi-wavelength studies of active galactic nuclei (AGNs)  
**Author**            : Kumari, Neeraj  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 523.112 KUM  
**Acc. No.**         : T01063
- 14**     **Title**            : 21 cm line astronomy and constraining new physics  
**Author**            : Natwariya, Pravin Kumar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 520 NAT  
**Acc. No.**         : T01065

- 15**     **Title**         : Application of relativistic coupled-cluster method to study P, T -odd properties in heavy and superheavy molecules  
          **Author**         : Mitra, Ramanuj  
          **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
          **Call No.**       : 530 MIT  
          **Acc. No.**       : T01066
- 16**     **Title**         : Interaction of intense femtosecond pulses with polyatomic molecules: probing the ultrafast dynamics  
          **Author**         : Das, Rituparna  
          **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
          **Call No.**       : 532.05 DAS  
          **Acc. No.**       : T01067
- 17**     **Title**         : Study of cometary coma: from simple molecules to complex organics  
          **Author**         : Ahmed, Sana  
          **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
          **Call No.**       : 523.6 AHM  
          **Acc. No.**       : T01068
- 18**     **Title**         : Entangled photons and their applications in quantum information processing  
          **Author**         : Mishra, Sarika  
          **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
          **Call No.**       : 530.12 MIS  
          **Acc. No.**       : T01069
- 19**     **Title**         : Orbital angular momentum of light and quantum correlations  
          **Author**         : Patil, Satyajeet  
          **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
          **Call No.**       : 530.12 PAT  
          **Acc. No.**       : T01070
- 20**     **Title**         : Investigations of low- and equatorial-latitude upper atmospheric processes using optical and radio techniques  
          **Author**         : Saha, Sovan  
          **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
          **Call No.**       : 539 SAH  
          **Acc. No.**       : T01072
- 21**     **Title**         : Phenomenological implication of particle dark matter models  
          **Author**         : Show, Sudipta  
          **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
          **Call No.**       : 523.1126 SHO  
          **Acc. No.**       : T01073

- 22**      **Title**           : Eruption of solar magnetic flux ropes and associated flaring activity: observational perspectives  
**Author**         : Sahu, Suraj  
**Publisher**      : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**        : 522.1 SAH  
**Acc. No.**        : T01074
- 23**      **Title**           : Evolution of remnant radio galaxies  
**Author**         : Dutta, Sushant  
**Publisher**      : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**        : 523.112 DUT  
**Acc. No.**        : T01075
- 24**      **Title**           : Enlightening the dark universe through light particles  
**Author**         : Poddar, Tanmay Kumar  
**Publisher**      : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**        : 535.4 POD  
**Acc. No.**        : T01076
- 25**      **Title**           : Aspects of spectroscopic and polarimetric instrumentation for ground based optical telescopes with related observations  
**Author**         : Kumar, Vipin  
**Publisher**      : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**        : 522.29 KUM  
**Acc. No.**        : T01077
- 26**      **Title**           : Searching for new Physics signatures in hadronic final states at the large Hadron collider with deep learning  
**Author**         : Ngairangbam, Vishal Singh  
**Publisher**      : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**        : 539.72 NGA  
**Acc. No.**        : T01078



# List of M. Tech Theses

## List of M. Tech Theses

### Biological Sciences and Engineering

- 1**      **Title**            : Molecular dynamics and molecular docking studies of REV - ERB  $\beta$   
**Author**            : Thakur, Rakesh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 572.6 THA  
**Acc. No.**          : T01093
- 2**      **Title**            : Detection of CIS-chimeric RNA from RNA sequencing data  
**Author**            : Satish, Aditi Lakshmi  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 572.88 SAT  
**Acc. No.**          : T01097
- 3**      **Title**            : Survey of cellular physiology regulation by small molecules  
**Author**            : Pise, Pradnya Vivekanand  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 570 PIS  
**Acc. No.**          : T01101
- 4**      **Title**            : Investigation of human THAP9 isoform 2: cloning, purification and functional characterization  
**Author**            : Bhattacharyya, Shaurav  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 660.65 BHA  
**Acc. No.**          : T01103
- 5**      **Title**            : Cloning and expression of c-terminal deleted and full length human THAP9 transposase  
**Author**            : Das, Sreyoshi  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 660.65 DAS  
**Acc. No.**          : T01104
- 6**      **Title**            : Zonal effects on cell growth and proliferation by photopatterned polymer substrate and theoretical simulation of pattern formation through photopolymerization induced phase separation  
**Author**            : Singh, Sugandha  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 668.9 SIN  
**Acc. No.**          : T01105

- 7      **Title**           : Ultrasonic characterization and imaging of anisotropic muscle-mimicking phantoms  
       **Author**           : Bezabh, Mekdes Wubet  
       **Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
       **Call No.**         : 611.3 BEZ  
       **Acc. No.**         : T01110
- 8      **Title**           : Developing tissue-mimicking phantoms for ultrasound viscoelastography and an experimental platform for ultrasound exposure of hydrogels  
       **Author**           : Marri, Bhanu Prasad  
       **Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
       **Call No.**         : 611.3 MAR  
       **Acc. No.**         : T01117

## Chemical Engineering

- 1      **Title**           : Synthesis and characterization of Tinospora Cordifolia (Giloy) loaded biopolymer films for food packaging  
       **Author**           : Singh, Manjot  
       **Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
       **Call No.**         : 668.9 SIN  
       **Acc. No.**         : T01089
- 2      **Title**           : Sewage disposal and management at high altitude areas  
       **Author**           : Sharma, Harshit  
       **Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
       **Call No.**         : 664.02845 SHA  
       **Acc. No.**         : T01094
- 3      **Title**           : Using molecular dynamics simulations to understand the exfoliation of Magnesium Diboride nanosheets  
       **Author**           : Rastogi, Amisha  
       **Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
       **Call No.**         : 660 RAS  
       **Acc. No.**         : T01113
- 4      **Title**           : Freeze-drying of human waste at higher altitudes: a waste-to-energy approach  
       **Author**           : Choudhury, Rupantar  
       **Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
       **Call No.**         : 664.02845 CHO  
       **Acc. No.**         : T01123

- 5      **Title**           : A comparative study of reverse flow chromatographic reactor and fixed bed reactor: a multi-objective optimization approach  
**Author**            : Srivastava, Shashwat  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 660.2832 SRI  
**Acc. No.**         : T01126
- 6      **Title**           : Self-assembled amino acid microstructures as biocompatible physically unclonable functions (BPUFs) for authentication of therapeutically relevant hydrogels  
**Author**           : Akavaram, Vishwas Reddy  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 660 AKA  
**Acc. No.**         : T01130

## Civil Engineering

- 1      **Title**           : Spatiotemporal evolution of hydroclimatic extremes using complex networks and synchronization analysis  
**Author**           : Mansoor, Danish  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 627 MAN  
**Acc. No.**         : T01088
- 2      **Title**           : Strengthening of railway bridge approaches using geocells  
**Author**           : Jaiswal, Ekta  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 624.2 JAI  
**Acc. No.**         : T01095
- 3      **Title**           : Design methodology of compaction piles to prevent liquefaction and to support structures on abandoned ash pond  
**Author**           : Choudhary, Vaidika  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 624.154 CHO  
**Acc. No.**         : T01106
- 4      **Title**           : Stress block parameters for concrete: experimental and analytical investigations  
**Author**           : Tripathi, Sandesh  
**Publisher**       : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 624.1834 TRI  
**Acc. No.**         : T01109

- 5      **Title**           : Effect of green infrastructures on the urban water cycle  
      **Author**         : Sabut, Amitesh  
      **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
      **Call No.**      : 624 SAB  
      **Acc. No.**     : T01114
- 6      **Title**           : Dam break flood risk in the Narmada basin under the warming climate  
      **Author**         : Dilip, K. Nandana  
      **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
      **Call No.**      : 627.8 DIL  
      **Acc. No.**     : T01121

## Computer Science and Engineering

- 1      **Title**           : Implicit bias of gradient descent based optimization algorithms for underdetermined problems  
      **Author**         : Gavini, Venkata Sai Kumar  
      **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
      **Call No.**      : 006.31 GAV  
      **Acc. No.**     : T01107
- 2      **Title**           : SpiroActive: active learning for efficient data acquisition for spirometry  
      **Author**         : Jain, Ankita Kumari  
      **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
      **Call No.**      : 006.31 JAI  
      **Acc. No.**     : T01115
- 3      **Title**           : In-network distributed rate-limiters using programmable switches  
      **Author**         : Nawab, Iram  
      **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
      **Call No.**      : 004.2 NAW  
      **Acc. No.**     : T01119
- 4      **Title**           : Decoding media perception with Electroencephalography using deep learning  
      **Author**         : Johri, Riddhi  
      **Publisher**    : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
      **Call No.**      : 006.31 JOH  
      **Acc. No.**     : T01122
- 5      **Title**           : Comparative information extraction from scientific papers  
      **Author**         : Alam, Shoab  
      **Publisher**    : Gandhinagar, Indian Institute of Technology Gandhinagar, 2023  
      **Call No.**      : 006 ALA  
      **Acc. No.**     : T01127

## Earth Sciences

- 1**      **Title**            : Extended finite-fault simulation (GMSS2.0) of ground-motion: sensitivity analysis and optimization of seismological parameters  
**Author**            : Omkar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 624.1762 OMK  
**Acc. No.**          : T01091
- 2**      **Title**            : Daily urban water supply forecasting for Bairagarh regions with machine learning algorithms  
**Author**            : Yadav, Girivendra Pratap  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 553.7 YAD  
**Acc. No.**          : T01099

## Electrical Engineering

- 1**      **Title**            : Battery management system for electric vehicles  
**Author**            : Kumar, Rahul  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.31242 KUM  
**Acc. No.**          : T01102
- 2**      **Title**            : IMC-SIM: an automated tool to benchmark different In-memory computing architectures  
**Author**            : Mittapalli, Yaswanth Ram  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.3 MIT  
**Acc. No.**          : T01108
- 3**      **Title**            : Secure and energy-efficient hardware design for AI on edge devices  
**Author**            : Pradhan, Alok  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.3 PRA  
**Acc. No.**          : T01112
- 4**      **Title**            : Stability analysis of monolayer TMD FET, Si FinFET, and Si NSFET based 6T SRAM for N5 and beyond  
**Author**            : Srivastava, Ayush  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.3 SRI  
**Acc. No.**          : T01116
- 5**      **Title**            : Low frequency on-chip sinusoidal oscillator for cryocooler applications  
**Author**            : Sawai, Sakshi  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.381533 SAW  
**Acc. No.**          : T01124

- 6**      **Title**            : Understanding the neural signature of post stroke patients, under a posner cueing paradigm, using a virtual reality based dart throwing task  
**Author**            : Patnaik, Siddesh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.3 PAT  
**Acc. No.**         : T01128
- 7**      **Title**            : Optimal power procurement strategy for electricity distribution licensees: a case study  
**Author**            : Omar, Yash Vardhan  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.319 OMA  
**Acc. No.**         : T01131

## Materials Engineering

- 1**      **Title**            : Rain-repellency and droplet bouncing properties of Bauhinia leaves in natural and laboratory environmental conditions  
**Author**            : Choubey, Rakesh  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 620 CHO  
**Acc. No.**         : T01092
- 2**      **Title**            : Evaluation of forming limit diagram and corrosion studies of friction stir welded dissimilar Aluminum alloys Al 5083 and Al 6061  
**Author**            : Jha, Chitranjan Kumar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 620.186 JHA  
**Acc. No.**         : T01098
- 3**      **Title**            : Characterisation and numerical modelling of friction stir channelled ETP Copper fabricated in open-air and underwater conditions  
**Author**            : Sahoo, Sambit Kumar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 671.52 SAH  
**Acc. No.**         : T01125

## Mechanical Engineering

- 1**      **Title**            : Flame propagation in pellets of Nickel-Clad Aluminium particles: a comprehensive multi-scale model  
**Author**            : Garai, Souritra  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 623.045 GAR  
**Acc. No.**          : T01090
- 2**      **Title**            : Design and analysis of membrane-based m-cycle cooling system  
**Author**            : Turpati, Sunilkumar  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2022  
**Call No.**          : 697.93 TUR  
**Acc. No.**          : T01096
- 3**      **Title**            : Interplay of bulk soluble surfactants and interfacial kinetics governs the stability of two-layer channel flows  
**Author**            : Chakraborty, Gourab  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 620.106 CHA  
**Acc. No.**          : T01100
- 4**      **Title**            : Laser surface processing of AA7075 and Aluminium surface composites  
**Author**            : Kalwar, Biki Kumar Sah  
**Publisher**        : Gandhinagar: Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 620.1 KAL  
**Acc. No.**          : T01111
- 5**      **Title**            : Characterization and acoustic analysis of supersonic overexpanded jets  
**Author**            : Sahoo, Ipsita  
**Publisher**        : Gandhinagar, Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621 SAH  
**Acc. No.**          : T01118
- 6**      **Title**            : Climate change impact on electricity demand and solar PV potential in Gujarat, India  
**Author**            : Ray, Madhusmita  
**Publisher**        : Gandhinagar, Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 621.47 RAY  
**Acc. No.**          : T01120
- 7**      **Title**            : Conceptualization and design of a portable FSW machine structure  
**Author**            : Chand, Subhrajit  
**Publisher**        : Gandhinagar, Indian Institute of Technology Gandhinagar, 2023  
**Call No.**          : 671.52 CHA  
**Acc. No.**          : T01129