

List of Ph.D. & M. Tech Theses

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

To see this collection in Institutional Repository please visit this link:
<https://repository.iitgn.ac.in/community-list>

Ph.D. Theses	
Departments	Total
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
Total	73

M.Tech Theses	
Departments	Total
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
Total	44

Table of Contents

List of Ph.D. Theses	5-16
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
List of M. Tech Theses	18-24
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

- 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

- 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
- 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
- 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
- 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
- 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 β
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