# Dr.KomalMehta

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ME Civil, Ph.D Environmental Engineering

# **Summary**

- 18+ years of experience in the field of academics, research and leadership
- Demonstrated competitive technical skills as well as contribution to elevate organization as well as staff by working on new ideas, concepts and opportunities
- Extensive experience to manage stakeholder expectations
- Significant involvement in research with contribution of five patents, five books, more
  than thirty international and national research papers, various grants and
  sponsorship, Editor and Reviewer in various international research journals. Details
  are mentioned in section- Research credentials
- Excellent people management skill
- As part of Board of studies, I was instrumental in review and deciding university curriculum
- Conducting national seminars right from planning to execution
- DPC member of Ph D candidate
- Proven track record as an exceptional academician, researcher and administrator with various recognitions like Dr. APJ Abdul Kalam Life Time Achievement National Award, Research Excellence award 2020 (for book chapter in "Science Direct") to name few.

# **KeySkills**

**Leadership**: Proven record of successfully mentoring / leading teams

working in different areas for more than five year

**Engineering** Hydranautics design software

DesignSoftware:

Packages: MS Office

**Technical**: Expertise in areas of water, waste water treatment and reuse,

water quality, water conservation as well as mathematical

Modelling

# **AchievementsandAwards**

 Awarded Dr. APJ Abdul Kalam Life Time Achievement National Award on 27 <sup>th</sup>Nov, 2019, for contribution in teaching, research and publication

- Awarded as best teacher in higher education category by Shri Om Prakash Kohli, Governor of Gujarat on 6<sup>th</sup>April, 2019, for contribution in higher education
- Best teacher award by ITM Universe three times in 2019, 2016 and 2013
- Research Excellence award 2020 for book chapter "Low Pressure Ammonia Production"
   Published in book "Sustainable Ammonia Production, Green Technology", Springer,
   Science Direct
- Multiple awards for best paper publication as well as various merit-based scholarships throughout the career

# **Experience**

# Drs. Kiran and Pallavi Patel Global University

2nd August, 2021 - till date

**Designation:** Professor, Deputy Director innovation & Research, Ph. D supervisor & Head of Civil Engineering Department with

**Previous Designation**: Professor & Head of Civil Engineering Department with added responsibility of in-charge Dean in absence of Dean

# **Supervisory / Leadership Role**

- Designed policy document for Center of Excellence for innovation & Research
- Successfully handled SSIP phase 1 inspection.
- Received and managing various grants: SSIP, IIC. 4, NI, Electronics & ITeS Hub etc. which includes more than 80,00,000/- in total.
- Chairman Board of Studies
- Instrumental in University, which drives objective based designing of curriculum (designed Degree and Diploma Civil Engineering syllabus and reviewed the same along with submission of requirements of resources) .Designed first year Degree & Diploma curriculum
- Delivering expert sessions in industry
- Established laboratories for undergraduate engineering course right from getting quotations till purchase and installation of instruments
- Supporting students for off campus placement and issuing LOR for higher studies in foreign countries
- Administration and academic management of Civil Engineering Department
- Execution of various technical events

#### **Teaching**

- Teaching various subjects UG, PG & PhD level with practical performance, demonstration, reasoning and multimedia presentation to impart better and practical understanding, reduce knowledge gap between practical and theoretical approaches
- Guiding students for projects with support of research papers and patent (Engineering students received grant of Rs.4,00,000/- under SSIP / SOIC)
- Frequently impart motivational and inspirational talks with intention to create liking towards the subject.
- International internship for students in various foreign universities

#### ITM Universe, Vadodara

1<sup>st</sup> June 2011 – 17<sup>th</sup> July,2021

**Designation:** Professor & Head of Civil Engineering Department with added responsibility of in-charge Dean in absence of Dean

Previous Designation: Associate Professor

# **Supervisory / Leadership Role**

• Mentoring staff members for their career growth and driving new initiatives like:

Introducing LMS (Learning management system) with Moodle software Developed Nano Technology as thrust area for Civil Engineering department by arranging various conferences and encouraging as well as executing student projects in area of nanotechnology. This helped to get three grants from GUJCOST Started and successfully established ACPC help center, which helped guide students for admission procedure and also increased visibility of ITM Universe

- Initiated international collaboration for ITM by establishing association of Professor from Brunei with ITM Universe, Vadodara as Adjunct Professor in Department of Civil Engineering
- Handled various AICTE / UGC inspections academically
- Key member in Board of Studies, which drives objective based designing of curriculum
- Instrumental in University, which drives objective based designing of curriculum (designed Degree and Diploma Civil Engineering syllabus and reviewed the same along with submission of requirements of resources)
- Member of exam committee, Ex officio chief IQAC cell
- Established laboratories for undergraduate engineering course right from getting quotations till purchase and installation of instruments
- Supporting students for off campus placement and issuing LOR for higher studies in foreign countries

#### **Teaching**

- Taught various subjects at UG & PG level with practical performance, demonstration, reasoning and multimedia presentation to impart better and practical understanding, reduce knowledge gap between practical and theoretical approaches
- Introduced activity-based learning and project-based learning
- Guiding students for projects with support of research papers and patent (Civil department students of Viswakarma got more than 4,50,000/- till date from GTU for final year projects)
- Frequently impart motivational and inspirational talks with intention to create liking towards the subject.
- International internship for students in various foreign universities

#### Coordination

- Conducted seminar each year for final year students to brief about the scopes of IDP ( Industrial Defined Project) and UDP (User Defined Project)
- Lead Coordinator for various research and promotional activities such as Editor and reviewer for various international journals, reviewer for international publishing house, delivering expert sessions at industries and national level events for latest technologies, guiding staff members for club activities, coordinating with more than 50 staff members for execution of technical events.

### K.J.Instituteof Technology & Engineering

June 2009- May 2011

**Designation**: Assistant Professor

#### **Key Responsibilities:**

- Develop courses in given specializations and participate in departmental curriculum and program development
- Serve on academic / administrative committees that deal with the institutional academic policies
- Contribute in recruitment for civil engineering department
- Teaching assigned courses at undergraduate level

### **Babaria Institute of Technology & Engineering**

June 2006-June 2009

**Designation:** Lecturer **Key Responsibilities:** 

- Teaching assigned courses at undergraduate level
- Design and prepare course material including syllabi, hand outs, assignments and exams
- Exam work, event contribution, Participate in student placement activities and support in

admissions

# The M.S.University of Baroda

January 2005 – June 2006

**Designation:** Temporary Lecturer

**Key Responsibilities:** 

- Teaching to Bachelor of Engineering and Master of Engineering students
- Guide projects of Master of Engineering

#### **Multi Mantech International Private Limited**

March 2004 - Jan 2005

**Designation**: Environmental Engineer

I had worked on Bharuch Eco Aqua infrastructure project as an environmental engineer where my key Responsibilities included:

- Client communication
- Coordination of samples with laboratory
- Creating and presenting weekly progress reports
- Site supervision and verification of bills

### **Additional Information**

• During my Ph.D following work was done:

Reuse of domestic sewage treatment plant: Collection of 10 years data, literature review, analysis, lab scale study, design, estimation, modeling and identifying future scope

Reuse of common effluent treatment plant: Collection of existing data, literature review, analysis, lab scale study, RO design with software, estimation, modeling and identifying future scope

• Subjects taught at Masters and undergraduate level:

More than 30 subjects

# **Research Credentials**

# **Patent (International)**

 Approved Australian patent, "An IOT and Deep Learning Enabled Device for Monitoring Social Distancing" patent number 2020103880

#### Patent (National)

- Patent Filed for, "CETP Waste Water Reuse" with patent Number 202121053852 on 23rd Nov ,2021
- Patent filed for "Pyrolysis oil from Plastic waste" with patent number 202121007965 on 25th Feb, 2021
- Patent filed for "Street Light that glows by detecting vehicle movement" with patent number 202021046013 on 22<sup>nd</sup>Oct, 2020
- Patent filed for "Production of Green electricity" with patent number 202021004639 on 3<sup>rd</sup>Feb, 2020
- Patent publishedfor "Analytical model for Reuse of Domestic Wastewater" with patent number 201921037614 on 18<sup>th</sup>September, 2019

#### **Grant Received**

- Research grant of Rs.4,00,000/- received from SSIP (Student startup and innovation policy)
- Rs. 50,00,000/- from Gujarat Government for Nodal Institute.
- Rs. 30,00,000/- for Electronics IT/ ITeS from Gujarat Government.
- Research grant from Gujarat Science and Technology in January 2018 for 5<sup>th</sup>National Conference on "Application of Nano Technology in Civil Engineering" from GUJCOST
- Research grant from Gujarat Science and Technology in April 2015 for 2<sup>nd</sup>National Seminar on "Nano Technology: New Materials and Applications"
- Research grant from Gujarat Science and Technology in February 2012 for workshop "Innovations in eco-friendly construction"
- Students of Civil Engineering Department received a grant of total 4.5 lacs (Rs. 11,000 per semester per student, till date more than 30 students received the same). Students of Civil study best village with all facilities and design for development of rural area an submit to government. This project works with aim of developing village with a rural soul

but with Il urban amenities that a city may have.

# Sponsorship received

- Rs. 40,000 from Zydex for two days national level seminar on, "Application of Nano Technology in Civil Engineering" in 2019
- Rs. 20,000 from Cube Construction for National level technical event, Illuminati 2012

#### **International Book Publication**

- Book Chapter "Nano materials for construction building products designed to withstand natural disasters" in Nanotechnology based smart remote sensing networks for disaster prevention - Micro and Nanotechnology series Elsevier ISBN Number: 9780323911665, 2022
- Book Chapter "Nano materials" in "Nano tehnology: Device Design and Applications" CRC press, Taylor & Francis, Boca Raton, London, New York (Scopus indexed) March, 2022 with ISBN: 9781003220350 (DOI: <a href="https://tinyurl.com/2p8pj5hw">https://tinyurl.com/2p8pj5hw</a>)
- Book Chapter "Nano technology in energy & env. in "Nano tehnology: Device Design and Applications" CRC press, Taylor & Francis, Boca Raton, London, New York (Scopus indexed) March , 2022 with ISBN: 9781003220350 (DOI: <a href="https://tinyurl.com/2p8pj5hw">https://tinyurl.com/2p8pj5hw</a>)
- Book Chapter "Application of Nano Technology in Waste Water Treatment" Springer, Lecture Notes in Civil Engineering, Vol. 178, Sreevalsa Kolathayar et al. (Eds): Climate Change and Water Security, 978-981-16-5500-5, 515428\_1\_En, (Chapter 33), Springer nature, science direct (Scopus indexed)
- Book Chapter "Low Pressure Ammonia Production" published in 2020 in Science Direct with Dr. Rama Rao, Brunei & Dr. Mubark, Malaysia, Green Technology, Science Direct (scopus indexed)
- Book "Reverse Osmosis in Wastewater Reuse" published in June 2020 with ISBN: 978-613-8-93254-3 by Scholar Press, Germany, Europe
- Book "Reuse of Domestic Wastewater" is published in August 2019 with ISBN: 978-613-8-90969-9 by Scholar Press, Germany, Europe
- Book "Nanotechnology in Water and Wastewater Treatment" published in Dec, 2019with ISBN: 978-613-8- 84049-7 by Lambart publication, Omniscripum publishing, Latvia

#### **National Book Publication**

Book, "Mechanics of Solids" is published in July 2009 by Mahajan Publication, Gujarat,
 India

# Research Papers

#### **International Journal Publications**

- "Advancement in treatment of wastewater with nano technology" in Materials today: Proceedings, elsevier, science direct, https://doi.org/10.1016/j.matpr.2021.07.253, 2021 (Scopus Indexed)
- "End to end secure e-voting using blockchain & quantum key distribution" in Materials today: Proceedings, elsevier, science direct, https://doi.org/10.1016/j.matpr.2021.07.254, 2021 (Scopus Indexed)
- "Water treatment with nano technology materials" in "in The journal of oriental research Madras, ISSN: 0022-3301, page 81-89, volume of July 2021 published in October, 2021, page 48-55 (UGC listed)
- "Mathematical modeling for CETP waste water reuse" in Design Engineering (Toronto), ISSN: 0011-9342, issue 7, page 2520-2530, 2021, (Scopus indexed)
- "Application of UV in Domestic waste water Reuse" in The journal of oriental research Madras, ISSN: 0022-3301, page 81-89, JUNE 2021, (UGC listed)
- "Development of Empirical Correlation for Thermal Fatigue Life Cycle Prediction" in International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-3S, March, 2020. (Scopus Indexed)
- "Learning Management System Significance And Application In Civil Engineering" in UGC approved International Journal of Advance Engineering and Research Development Volume 7, Issue 02, February - 2020, DOI:10.21090/ijaerd, ISSN:2348 - 4470, Scientific Journal of Impact Factor (SJIF): 5.71
- "Risk Associated with Use of Nano Materials" in Journal of Emerging Technologies and Innovative Research (JETIR), June 2019, Volume 6, Issue 6 (ISSN- 2349-5162) ( UGC listed)
- "Save Water: Solution by Reuse" in journal of emerging technology & innovative research, ISSN: 2349-5162, volume 5, issue 10, page 11, 2018, (UGC listed)
- "Nano Materials in water purification" published in International Journal of Advance Engineering and Research Development, Volume 5, Special Issue 03, February 2018 (UGC listed)
- "Hydranautics design software in Reverse Osmosis system" in International Journal of Research and Analytical Reviews (IJRAR), (E-ISSN 2348-1269, P- ISSN 2349-5138), Volume

# 4, Issue 2, page no 309-317, impact factor 5.75, August 2017 (UGC listed)

- "Nano Technology in water treatment" in International journal of Engineering Research and Management ISSN:2349-2058 impact factor 2.37, July 2016
- "Reverse Osmosis Design With Hydranautics Design Software For Industrial Wastewater Reuse" International Journal of Environmental Research And Development, Volume, ISSN 0973-6921 Impact factor 4.301, March 2015, volume 9, page 421 to 430
- "Design of Reverse Osmosis System with Reuse of Wastewater for Common Effluent Treatment Plant" in International Research journal of engineering & technology, e-ISSN: 2395 - 0056, p-ISSN: 2395-0072, impact factor 7.34, volume 2, page no 983 to 991, in 2015 (UGC listed)
- "Case study of bio medical waste handling" in International Journal of Research and Analytical Reviews (IJRAR), (E-ISSN 2348-1269, P- ISSN 2349-5138), Volume 2, Issue 3, page no 318-322, impact factor 5.75, August 2015 (UGC listed)
- "Status of Solid waste in the City of Vadodara" in International Journal of Darshan Institute of Engineering Research& Emerging Technologies volume 3, No 1, 2014
- "Reuse of Domestic Wastewater for Industrial Purpose" in International Journal of Environmental Research and Development, ISSN 0973-6921, Impact factor 1.28, March 2013
- "Water Status and Need of Reuse a review for India" in International journal of computer applications in Engineering technology & sciences (IJ-CA-ETS) in volume 3, Issue 2, ISSN: -0974- 3596 April to September, 2011

#### **National Journal Publications**

- "Treatment of Wastewater to Meet Disposal Standards & to Explore the Possibilities for Reuse of Wastewater of Common Effluent Treatment Plant" in water specific special volume of Environmental pollution control journal, New Delhi, ISSN: 0972-1541, July 2012
- "Reuse of Wastewater Mandatory Option for Future of Water" in Environmental pollution control board, New Delhi, 2011. ISSN: 0972-1541, June2011
- "Water Reuse from Municipal Sewage Treatment Plant A Step Towards Water Scarcity" in Environ Pollution Control Journal, New Delhi, March - April 2010
- "Reuse of Municipal Wastewater for Industrial Purpose with Ultra Violet Technique" in The Institute of Engineer's Journal, April 2007
- "Bio Medical Waste Management Practices: A Case study" in Environmental Pollution control journal, Volume 9, Number 4, May June 2006
- "Bio Medical Waste Management, Handling and Disposal" in Environ Pollution Control Journal, New Delhi, April 2006
- "Management of Bio-Medical Waste A Case Study" in Environ Pollution Control

- Journal, New Delhi. Volume 9, December 2005
- "Analysis of a Common Treatment Facility, Performance, Evaluation and Treat Ability Study on Common Effluent Treatment Plant" in Environ Pollution Control Journal, New Delhi, Vol.8, May - June, 2005
- "A Case Study Biodegradability Study using Different Seeding Materials In ETP of Polymer Manufacturing Company" in Environmental pollution control journal, New Delhi volume10, Number 4, May June 2007
- "Recycling Technology Feasibility Study for Industrial Reuse of Treated Effluent from Sewage Treatment Plant" in Environ Pollution Control Journal, New Delhi, Volume 7, March-April, 2004
- "A case study, ITM Universe Campus Green Campus" in Environmental pollution control journal, New Delhi, ISSN: 0972-1541, Nov 2013

## **National Conferences**

- "Environment Safety and Health Management in Manufacturing Industry" at National conference on Civil Engineering Trends, Issues & challenges Civil Engineering Department, The M.S.U. (Presented and published in proceeding)
- "COD Fractionation in Sewage Treatment Plant" at National conference on Civil Engineering Trends, Issues & challenges Civil Engineering Department, The M.S.U (Presented and published in proceeding)

#### **International Conference**

- Application Of Nano Technology In Waste Water Treatment' presented in international conference, "Global Virtual Conference on Disaster Risk Reduction - Civil Engineering" for a Disaster Resilient Society, March 2021 organized by ADRRN, IHRR, and NITK in association with Springer, Science Direct
- "Save Water Solution By Reuse of Wastewater" presented and published in proceedings
  of second international conference, "Women in science & Technology: creating
  sustainable career "June 2018, international conference held at BVM, Vidyanagar in
  affiliation with GTU
- "Women A Powerful Engine for Social and Economic Growth" at "Women in science & Technology: creating sustainable career" International conference ISBN: 978-93-84339-11-1, January 2016, international conference held at BVM, Vidyanagar in affiliation with GTU (Received Best paper award)

### PhD guided

• Four PhD candidates are pursuing PhD in Civil Engineering under my guidance at Drs.

Kiran and Pallavi Patel Global University, Vadodara

# Seminars/ Conferences/ Workshops Arranged

- Application of drones in industries, on 10th March, 2022
- Online startup recognition and appreciation event Runway to Vibrant Gujarat startup summit, 5th January, 2022
- The event was organized to introduce the Policy to SSIP Grantees of the state to celebrate the Start-up week on 17th January 2022 containing the journey of SSIP 1.0, brief of SIP 2.0 and planning to execute SSIP 2.0.
- Alumni talk and start up quiz for celebration of "Azadi ka Amrit Mahotsav" on 23<sup>rd</sup>
   September, 2021
- Webinar on, "Building Information Modelling (BIM)" by Keval Shah, GM Geo design and research on 26<sup>th</sup>March,2021
- Online event, "Valuing Water" on 22<sup>nd</sup>March, 2021, World Water Day with delivery of expert session on, "Water capture technology by Nano Enabled photo thermal desiccants"
- International workshop on "Advances in Civil Engineering" organized on 2019
- FDP on "Advances in Integrated Geo engineering Researches" organized on 2019
- 6<sup>th</sup>National Conference on Application of Nano Technology in Civil Engineering organized in January 2019 at ITM Universe, Vadodara
- 5<sup>th</sup>National conference on Application of Nano Technology in Civil Engineering organized on January 2018 at ITM Universe, Vadodara
- 4<sup>th</sup>National conference on Application of Nano Technology in Civil Engineering organized on January 2017 at ITM Universe, Vadodara
- 3<sup>rd</sup>National conference for two days on Nano Technology: Carbon Ladder to sky in 2016
- 2<sup>nd</sup>National conference for two days on Nano Technology in 2015
- Two-day national Seminar on "Nanotechnology and Sustainability in Construction" on February 2014
- One day workshop on "Check the Pulse of the Structure" on July 2013
- One day workshop on "Innovations in Eco-friendly Construction" on February 2012
- "Civil engineering trends, issues and challenges" on March 2006 sponsored by UGC, New Delhi at Civil Engineering Department, Faculty of Technology and Engineering, The M.S.University of Baroda

### **Reviewer**

Reviewer in International book publication house, Omniscriptum Publishing house, Latvia, Germany

#### Reviewer/ Editor

- honored with Editorial board Membership in, "Global Journal of Civil & Environmental Engineering", Phonenix, USA
- Reviewer for international conference, "Global Virtual Conference on Disaster Risk Reduction - Civil Engineering" for a Disaster Resilient Society, March 2021 organized by ADRRN, IHRR, and NITK in association with Springer, Science Direct
- Reviewer in Advances in Science, Technology & Engineering systems journal (ASTESJ)
   ISSN: 2415-6698 (Reviewer code: AJR09340)
- Editor in International journal of Advanced study & Research work
- Reviewer in InSc International Journal of Civil Engineering
- Reviewer in book "Soft Computing in Solid waste and wastewater management",
   Elsevier, Science Direct
- Editorial board member in journal of environmental chemistry and toxicology
- Editor in international Journal of Civil Engineering and Technology
- Reviewer of multi-disciplinary international conference GTUICON 2019 in Engineering Theme: Scientific Revolution through Engineering & Technical Research organized by GTU in March 2019
- Reviewer of 1<sup>st</sup>National Conference on Emerging Research and Innovations in Civil Engineering held on February, 2019 at Dr. S &S.S.Gandhy Government Engineering College, Surat.
- Reviewer for national level journal (Env. Health journal)
- International Journal of Engineering Research & Technology (IJERT)
- International Journal of innovative Research in Engineering & Multidisciplinary Physical Sciences(IJIRMPS), ISSN: 2349-7370, member ID: 798
- Material Science Research, India, ISSN: 0973-3469, Online ISSN:2394-0565
- Journal of Emerging Technology & Innovative Research, ISSN:2349-5162, Member ID:
- 113742
- Reviewer in Journal of emerging Technology and Innovative Research (An International Peer reviewed journal) ISSN: 2349 5162, member ID: 113742, since September 2018

#### **Expert sessions Delivered**

- Expert session on, "Domestic Waste Water Reuse" on global platform as expert of Asia region Xylem on 30th Nov,2021
- Expert session on, "Water capture technology by Nano Enabled photo thermal desiccants" in online event, "Valuing Water", World Water Day at ITM (SLS) Baroda University on 22<sup>nd</sup>March, 2021
- Expert session on "Possibilities of Reuse of CETP Wastewater after Treatment" at XWN

- at Xylem ITC, Vadodara on December 2020
- Expert session on "Applications of Nano Technology for Water and Wastewater Treatment" at XWN at Xylem - ITC, Vadodara on October 2020
- Delivered expert talk on "Application of Nano Technology in Wastewater Treatment" on January 2019 in National level conference
- Delivered expert talk on "Nano Technology and Risk Associated in Environmental Engineering" in National level conference on January 2018
- Delivered expert talk on "Nano Technology in Water Treatment" in National level conference on March 2016
- Expert session in GTU ALVCOM series on October 2015 for principles of building planning in Civil Engineering at Biseccenter, Gandhinagar
- Rain water Harvesting in event of RSS

# Participation in short term training program

- AICTE- ISTE sponsored refresher program on ," Energy Efficient Buildings" from 1st Dec,21 to 7th Dec,21 organized by G.H.Patel college of Engineering ,BVM, Vidyanagar, Gujarat
- AICTE training and learning ATAL academy online FDP on, "Green Technology & Sustainability Engineering" organised by institute of Engineering& Technology, Lucknow from 23<sup>rd</sup> to 28<sup>th</sup>Nov,2020
- TEQIP 3 five days short term course on, "Machine learning and its application to civil engineering, MLACE 2020" organised by National institute of technology, Srinagar from 2<sup>nd</sup>to 6<sup>th</sup>Nov,2020
- Five day short term training program at the Maharaja Sayajirao University, Baroda at Vadodara for, "Applications of MATLAB in Engineering" from 7<sup>th</sup>-11<sup>th</sup> Jan,2015
- Five days National conference on, "Domestic waste water reuse", Centre for science & Environment, Delhi, July2010.
- Short term training course on "Environment Impact Analysis" from 8<sup>th</sup> Dec. to 12<sup>th</sup> Dec,2008 at Parul Institute of Technology
- Short term training workshop on, "Fuzzy Set Theory and Fuzzy logic application in Civil and Environmental Engineering "organized by Civil Engineering Department, Sardar Vallbhbhai National Institute of Technology, Surat during January 8<sup>th</sup> 13<sup>th</sup>,2007.
- Short term course on "Soft Computing in Civil Engineering" conducted by IIT, Bombay during Jan2<sup>nd</sup> – 6<sup>th</sup>,2006.

#### **NTPEL Online FDP Course**

Successfully completed waste water treatment and recycling course (12 weeks) July – Oct, 2019 with 82 % score In Elite + Silver category and also received AICTE Faculty Development Program certificate for same.

# Research Cycle certificates, Elsevier by Mendeley

Certificates of research cycle, Elsevier (Science Direct) by research academy handled by Mendeley, all levels achieved within module and certificate of excellence for each module). This includes:

- Research Preparation: Funding, Research Data Management, Research collaborations.
- Writing Research: Fundamentals of manuscript preparation, writing skills, technical writing, book writing
- Publication process: Fundamentals of publishing, finding the right journal, ethics, open science, publication in chemical science
- Navigating peer review: Fundamentals of peer review, becoming a peer review, going through peer review
- Communication research: Social impact, ensuring visibility

### **Webinars Delivered as subject Expert**

- Career Guidance and counselling for class 10& 12 by ITM (SLS) Baroda University
- Nano Technology in Water & Waste Water Treatment by Shantilal Shah Engineering +College, Bhavnagar
- Nano Technology for Water & Waste Water Treatment by C.K.Pithawala College of Engineering & Technology, Surat

# Webinars Attended (2020)

- "Webinar on Research Workflows, Research Metrics & Excellence in Academic Institutes" co-organized by Elsevier and AICTE on 12th May
- National Webinar on Rural based Start-up and Entrepreneurship Sanitary Product Manufacturing and Entrepreneurship Development on 12th May
- Webinar on star AI & ML for business applications
- Case studies on diaphragm wall constructions by ultratech
- BIM Technology, how much we are adapted in
- Climate change effects on weather patterns by institute of climate change research, The M.S. University

- Will learning from COVID 19 be useful in Global Climate Actions Climate Change Department, Government of Gujarat, by institute of climate change research, the M.S.Unversity
- Climate resilient cities by institute of climate change research, the M.S. University
- Modelling drinking water & process water treatment with GPS -XTM byHydranautics,
- Environmental software solutions
- Machine learning scratch level to advance

## **Online MOOC Courses**

- DART.ENVS.01.X: Introduction to Environmental Science, 6 weeks on line course DART.ENVS.01 with 82 % in March,2015
- Fundamentals of Six Sigma: Quality Engineering & Management, 6 weeks on line course DART.ENVS with 66% in September2016
- Six Sigma White Belt by Aveta Business Institute
- Business Analysis online crash course by Udemy

#### **Coursera Courses**

- "Programming for everybody (Getting started with Python)", 7-week course offered by Coursera (University of Michigan)
- AI for everyone, deep learning, 4-week course by Coursera
- Inspiring leadership through Emotional Intelligence, 8-week course by Coursera

#### **Professional Affiliations**

- Senior membership of The Asia society of researchers (ASR Number R219092924)
- Professional membership with institute of engineering research and publication (member id: PM50672398)
- Institute of Engineers (Fellow membership lifetime)
- Indian water works association (Fellow membership lifetime)
- M.S.U.CIVIL Engineering Association (MSUCEEA), The M.S.University, Vadodara.
- Engineers and architects' associations, Vadodara.
- Indian Environmental Association.
- Professional Membership with Institute of Scholars.

# Courses taught at UG and PG level

#### PhD Level

Research Methodology

• Research & publication Ethics

### **Post Graduate Level**

- waste energy management
- Solid Waste Management
- WaterRecycling Management
- Biological Treatment processes
- Quantity Research
- Environmental Management
- Sustainable design principles
- Water and Waste management

# **Under Graduate Level**

- Engineering Mechanics
- Elements of Civil Engineering
- Engineering Graphics
- Elements of Civil and Mechanical Engineering
- Material Science
- Environmental Studies
- Mechanics of Solids
- Surveying
- Advanced surveying
- Environmental Engineering
- water and wastewater Engineering
- Fundamentals of Civil Engineering
- Advanced water supply and Engineering
- Air Pollution
- Construction technology
- Remote Sensing & GIS
- Building & Town Planning

- Nano Technology for water and wastewater treatment
- Water and waste water treatments
- Reuse ofwastewater
- Design of Reverse osmosis
- Solid waste management
- Analysis of domestic sewage treatment plant
- Analysis of common effluent treatment plant