**Resume**



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| **1.0** | **Name, Designation & Date of joining** | Dr. P L Patel, Professor (HAG) &  July 03, 2007 |
| **2.0** | **Age as on date** | March 20, 1966 (52 years) |
| **3.0** | **Name of the Institution** | S V NIT, Surat |
| **4.0** | **Department** | Civil Engineering |
| **5.0** | **Field of Specialization** | Water Resources Engineering |
| **6.0** | **Academic Qualifications** | B E (Civil) Hons., Government Engineering College, Rewa  M E (Civil) Hons., University of Roorkee  PhD (University of Roorkee, Now IIT Roorkee) |
| **7.0** | **Technical Qualifications** | B E (Civil) Hons., Government Engineering College, Rewa  M E (Civil) Hons., University of Roorkee  PhD (University of Roorkee, Now IIT Roorkee) |
| **8.0** | **Previous Work Experiences** | 1. Joined Border Roads organization as Assistant Executive Engineer through Indian Engineering Services (Sep.1995- June 99) 2. Served Delhi College of Engineering (Now DTU) from July 99 to Jun 2007 as Reader in Department of Civil Engineering |
| **9.0** | **Awards / Prizes/ Certificates etc.** | * + - Received **G. M. Nawathe Best Paper Award 2018** for best presentation during HYDRO 2017 held at LDCE, Ahmedabad for the paper titled "Assessing the Impact of Hathnur Reservoir on Hydrological Regime of Tapi River, India".     - Awarded **Best Paper in Climate Change Analysis theme during HYDRO 2018** International Conference held at National Institute of Technology Patna during Dec. 19-21, 2018.     - Awarded **Best Paper in Water Resources Engineering** theme during the National Conference on "Next Frontiers in Civil Engineering: Sustainable and Resilient Infrastructure" organized by Department of Civil Engineering, Indian Institute of Technology Bombay during Nov. 30 - Dec. 01, 2018.     - Recipient of **Visiting International Fellowship (VIF-2017) 2017** for attending **ASCE EWRI Congress-2017** at Sacramento, California, **USA, May 21-25, 2017**.     - **The Research paper** ‘A 1D-2D coupled Hydrodynamic model for river flood prediction in a coastal urban flood plain’, **Journal of Hydrologic Engineering (ASCE)**, Vol. 20(2), pp. 05014017-(1-18), Feb. 2015, by Timbadiya P.V., Patel, P. L. and Porey, P. D.is awarded as **BEST CASE STUDY - 2015**  by **ASCE EWRI congress – May 2016, Florida, USA.**     - **The Research project** ‘Erosion of non-uniform and bimodal sediments’ sponsored by Department **of Science and Technology (DST)** was rated under **‘Excellent’** grading during the review and final project completion presentation.     - A guided PhD Thesis titled ‘Incipient Motion and Bed Load Transport Characteristics of Unimodal and Bimodal Sediments by (DS08 CE 106) Shaileshkumar B Patel, has been awarded **Professor U C Kothyari Best PhD Thesis award of Indian Society for Hydraulics for year 2012-2013** in HYDRO-2013 at IIT Madras**.**     - The **G M Nawathe Best Paper Puruskar was awarded for best paper**, ‘Sustainable Irrigation Planning using two phase Multi- Objective Fuzzy linear programming approach’ presented in HYDRO-2012 at IIT Bombay.     - **Invited for the talk** on ‘Impact of climate change on fluvial processes’ in International workshop on ‘Impacts of global warming from hydrological and hydraulic issues**,** March 16, 2010, Uji campus, **Kyoto University, Japan**.     - The **G M Nawathe Best Paper Puruskar was awarded for best paper**, ‘Incipient motion conditions of non-uniform sediments’ presented in HYDRO-2003 at CWPRS Pune. |

**10.0 Research projects completed/ongoing as Chief Coordinator:**

* **Completed: 04**
* **Ongoing: 03**

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| **Sr. No.** | **Name of the funding agency** | **Name of the Scheme** | **Programme Title** | **Year of**  **Funding** | **Duration** | **Amount Sanctioned (Rs.)** | **Status: Completed/ Ongoing** |
| 1. | INCCC | **MoWRE,**  **RD&GR**  **(PI)** | Impact of Climate change on Water resources of Tapi basin | 2018 | 3 years | 88.26 Lakhs | ***Ongoing*** |
| 2. | INCCC | **MoWRE,**  **RD&GR**  **(Co-PI)** | Impact of Climate change on Water resources of Sabarmati basin | 2018 | 3 years | 23.36 Lakhs | ***Ongoing*** |
| 3. | DST | **FIST (Co-PI)** | Recirculating Sediment Transport Flume | 2015 | 2 years | 1.75 Crores | ***Ongoing*** |
| 4. | TEQIP-II | **World**  **Bank**  **and**  **MHRD (PI)** | Centre for excellence on Water Resources and Flood Management | 2013 | 4 years | 4.15 Crores | Completed |
| 5. | MHRD,  New Delhi | **ICT**  **(PI)** | Development of course on “Hydrology and Flood Control” | 2014 | 1.5 Year | 7 Lakhs | Completed |
| 6. | DST | **SERC**  **(PI)** | Erosion of Non Uniform Unimodal and Bimodal  Sediments | 2009 | Four  years | 31.89  Lakhs | Completed |
| 7. | AICTE | **NCP**  **(PI)** | Development of Water Resources & Flood Management Centre | 2009 | Four  Years | 35 Lakhs | Completed |

**11.0 Publications (Peer Reviewed Journals and Magazine/Conference Proceedings)**

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| **Book Chapter:** | **02** |
| **International Journal :** | **43** |
| **National Journal :** | **02** |
| **International Magazine Articles:** | **02** |
| **International Conference :** | **60** |
| **National Conference:** | **61** |
| **Total:** | **170** |

**BOOK CHAPTER:**

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| --- | --- | --- | --- |
| **Sr. No.** | **Title of Book Chapter** | **Author(s)** | **Name of Book with Year** |
| 1 | Identification of Causes of Failure of Downstream Block Protection for Singanpore Weir-Cum-Causeway, Surat | Sharma, P. J.  Chethan, S. V.  Timbadiya, P. V.  Patel, P. L. | *Development of Water Resources in India*, Eds: Vikas Garg, Vijay P Singh and Vijay Raj, Springer, Cham publisher, 2017, pp. 355-362. |
| 2 | Flood Forecasting and Mitigation | P L Patel | *Sustainable Holistic Water Resource Management in a changing Climate*, Eds: K. Srinivasa Raju and A Vasan, Jain Brothers, New Delhi, 2017, pp. 18.1-22. |

**INTERNATIONAL JOURNAL:**

| **Sr. No.** | **Title of Research Paper** | **Author(s)** | **Name & Vol. of Journal with Year** |
| --- | --- | --- | --- |
| 1 | Fractionwise calculation of bed load transport | P. L. Patel  Ranga Raju, K. G. | Journal of Hydraulic Research,  IAHR, Vol.34, No.3.pp 363-379,  1996. |
| 2 | Critical tractive stress of non-uniform sediments | P. L. Patel  Ranga Raju, K. G. | Journal of Hydraulic Research,  IAHR, Vol. 37, No.1, pp 39-58,  1999. |
| 3 | Critical tractive stress of non-uniform and bimodal sediments | P. L. Patel  Pati, D. R. | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 12(1). pp 39-51, 2006. |
| 4 | Bed load transport of bimodal sediments | P. L. Patel  Jain Mayank | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 15(1), pp.14-23, 2009. |
| 5 | Critical tractive stress of representative sizes in non-uniform sediments | P. L. Patel,  P. D. Porey,  S. B. Patel | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 15(3), pp. 41-50, 2009. |
| 6 | Entrainment characteristics of non-uniform unimodal and bimodal sediments | P. L. Patel  P. D. Porey  A. D. Ghare  S. B. Patel | Korean Society of Civil  Engineering (KSCE), Springer, Journal of Civil Engineering, Vol. 13, No. 3, pp. 189-194, Feb.2009. |
| 7 | Computation of critical tractive stress of scaling sizes in non-uniform sediment | P. L. Patel,  P. D. Porey  Shaileshkumar B. Patel | Journal of Hydraulic Research,  IAHR, Vol.48 (4), pp. 531-537,  2010. |
| 8 | HEC-RAS based hydrodynamic model in prediction of stages of lower Tapi River | P V Timbadiya  P. L. Patel  P. D. Porey | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol.17, No.2, pp.110-117, 2011. |
| 9 | A fuzzy based optimal irrigation planning for Kakrapar right bank canal command area, Gujarat, India. | A B Mirajkar  P L Patel | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol.17 (1), No.3, pp. 43-50, January 2011. |
| 10 | Calibration of HEC-RAS model on prediction of flood for lower Tapi River | P V Timbadiya  P. L. Patel  P. D. Porey | Journal of Water Resources and  Protection, Scientific Research, Vol. 3, pp. 805-811, 2011. |
| 11 | Application of innovative trend analysis methodology and distribution fitting: Study on annual peak inflow into Ukai Dam, Gujarat, India. | P V Timbadiya  P L Patel  P D Porey | Water & Energy International,  CBIP, Vol.69, No.9, pp.40-43, Sep.2012. |
| 12 | Prediction of missing rainfall data using conventional and artificial neural network. | U C Roman  P L Patel  P D Porey | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, Volume 18(3), pp. 224-231, September 2012. |
| 13 | Optimal irrigation planning of Kakrapar right bank canal using two phase fuzzy multi- objective linear programming model | A B Mirajkar  P L Patel | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol.18 (3), pp. 232- 240, Sep. 2012. |
| 14 | Effect of silt erosion on Francis Turbine: A case study of Maneri Bhali Stage-II, Uttarakhand | Mandeep Singh  J Banerjee  P L Patel Himanshu Tiwari | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK; Vol. 19(1), pp. 1-10, March 2013. |
| 15 | Identification of trend and  probability distribution for time series of annual peak flow in Tapi basin | P V Timbadiya  A B Mirajkar  P L Patel  P D Porey | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 19 (1), pp. 11-20, March 2013. |
| 16 | Threshold for initiation of motion of unimodal and bimodal sediments | S B Patel  P L Patel  P D Porey | International Journal of Sediment  Research (IJSR), Elsevier, Vol.  28(1), pp. 24-33, March 2013 |
| 17 | Prediction of friction factor and stage-discharge relationship in alluvial streams | B.R. Andharia,  P.L. Patel  V.L. Manekar  P.D. Porey | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 19(1), pp. 49-54, March 2013. |
| 18 | Reply to the discussion on the paper: Prediction of missing rainfall data using conventional and artificial neural network techniques by ISH Journal of Hydraulic Engineering, 18 (3), 224-231, Sept. 2012 | U C Roman  P L Patel  P D Porey | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 19(2), pp. 78-79, June 2013. |
| 19 | Development of sustainable  irrigation planning with multiobjective fuzzy linear programming for Ukai – Kakrapar Irrigation Project, Gujarat, India | A B Mirajkar  P L Patel | Canadian Journal of Civil Engineering, Vol.40, No.7, pp.663-673, May 2013. |
| 20 | Estimation of fractional critical tractive stress from fractional bed load transport measurements of unimodal and bimodal sediments | S B Patel  P L Patel  P D Porey | Measurement, Elsevier, Vol. 47,  pp. 393-400, January 2014. |
| 21 | One-dimensional  hydrodynamic modelling of flooding and stage hydrographs in the lower Tapi River in India | P. V. Timbadiya  P. L. Patel  P. D. Porey | Current Science, Vol. 106(5), pp.  708-716, 10 March 2014. |
| 22 | Reply to discussion on paper:  Prediction of friction factor and stage–discharge relationship in alluvial streams in ISH journal of hydraulic engineering, 19 (1), 49–54, Feb. 2013. | B.R. Andharia,  P. L. Patel  V. L. Manekar  P. D. Porey | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 20(2), pp.188-191, May 2014. |
| 23 | Development of two-layered  model for compound open- channel flow | J Sinha  S K Das  P L Patel  B K Samtani | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 20 (3), pp. 250-262, Sep. 2014. |
| 24 | Estimation of sediment yield  using SWAT model for Upper Tapi basin | Prabhat Chandra  P L Patel  P D Porey  I D Gupta | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 20 (3), pp. 291-300, Sep. 2014. |
| 25 | A 1D-2D coupled hydrodynamic model for river flood prediction in a coastal urban flood plain | P V Timbadiya  P L Patel  P D Porey | Journal of Hydrologic Engineering  (ASCE), Vol. 20(2), pp. 05014017- (1-18), Feb. 2015. |
| 26 | Fractional bed load transport  model for unimodal and bimodal sediments | S B Patel  P L Patel  P D Porey | Journal of Hydro-Environment Research, Elsevier, Vol. 9, pp. 104-119, March 2015. |
| 27 | Characterization of flow  turbulence in mobile boundary channels | Sudhanshu Dixit  P L Patel | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 21(2), pp. 179-192, 2015. |
| 28 | Lumped conceptual hydrologic model for Purna river basin, India | V D Loliyana  P L Patel | Sadhana Journal, Springer, Vol. 40(8), pp. 2411-2428, Dec. 2015. |
| 29 | Prediction of sediment erosion pattern in Upper Tapi basin | Prabhat Chandra  P L Patel  P D Porey | Current Science, Vol. 110(6), pp.  1038-1049, March 2016. |
| 30 | Multi-objective two- phase fuzzy compromised approaches in integrated management of water resources | A B Mirajkar  P L Patel | Journal of Water Resources and Planning Management, ASCE, Vol. 122 (11), pp. 04016046- 1-16, November 2016. |
| 31 | [Efficient discretization of state variables in stochastic dynamic programming model of Ukai reservoir, India](http://www.tandfonline.com/doi/abs/10.1080/09715010.2016.1204632) | Priyank J. Sharma  P L Patel  V Jothiprakash | ISH Journal of Hydraulic Engineering, Taylor and Francis publisher, UK, Vol. 22(3), pp. 293-304, 2016. |
| 32 | Morphological study of Upper Tapi river using remote sensing and GIS techniques | Resmi S R  P L Patel  P V Timbadiya | ISH Journal of Hydraulic Engineering, Taylor and Francis, 1-9, 2017.  **DOI:** 10.1080/09715010.2017.140989 |
| 33 | Spatiotemporal trends in extreme rainfall and temperature indices over Upper Tapi Basin, India | Priyank J. Sharma  V D Loliyana  Resmi S R  P V Timbadiya  P L Patel | Theoretical and Applied Climatology, Springer, 1-26, 2017.  **DOI**: 10.1007/s00704-017-2343-y |
| 34 | Assessment of variability in runoff coefficients and their linkages with physiographic and climatic characteristics of two contrasting catchments | Priyank J. Sharma  P L Patel  V Jothiprakash | Journal of Water and Climate Change, IWA Publishing, 2018.  **DOI: 10.2166/wcc.2018.139** |
| 35 | [Numerical and experimental investigations in prediction of bed levels of aggrading channels](http://www.currentscience.ac.in/php/forthcoming/21882.pdf) | B R Andharia,  P L Patel  V L Manekar  P D Porey | Current Science*,* 114(8), 1697-1708, 2018. |
| 36 | Prediction of bed level variations in non-uniform sediment bed channel | B R Andharia  P L Patel  V L Manekar  P D Porey | Sādhanā, 43(4), 55, 2018. |
| 37 | Stochastic nature of turbulence over mobile bed channels | Sudhanshu Dixit  P L Patel | ISH Journal of Hydraulic Engineering, Taylor and Francis, 1-8, 2018.  **DOI:** 10.1080/09715010.2018.1460628 |
| 38 | Performance evaluation and parameter sensitivity of a distributed hydrological model for a semi-arid catchment in India | V D Loliyana  P L Patel | Journal of Earth System Science,  Springer, 1-26, 2018  **DOI:** 117 (01-26). |
| 39 | Assessment and prioritization of flood protection levees along Lower Tapi River, India | Anav Vora  Priyank J. Sharma  V D Loliyana  P L Patel  P V Timbadiya | Natural Hazards Review, 19(4), 05018009.  **DOI:** 10.1061/(ASCE)NH.1527-6996.0000310 |
| 40 | Evaluation of soil moisture prediction for Gopalkheda sub-catchment, India. | Loliyana, V. D., & **Patel, P. L.** | ISH Journal of Hydraulic Engineering,  Taylor and Francis, 1-10, 2019  **DOI:** 10.1080/09715010.2019.1574617 |
| 41 | Impact assessment of Hathnur reservoir on hydrological regimes of Tapi River, India. | Sharma, P. J., **Patel, P. L.**, & Jothiprakash, V. | ISH Journal of Hydraulic Engineering,  Taylor and Francis, 1-13, 2019  **DOI:** 10.1080/09715010.2019.1574616 |
| 42 | Impact of Rainfall Variability and Anthropogenic Activities on Streamflow Changes and Water Stress Conditions across Tapi Basin in India. | Sharma, P. J., **Patel, P. L.**, & Jothiprakash, V. | Science of the Total Environment, Elsevier, 885-897,2019  **DOI:** 10.1016/j.scitotenv.2019.06.097 |
| 43 | Hydroclimatic teleconnections of large-scale oceanic-atmospheric circulations on hydrometeorological extremes of Tapi Basin, India. | Sharma, P. J., **Patel, P. L.**, & Jothiprakash, V. | Atmospheric Research,  Elsevier, 235,2020  **DOI:** <https://doi.org/10.1016/j.atmosres.2019.104791> |

**NATIONAL JOURNAL:**

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| --- | --- | --- | --- |
| **Sr. No.** | **Title of Research Paper** | **Author(s)** | **Name & Vol. of Journal with Year** |
| 1 | Flood Forecasting in Tapi  Basin: A Scope for  Improvement | P V Timbadiya  P. L. Patel  P. D. Porey | Journal of Applied Hydrology,  AHI, Vol. XXIII, No.3 & 4, 2010, pp. 44-52. |
| 2 | CFD Simulation of Hydro turbine units including tail race channel of Koteshwar Hydro-Electric Project | J Banerjee  P L Patel  H L Arora | THDC Hydro-Tech Journal, Vol. 4, Issue 2, 2016, pp. 65-76. |

**INTERNATIONAL MAGAZINE PROCEEDINGS:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr. No.** | **Title of Research Paper** | **Author(s)** | **Name & Vol. with Year** |
| 1 | Fluvial Mechanics: Impact of climate change on sediment yield from river basins | P. L. Patel | IAHR Hydrolink – Climate Change Special Magazine, Vol. 3, pp. 74-75, 2013. |
| 2 | Summary of recommendations for policy makers on adaption to climate change in water engineering | P. L. Patel  Ramesh Teegavarapu  James Ball  Eiichi Nakakita  Andre Paquier  Sang-II Lee  Carlos Galvao  Gregory De Costa  A-A. Ahmed  E. Kolokyatha  Yangwen Jia  Young-Oh Kim | IAHR Hydrolink – SPH (Smoothed Particle Hydrodynamics) in Hydraulics Special Magazine, Vol. 3, pp. 93-95, 2015. |

**INTERNATIONAL CONFERENCE/SEMINAR/SYMPOSIUM:**

| **Sr. No.** | **Title of Research Paper** | **Author(s)** | **Name of Conference with Year** |
| --- | --- | --- | --- |
| 1 | Semi-theoretical approach on  transport of coarse sediments | P. L. Patel  Durga Sai K. | Proceeding of an International  Conference on “Hydraulic Engineering: Research and Practice (ICON-HERP-2004)” held at Department of Civil Engineering, IIT Roorkee, Oct. 26 -28, 2004, pp. 164-175. |
| 2 | River stage Simulation using  HEC-RAS | P. V. Timbadiya  P. L. Patel  P. D. Porey | Proceeding of 3rd International  Congress on Computational Mechanics and Simulation-2009, at IIT- Bombay during 1-5  December, 2009. |
| 3 | Optimization of irrigation area  of URBMC – A Linear  Programming Approach | Nishi Bhuvandas  A. B. Mirajkar  P. V. Timbadiya P. L. Patel | AIP conference proceedings  Volume-1324, International conference on Methods and Models in Science and Technology (ICM2ST-10) held at Chandigarh on Dec. 25-26, 2010. |
| 4 | Optimal Irrigation Planning By  Stochastic Linear Programming Approach For Ukai Irrigation Project | A. B. Mirajkar  P. L. Patel | Indo-Italian workshop in  Hydrology, CWPRS, Pune, Maharashtra, September, 15-16,  2011. |
| 5 | Recent Trend Analysis for  Annual Peak Flow in Tapi  Basin | P V Timbadiya  A B Mirajkar  P L Patel  P D Porey | International conference on “India  Water Week-2012”, organized by Central Water Commission, held at New Delhi. |
| 6 | Geomorphic effectiveness of  flood on lower Tapi River, India using 1D hydrodynamic model | P. V. Timbadiya  P. L. Patel  P. D. Porey | International Conference on  Hydro-system and Engineering-  2012, Orlando, USA at University of Central Florida (UOCF), Orlando, USA organized by UOCF in association with EWRI- ASCE, IAHR, IIHR etc. during November 4-7, 2012. |
| 7 | Calibration of channel and  flood plain roughness using  1D/2D integrated hydrodynamic model : A study of Surat city on lower Tapi River | P. V. Timbadiya  P. L. Patel  P. D. Porey | International Conference on Hydro-system and Engineering-2012, Orlando, USA at University of Central Florida (UOCF), Orlando, USA organized by UOCF in association with EWRI- ASCE, IAHR, IIHR etc. during November 4-7, 2012. |
| 8 | Multi-objective fuzzy linear  programming under uncertain resource parameters | A. B. Mirajkar  P. L. Patel | International Conference on Hydro-system and Engineering-2012, Orlando, USA at University of Central Florida (UOCF), Orlando, USA organized by UOCF in association with EWRI- ASCE, IAHR, IIHR etc. during November 4-7, 2012. |
| 9 | Experimental study on  initiation of motion and bed load transport of unimodal and bimodal sediments | S. B. Patel  P. L. Patel  P. D. Porey | Proceedings of the 35th IAHR World Congress 2013 at Chengdu, China during September 9-13, 2013. Vol. 5(1), paper No. A10517. |
| 10 | Analysis of trends and  variability in time series of extreme daily rainfall in Tapi basin, India | Nishi Bhuvandas  P. V. Timbadiya  P. L. Patel  P. D. Porey | Proceedings of the 35th IAHR World Congress 2013 at Chengdu, China during September 9-13, 2013. Vol. 8(3), paper No. A11949. |
| 11 | Fuzzy Programming Models  for Optimal Irrigation Planning Under Uncertain Resource Conditions | Mirajkar, A. B.  P. L. Patel. | Proceedings of the 18th HYDRO – 2013 International at IIT Madras, Chennai during Dec. 4-6, 2013. |
| 12 | Ukai reservoir operation  simulation using HEC- ResSim | P. V. Timbadiya  Mirajkar, A. B., P. L. Patel. | Proceedings of the 18th HYDRO – 2013 International at IIT Madras, Chennai during Dec. 4-6, 2013. |
| 13 | Conceptual rainfall-runoff  model for Gopalkheda sub-catchment (Maharashtra, India) using MIKE11 NAM model | Loliyana, V. D.  P. L. Patel. | Proceedings of the 18th HYDRO – 2013 International at IIT Madras, Chennai during Dec. 4-6, 2013. |
| 14 | Sediment yield modeling for  upper Tapi basin | Prabhat Chandra  P. L. Patel.  Porey, P. D.  Gupta, I. D. | Proceedings of the 18th HYDRO – 2013 International at IIT Madras, Chennai during Dec. 4-6, 2013. |
| 15 | Mathematical modeling of  aggradation in alluvial channels | Andharia, B. R.  P. L. Patel.  Manekar, V. L.  Porey, P. D. | Proceedings of the 18th HYDRO – 2013 International at IIT Madras, Chennai during Dec. 4-6, 2013. |
| 16 | Review of Downscaling  Methods in Climate Change and Their Role in Hydrological Studies | Nishi Bhuvandas,  P. V. Timbadiya  P. L. Patel.  Porey, P. D. | International conference on  Environmental, Ecological, Geological and Mining Engineering World Academy of Science, Engineering and Technology, held at Dubai, 2014. |
| 17 | Calibration and validation of  hydrologic model for Yerli sub-catchment (Maharashtra, India) | V. D. Loliyana  P L Patel | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 18 | Performance of multi-purpose  reservoir using simulation models for different scenarios | P J Sharma  P L Patel  V Jothiprakash | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 19 | Characterization of turbulence  in mobile boundary channels | Dhvani Patwa  P L Patel  P V Timbadiya | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 20 | Development of IDF curve: A  study for Dholera region of  Gujarat, India | Ankit Patel  P V Timbadiya  P L Patel | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 21 | Turbulence characteristics  over a fluvial channel bed | Sudhanshu Dixit  P L Patel | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 22 | Trend detection and  forecasting of annual precipitation in Tapi basin, India using singular spectrum analysis (SSA) | Nishi Bhuvandas  P V Timbadiya  P L Patel  P D Porey | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 23 | Experimental and numerical  studies on aggradation for alluvial stream bed | Andharia, B. R.  P. L. Patel.  Manekar, V. L.  Porey, P. D. | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 24 | Contrast in sediment yield  patterns of subcatchments of upper Tapi basin | Prabhat Chandra  P. L. Patel.  Porey, P. D. Gupta, I. D. | Proceedings of the 19th HYDRO –  2014 International at MANIT Bhopal during Dec. 17-19, 2014. |
| 25 | Investigation of long-term  trends and temporal variability of rainfall in Surat district, Gujarat | P J Sharma  V D Loliyana Garima Nagpal  P V Timbadiya  P L Patel | International conference on “India  Water Week-2015”, organized by Central Water Commission at New Delhi during Jan. 13-17, 2015. |
| 26 | Flood inundation mapping of  Surat city using 1D-2D  coupled hydrodynamic model | P V Timbadiya  P L Patel  P D Porey | International conference on “India  Water Week-2015”, organized by Central Water Commission at New Delhi during Jan. 13-17, 2015. |
| 27 | Trend analysis of climate  variables and their impact on stream flow using NAM model | V. D. Loliyana  P L Patel | Proceedings of the 36th IAHR World Congress 2015 at The Hague, Netherlands during June 28-July 3, 2015. |
| 28 | Experimental investigation of  turbulent bursting events in weakly mobile channel bed | Dhvani Patwa  P L Patel  P V Timbadiya | Proceedings of the 36th IAHR World Congress 2015 at The Hague, Netherlands during June 28-July 3, 2015. |
| 29 | A simulation – optimization  approach in development of operation policy of a multipurpose reservoir | P J Sharma  P L Patel  V Jothiprakash | Proceedings of the 36th IAHR World Congress 2015 at The Hague, Netherlands during June 28-July 3, 2015. |
| 30 | Development of IDF curve  under non-stationary meteorological condition | Ankit Patel  P V Timbadiya  P L Patel | Proceedings of the 36th IAHR World Congress 2015 at The Hague, Netherlands during June 28-July 3, 2015. |
| 31 | Distributed surface water flow model for Gopalkheda sub-catchment, Maharashtra, India | V D Loliyana  P L Patel | Proceedings of the 20th HYDRO –  2015 International at IIT Roorkee during Dec. 17-19, 2015. |
| 32 | Assessment of Regional Flood Frequency Model for the Upper Tapi Basin, India | Resmi S R  P L Patel | Proceedings of the 20th HYDRO –  2015 International at IIT Roorkee during Dec. 17-19, 2015. |
| 33 | Identification of regional frequency model for rainfall based on spatial clustering in lower Tapi basin, India | Garima Nagpal  P L Patel | Proceedings of the 20th HYDRO –  2015 International at IIT Roorkee during Dec. 17-19, 2015. |
| 34 | Stochastic Modelling for Inflow Prediction into Ukai Reservoir, India | Priyank Sharma  P L Patel  V Jothiprakash | Proceedings of the 20th HYDRO –  2015 International at IIT Roorkee during Dec. 17-19, 2015. |
| 35 | A 2-D Hydrodynamic Model for Urban Flood Plain of Surat City, India | Apoorv Tripathi  P V Timbadiya  P L Patel | Proceedings of the 20th HYDRO –  2015 International at IIT Roorkee during Dec. 17-19, 2015. |
| 36 | Sediment management modelling in Upper Tapi basin | Prabhat Chandra  P L Patel  P D Porey | Proceedings of the 20th HYDRO –  2015 International at IIT Roorkee during Dec. 17-19, 2015. |
| 38 | Regional flood frequency relationship for the upper tapi basin | Resmi S R  P L Patel | Proceedings of International Conference, ICWEES-2016, Bhopal during March 14-18, 2016. |
| 39 | Physics based distributed overland flow modeling for Yerli sub-catchment, Maharashtra, India | V D Loliyana  P L Patel | Proceedings of the 20th IAHR APD 2016 at Colombo, Sri Lanka during August 28-31, 2016. |
| 40 | [Seasonal Stochastic Model for Long Term Reservoir Inflow Forecasting for Ukai Reservoir, India](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=ayxugJcAAAAJ&citation_for_view=ayxugJcAAAAJ:zYLM7Y9cAGgC) | Priyank Sharma  P L Patel  V Jothiprakash | Proceedings of the 20th IAHR APD 2016 at Colombo, Sri Lanka during August 28-31, 2016. |
| 41 | Aggradation in mobile boundary channel due to overloading of sediments | P Laxmi Narayana  P V Timbadiya  P L Patel | Proceedings of the 20th IAHR APD 2016 at Colombo, Sri Lanka during August 28-31, 2016. |
| 42 | At-site flood frequency analysis for Upper Tapi basin, India | Priyank Sharma  P L Patel  V Jothiprakash | Proceedings of the 21st HYDRO – 2016 International at CWPRS during Dec. 8-10, 2016. |
| 43 | [Groundwater Flow Estimation using Distributed Hydrologic Model for Yerli sub-catchment, Maharashtra, India](https://www.researchgate.net/publication/311575692_Groundwater_Flow_Estimation_using_Distributed_Hydrologic_Model_for_Yerli_sub-catchment_Maharashtra_India?_iepl%5BviewId%5D=nDWlSaRcq4OOoAOzreHiZHtn&_iepl%5BprofilePublicationItemVariant%5D=default&_iepl%5Bcontexts%5D%5B0%5D=prfpi&_iepl%5BtargetEntityId%5D=PB%3A311575692&_iepl%5BinteractionType%5D=publicationTitle) | V D Loliyana  P L Patel | Proceedings of the 21st HYDRO – 2016 International at CWPRS during Dec. 8-10, 2016. |
| 44 | Flow characteristics at horizontal interface of asymmetric compound open channel | J Sinha  P L Patel  S K Das  B K Samtani | Proceedings of the 21st HYDRO – 2016 International at CWPRS during Dec. 8-10, 2016. |
| 45 | Morphological study of Upper Tapi river using remote sensing and GIS technique | Resmi S R  P L Patel  P V Timbadiya | Proceedings of the 21st HYDRO – 2016 International at CWPRS during Dec. 8-10, 2016. |
| 46 | A 1D Numerical Model for Prediction of Bed Levels of Aggrading Channels | P. L. Patel.  Andharia, B. R.  Manekar, V. L. | Proceedings of the World Environment & Water Resources Congress, ASCE – EWRI, 2017 at Sacramento, California during May 21-25, 2017. |
| 47 | Post processing of ultrasonic ranging system and acoustic doppler velocimeter data for morphological studies | P Laxmi Narayana  P V Timbadiya  P L Patel | Proceedings of 37th IAHR World Congress-2017 at Kuala Lumpur, Malaysia during Aug. 13-18, 2017. |
| 48 | A 1D numerical model for aggrading channel of nonuniform sediment bed | Andharia, B. R.  P. L. Patel.  Manekar, V. L.  Porey, P. D. | Proceedings of 37th IAHR World Congress-2017 at Kuala Lumpur, Malaysia during Aug. 13-18, 2017. |
| 49 | Energy and momentum correction factors under varied roughness and flow conditions in mobile boundary channels | Chaitanya J C  P L Patel | Proceedings of the 22nd HYDRO – 2017 International at L D College of Engineering, Ahmedabad during Dec. 21-23, 2017. |
| 50 | Computation of channel roughness and unit stream power using simulated and observed flow variables of Middle Tapi River | Neha Manoj  P L Patel | Proceedings of the 22nd HYDRO – 2017 International at L D College of Engineering, Ahmedabad during Dec. 21-23, 2017. |
| 51 | Assessing the impact of Hathnur reservoir on hydrological regime of Tapi River, India | Priyank J Sharma  P L Patel  V Jothiprakash | Proceedings of the 22nd HYDRO – 2017 International at L D College of Engineering, Ahmedabad during Dec. 21-23, 2017. |
| 52 | A study on morphological changes in Upper Tapi River,  India | Resmi S R  P L Patel  P V Timbadiya | Proceedings of the 22nd HYDRO – 2017 International at L D College of Engineering, Ahmedabad during Dec. 21-23, 2017. |
| 53 | Evaluation of soil moisture prediction for Gopalkheda  sub-catchment, India | V D Loliyana  P L Patel | Proceedings of the 22nd HYDRO – 2017 International at L D College of Engineering, Ahmedabad during Dec. 21-23, 2017. |
| 54 | Rainfall trends over the past century for tropical climatic region in western India | Priyank Sharma  P L Patel | Proceedings of the 13th International Conference on Hydroinformatics (HIC 2018) at Palermo, Italy during July 01-06, 2018. |
| 55 | Geomorphic effectiveness of peak flows in Upper and Middle Tapi rivers, India | Resmi S R  P L Patel  P V Timbadiya | Proceedings of the 21st IAHR APD 2018 at Yogyakarta, Indonesia during September 2-5, 2018. |
| 56 | Integrated hydrological and hydraulic model for prediction of inflows into Hathnur reservoir | Kachhwaha, V. **Patel P. L** | *Proceedings of the 23rd* HYDRO-2018 *International* at National Institute of Technology, Patna |
| 57 | Development of hydraulic geometry equations for Middle Tapi River, India | Choudhary, S.  **Patel P. L** | *Proceedings of the 23rd* HYDRO-2018 *International* at National Institute of Technology, Patna |
| 58 | Linking of sediment yield pattern with rainfall and land-use land-cover changes within Burhanpur sub-catchment, India | Resmi, S. R. **Patel P. L**. Timbadiya, P. V. | *Proceedings of the 23rd* HYDRO-2018 *International* at National Institute of Technology, Patna |
| 59 | Changes in monthly hydro-climatic indices for Middle Tapi Basin, India | Sharma, P. J. **Patel P. L.** Jothiprakash, V. | *Proceedings of the 23rd* HYDRO-2018 *International* at National Institute of Technology, Patna |
| 60 | Characterization of flow turbulence around bridge pier on rigid bed channel. | Laxmi Narayana, P. Timbadiya P. V.  **Patel P. L.** | *Proceedings of the 23rd* HYDRO-2018 *International* at National Institute of Technology, Patna |

**NATIONAL CONFERENCE/ SYMPOSIUM/ SEMINAR:**

| **Sr. No.** | **Title of Research Paper** | **Author(s)** | **Name of Conference with Year** |
| --- | --- | --- | --- |
| 1 | Characteristics of flow past  Ski-jump bucket, | P. L. Patel,  Asawa, G.L.  Ranga Raju, K.G. | NASORT in Design of Hydraulic  Structures, Dept. of Civil Engg, University of Roorkee, pp 143-  151, 1994. |
| 2 | An evaluation of fractionwise  calculation of bed load | P. L. Patel,  Ranga Raju, K. G | NASORT in Design of Hydraulic  Structures, Dept. of Civil Engg, University of Roorkee, pp. 265-272, 1994. |
| 3 | Criteria for movement of  Non-uniform sediments: An overview | P. L. Patel | HYDRO 2000, Recent Advances in Hydraulic and Water Resources, Deptt. of Civil Engg., Regional Engineering College, Kurukshetra, pp. 216-223 |
| 4 | Lift and drag model for  transport of coarse sediments | P. L. Patel  Ghosh, M. D. | HYDRO 2001, National conference on Hydraulics and Water Resources, CWPRS, Khadakwasla, Pune, pp. 237-283 |
| 5 | Model study of a ski-jump type  energy dissipator | Mazumder, S. K.  P. L. Patel | HYDRO 2001, National conference on Hydraulics and Water Resources, CWPRS, Khadakwasla, Pune, pp. 425-432 |
| 6 | Measures for silt free water in  power canal | P. L. Patel | National Workshop on ‘Water Quality (Including drinking water)’ Feb. 2002 held at Jawahar Lal Nehru University, New Delhi. |
| 7 | An evaluation of critical  tractive stress of non-uniform sediments | P. L. Patel | National Conference on Advances in Civil Engineering, Dept. of Civil Engg., HBTI, Kanpur, pp. 452-457. |
| 8 | Incipient motion conditions of  Non-uniform sediments | P. L. Patel  Sharma A. K. | National Conference on Hydraulics and Water Resources, HYDRO 2003, at Khadakwasla, Pune during December 26-27, 2003, pp 183- 187. |
| 9 | Sediment transport concepts in  design of power canals and silt exclusion devices | P. L. Patel | Proceedings of a National Seminar on Safety and Quality management in development of Uttaranchal, organized by Institution of Engineers, June 24, 2004, pp.241-245. |
| 10 | Prediction of critical tractive  stress of non-uniform and bimodal sediments | P. L. Patel | Proceeding of a National Conference HYDRO-2005, Dec. 08-09, SIT Tumkur, pp.668-674. |
| 11 | Critical submergence of ski-  jump bucket: An analytical approach, | P. L. Patel  Shrivastava Vishal | Proceedings of a National Conference HYDRO-2006, Dec.08-09, SIT Tumkur. |
| 12 | Probabilistic model in  prediction of non-uniform sediment bed surface under equilibrium condition | Goyal Kanhaiya  P. L. Patel | Proceedings of a National Conference HYDRO-2006, Dec.08-09, SIT Tumkur. |
| 13 | Study of Mobility Index of  Sarangkheda gauging station of  Tapi River | Anajwala J. Nitisha,  P. L. Patel  Samtani B K | Proceedings of a National Conference HYDRO-2006, Dec.08-09, SIT Tumkur. |
| 14 | Stream flow forecasting using  Deterministic approach for  Sabarmati River Basin | P. V. Timbadiya  A. D. Ghare P. L. Patel P. D. Porey | Proceeding of 13th National Seminar symposium on Hydrology with focal theme on “flow forecasting during Extremes”, 28-29, August 2008, IIT-Delhi. |
| 15 | Computation of Bed load  transport of non-uniform bimodal sediments | P L Patel,  P D Porey  Jain Mayank | Proceeding of Indian National  Conference on Advances in Hydraulic engineering with special emphasis on Model- Prototype Conformity, INCAHE-2008, Nov. 6-7 2008, pp.184-188. |
| 16 | Critical Tractive Stress of  Representative Sizes in  Non-uniform Sediments | P. L. Patel  P. D. Porey Shaileshkumar B. Patel | Proceedings of a National Conference HYDRO-2008 at MNIT Jaipur during Dec. 15-16, 2008, pp. 366-374. |
| 17 | Stream flow forecasting using  ANN approach for Sabarmati  River Basin | Timbadiya P V  P. L. Patel  Porey P D | Proceedings of a National Conference HYDRO-2008 at MNIT Jaipur during Dec. 15-16, 2008, pp.254-263. |
| 18 | Flood forecasting in Tapi basin: A scope for Improvement | P.V.Timbadiya,  P.L.Patel  P.D.Porey | Proceeding of National Seminar  on recent advances in Hydrology for Water Resources Development and Management & xxvii Annual Convention of AHI 21st & 22nd January 2009, Baroda. |
| 19 | Need for Water Resources and  Flood Management Centre in  South Gujarat Region | P. L. Patel  B K Samtani | Proceeding of Seminar on Water  for Future- Issues and Options organized by CWC during March 4-5, 2009. |
| 20 | Simulation of Unsteady flow in  Natural channel: A case study of Tapi river using MIKE-11. | P. V. Timbadiya  P. L. Patel  P. D. Porey | Proceedings of the Civil Engineering Conference Innovation Without Limits (CEC-09) at NIT-Hamirpur during September 18-19, 2009. |
| 21 | Simulation of flow in Tapi  river between Ukai Dam and  Kakrapar weir using HEC-RAS | P. V. Timbadiya  Jaimin Trivedi  Niket R Shah  P L Patel | Proceedings of the Civil Engineering Conference Innovation Without Limits (CEC-09) at NIT-Hamirpur during September 18-19, 2009. |
| 22 | Evaluation of Existing  Methods for Computation of Critical Tractive Stress of Bimodal Sediments | P. L. Patel  P. D. Porey Shaileshkumar B. Patel | National Specialty Conference on River Hydraulics – 2009, held at MMU-Mullana, Haryana, Oct. 29-30, 2009. |
| 23 | Characterization and  Computation of Critical Tractive Stress of Bimodal sediments | P. L. Patel  P. D. Porey Shaileshkumar B. Patel | Proceedings of a National Conference HYDRO – 2009, held at Khadakwasla, PUNE (INDIA), Dec. 17 -18, 2009. |
| 24 | Optimal Irrigation Planning in  Fuzzy Environment: A Case Study of Kakrapar Canal Command Area, Gujarat | A. B. Mirajkar  P. L. Patel | Proceedings of a National Conference HYDRO-2010 at Ambala (Haryana), on 16-18 December, 2010. |
| 25 | Simulation of Stages using  Hydrodynamic model MIKE  11 : A case study of Lower  Tapi river | P. V. Timbadiya  P. L. Patel  P. D. Porey | 14th National Symposium on Hydrology at MNIT- Jaipur during December- 21-22, 2010. |
| 26 | Optimal Cropping Pattern for  Ukai Command Area, Gujarat. | A. B. Mirajkar  P. L. Patel | 14th National Symposium on Hydrology at MNIT- Jaipur during December- 21-22, 2010. |
| 27 | Optimal Cropping pattern in  Command Area Kakrapar  Right Bank Main Canal | Nishi Bhuvandas  A. B. Mirajkar  P. V. Timbadiya  P. L. Patel | National Conference on Sustainable Development of Urban Infrastructure, VNIT, Nagpur, pp. 408-413, June 2010. |
| 28 | Optimal Irrigation Planning in  Fuzzy Environment: A Case Study of Canal Command Area, Gujarat | A. B. Mirajkar  P. L. Patel | National Conference on Environment Pollution and Management, GEC Aurangabad, MS, pg. 159-166, Jan-2011. |
| 29 | HEC-RAS Model in Prediction  of Levees along Lower Tapi  River | V. D. Loliyana  P. L. Patel  P. V. Timbadiya  M. Khan  K. L. Dave | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 30 | One-Dimensional Model in  Prediction of Stage-Discharge  Curves in Natural Channel | P. V. Timbadiya  P. L. Patel  P. D. Porey | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 31 | Hydrodynamic Simulation of  Open Channel Flow using MIKE 11 and its Validation: A Case Study | P. V. Timbadiya  Apurva M. Suthar  P. L. Patel | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 32 | Irrigation Operating Policies  using Genetic Algorithm for Ukai Reservoir, India: A Case Study | S. S. Shiyekar  P. L. Patel  P. D. Porey | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 33 | Chance Constraint Linear  Programming Model for  Optimal Cropping Pattern | A. B. Mirajkar  P. L. Patel | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 34 | Analysis of Sediment Yield  Data in Tapi Basin | Prabhat Chandra  P. L. Patel  P. D. Porey  I. D. Gupta | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 35 | Comparative Performance of  Critical Tractive Stress Predictors for Bimodal Sediments | Shailesh B. Patel  P. L. Patel  P. D. Porey | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 36 | Estimation of Friction Factor  for Alluvial Rivers | B. R. Andharia  V. L. Manekar  P. L. Patel  P. D. Porey | Proceedings of National Conference HYDRO-2011 at SVNIT Surat during December 29-30, 2011. |
| 37 | Comparative Prediction of  rating curves using 1D and 1D-  2D coupled Hydrodynamic models | P. V. Timbadiya  P. L. Patel  P. D. Porey | Proceedings of National Conference HYDRO-2012 at IIT- Bombay during December 7-8, 2012. |
| 38 | Sustainable Irrigation Planning  using two phase Multi- Objective Fuzzy linear programming approach | A. B. Mirajkar  P. L. Patel | Proceedings of National Conference HYDRO-2012 at IIT- Bombay during December 7-8, 2012. |
| 39 | Development of two layered  model for compound open channel flow | J. Sinha  S. K. Das  P. L. Patel  B. K. Samtani | Proceedings of National Conference HYDRO-2012 at IIT- Bombay during December 7-8, 2012. |
| 40 | Experimental investigation on  threshold for incipient motion of graded sediments | S. B. Patel  P. L. Patel  P. D. Porey | Proceedings of National Conference HYDRO-2012 at IIT- Bombay during December 7-8, 2012. |
| 41 | Estimation of sediment yield  using SWAT model- Generation of input data for Tapi basin | Prabhat Chandra  P. L. Patel  P. D. Porey  I. D. Gupta | Proceedings of National Conference HYDRO-2012 at IIT- Bombay during December 7-8, 2012.7-8, 2012. |
| 42 | Calibration and performance of  HEC-RAS based hydrodynamic model for stage prediction in lower Tapi river | V. D. Loliyana  P. L. Patel | Proceedings of National Conference HYDRO-2012 at IIT- Bombay during December 7-8, 2012. |
| 43 | Sustainable irrigation planning  management with multi- objective fuzzy linear programming | A. B. Mirajkar  P. L. Patel | Proceedings of SWRDAM-13 at GEC Aurangabad during Sept 30-Oct 1, 2013. |
| 44 | Sustainable irrigation planning using multi objective fuzzy optimization models | M. S. Mankar  A. B. Mirajkar  P. L. Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 45 | Optimal irrigation planning in an intuitionistic fuzzy environment | S. V. Pawar  A. B. Mirajkar  P. L. Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 46 | Hydrodynamic characteristics of flows in a two-layered compound open channels using dynamic SGS model | J. Sinha  S. K. Das  P. L. Patel  B. K. Samtani | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 47 | M5 model tree technique in daily river flow forecasting for Purna River in Tapi Basin, India | Priyank Sharma  P L Patel  V Jothiprakash | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 48 | Prediction of bed aggradation in alluvial streams: Application of numerical computations | B. R. Andharia  V. L. Manekar  P. L. Patel  P. D. Porey | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 49 | Influence of turbulence in aggraded alluvial bed in mobile boundary channel | P Laxmi Narayana  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 50 | Distributed hydrological modelling using MIKE SHE for Gopalkheda sub-catchment, Maharashtra, India | V. D. Loliyana  P. L. Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 51 | Analysis of rainfall variability for Middle Tapi Basin, India | Vinay Maurya  Priyank Sharma  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 52 | Flood hazard mapping of Surat city for different return period floods | Chethan S V  Apoorv Tripathi  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 53 | Flood and agricultural water management using a hydrophilic material | M. S. Bhagat  A. D. Ghare  R. V. Ralegaonkar  P. L. Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 54 | Trend analysis of water quality parameters in Tapi Basin, India | R P Vachhani  Y J Lathiya  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 55 | Spatio-temporal analysis of changes in rainfall pattern over Gujarat State, India | Nirdesh Shah  Priyank Sharma  V. D. Loliyana  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 56 | Investigation of trends in extreme rainfall and rainy days over Middle Tapi Basin, India | Vikash Sharma  V. D. Loliyana  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 57 | Identification of trend and change point in hydro-climatic variables in Tapi Basin, India | Lalit Pal  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 58 | Quantification of bank erosion and bankline migration in Upper Tapi River, India | Resmi S R  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 59 | Characterisation of erosion and deposition behaviour of Middle Tapi River, India | Akshay Rajak  P V Timbadiya  P L Patel | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 60 | Morphological analysis of lower Tapi River using remote sensing and GIS technique | Kavya Rajendran  P L Patel  P V Timbadiya | Proceedings of National Conference on Water Resources and Flood Management (WRFM)-2016 at SVNIT Surat during Oct. 14-15, 2016. |
| 61 | Investigation of long-term trends and temporal variability in annual rainfall across Purna River Basin, India | Priyank Sharma  V D Loliyana  P V Timbadiya  P L Patel | Proceedings of 49th IWWA Annual Convention on “Smart Water Management” at VNIT Nagpur, India during Jan. 19-21, 2017. |

**12.0 Consultancy Projects:**

* **No. of consultancy projects completed: 15**
* **No. of consultancy projects ongoing: 01**

| **Sr. No.** | **Sponsoring Authority** | **Type of Work** | **Sanctioned Amount (Rs.)** | **Present Status** |
| --- | --- | --- | --- | --- |
| 1 | Iron Triangle Limited, Ahmedabad | Proof consultancy services for Construction of Sewerage System of Bhubaneshwar Sewerage District-I on EPC Mode | 16.20 | Completed (2018) |
| 2 | Laxmi Construction, Ahmedabad | Proof consultancy services for Construction of Sewerage System of Bhubaneshwar Sewerage District-II on EPC Mode | 9.00 | Completed (2018) |
| 3 | Ashoka Buildcon Limited, Nashik | Study of Hydraulic Impact of Existing Bridge on proposed bridge on Barak River at Govindpur-Tundi-Girdih Road, Project in Jharkhand state | 2.00 Lakhs | Completed  (2017) |
| 4 | Central Water Commission, New Delhi | Morphological study on Tapi River using Remote sensing technique | 72.86 Lakhs | Completed 2018 |
| 5 | Tehri Hydro Development India Corporation Limited (THDICL)-Rishikesh Uttarakhand | CFD Simulations of Hydro Turbines including Tail Race of Koteshwar Hydro Power Project | 15.00 Lakhs | Completed  2016 |
| 6 | Surat Municipal Corporation, Surat | Safety assessment of Singanpore weir-cum- Causeway | 15.00 Lakhs | Completed  2016 |
| 7 | Design Point Consultant Pvt. Ltd. Surat | Design of storm drainage, water supply, sewerage and waste water recycling work of TP4E of DSIR | 4.50 Lakhs | Completed  2016 |
| 8 | Design Point Consultant Pvt. Ltd. Surat | Design of storm drainage, water supply, sewerage and waste water recycling work of TP2E of DSIR | 25.00 Lakhs | Completed  2016 |
| 9 | Narmada, Water Resources Water Supply and Kalpsar Department (NWRWS&KD), Govt. of Gujarat | Design of lining of Vinzol vhela passing through Vatva, GIDC, Ahmedabad and its estimation | 10.00 Lakhs | Completed  2015 |
| 10 | Tehri Hydro Development India Corporation Limited (THDICL)-Rishikesh Uttarakhand | Conducting CFD Simulations of River Pocket in front of Tail Race Tunnels (TR1and TR2) of Tehri HPP CFD | 7.75 Lakhs | Completed  2012-13 |
| 11 | Uttaranchal Jal Vidyut  Nigam Limited- Dehradun | Analysis of Maneri Bhali Stage II (Part I&II) | 13.40 Lakhs | Completed  2010-11 |
| 12 | SVNIT-Surat | Design of Water Distribution Network for SVNIT Surat with Revised Demand | Services were provided free of cost being Institute project | Completed  2010 |
| 13 | Surat Municipal Corporation, Surat | Safety of Weir-cum- Causeway (Singanpur) due to flooding | 0.30 Lakhs | Completed  2007 |
| 14 | Gujarat Water Resources Water Supply and Kalpsar Department | ‘Damaged Aqueduct at Chainage 7350 m on the Daman-Ganga, | 1.12 Lakhs | Completed  2007 |
| 15 | Design Point Consultant Pvt. Ltd., Surat | Drainage Plan for Vaghrech Recharge Project, Tal. Gandevi, Navsari, Gujarat | 13.50 Lakhs | Submitted |
| 16 | Uttaranchal Jal Vidhyut Nigam Ltd. | CFD Simulation of Flow through Turbine units including tail race channel of Maneri Bhari-I Hydro-electric project for finalization of outfall gates in tail-race | 14.90 Lakhs | Ongoing |

**13.0 List of Completed/ Ongoing Ph.D. Theses**

* **Completed – 08, Ongoing – 11**

| **Sr. No.** | **Name of Students** | **Title of Thesis** | **Ph.D. Supervisors** | **Date of Joining Ph.D.** | **Status** |
| --- | --- | --- | --- | --- | --- |
| **1** | **Praful V. Timbadiya** | **Development of 1D-2D Integrated Hydrodynamic Model for River Flood Prediction in Coastal Urban Flood Plain** | **Dr. P L Patel**  Dr. P D Porey | **20/07/2007** | **Completed**  **August 2012** |
| **2** | **Shailesh B. Patel** | **Incipient Motion and Bed Load Transport Characteristics of Unimodal and Bimodal Sediments** | **Dr. P L Patel**  Dr. P D Porey | **27/01/2009** | **Completed**  **June 2013** |
| **3** | **Ashwini B. Mirajkar** | **Multiobjective Fuzzy Linear Programming Approaches in Integrated Management of Water Resource System** | **Dr. P L Patel** | **01/01/2010** | **Completed**  **March 2014** |
| **4** | **Uday C. Roman** | **Estimation of Missing Rainfall and Prediction of Runoff in Upper Catchment of Tapi Basin** | **Dr. P L Patel**  Dr. P D Porey | **27/01/2008** | **Completed**  **May 2015** |
| **5** | **Prabhat Chandra** | **Prediction of Sediment Yield and Identification of Erosion Prone Areas for Soil Conservation Measures in Upper Tapi Basin, India** | **Dr. P L Patel**  Dr. P D Porey | **27/01/2009** | **Completed**  **May 2016** |
| **6** | **Bhoomi R. Andharia** | **Prediction of Bed Level Variation in Alluvial Streams** | Dr. V L Manekar  **Dr. P L Patel**  Dr. P D Porey | **23/07/2009** | **Completed**  **December 2016** |
| **7** | **Jiveswar Sinha** | **Development of 2-Layered 2-D Model for Compound Open Channel Flow** | **Dr. P L Patel**  Dr. B K Samtani  Dr. S K Das | **20/07/2009** | **Completed**  **December 2016** |
| 8 | **Viraj D. Loliyana** | **Development of a Physics Based Distributed Integrated Hydrological Model for Prediction of Water Availability in a Semi-Arid Region in India** | **Dr. P L Patel** | **15/07/2011** | **Completed May 2018** |
| **9** | **Priyank J. Sharma**  ***DST Inspire Fellow*** | **Integrated Assessment of Hydroclimatic variability including streamflow modelling of a Climatically heterogeneous basin in India** | **Dr. P L Patel**  Dr. V Jothiprakash  (IIT Bombay) | 31/07/2014 | **Synopsis submitted** |
| 10 | Soumita Bid | Numerical modeling of environmental flows in Hydraulics | **Dr. P L Patel**  Dr. R A Christian | 26/07/2013 | Ongoing |
| 11 | Resmi S. R. | Morphological study of Tapi river using Remote sensing Technique | **Dr. P L Patel**  Dr. P V Timabadiya | 17/07/2015 | Ongoing |
| 12 | P. Laxmi Narayana | Experimental investigation of bridge pier scouring in mobile boundary channels | Dr. P V Timbadiya  **Dr. P L Patel** | 17/07/2015 | Ongoing |
| 13 | Sangita Pawar | Reservoir operation study using Fuzzy Logic | **Dr. P L Patel** | 17/07/2015 | Ongoing |
| 14 | Nishant Sourabh | Leak detection in water distribution systems | Dr. P V Timbadiya  **Dr. P L Patel** | 21/12/2016 | Ongoing |
| 15 | Namrata Chandel | Flood frequency analysis of Upper Narmada basin | **Dr. P L Patel** | 15/07/2017 | Ongoing |
| 16 | Alka Sharma  ***Senior Research Fellow*** | Impact of climate change on water resources of Sabarmati basin | **Dr. P L Patel** | 15/07/2017 | Ongoing |
| 17 | Shubham M. Jibhakate  ***Senior Research Fellow*** | Impact of climate change on water resources of Lower Tapi basin | Dr. P V Timbadiya  **Dr. P L Patel** | 16/07/2018 | Ongoing |
| 18 | Lalit Kumar Gehlot  ***Junior Research Fellow*** | Impact of climate change on water resources of Purna basin | **Dr. P L Patel**  Dr. P V Timabadiya | 16/07/2018 | Ongoing |
| 19 | Vineela Nandam ***DST Inspire Fellow*** | Morphological study of Lower Tapi River with special reference to coastal-urban flood plain | **Dr. P L Patel** | 16/07/2018 | Ongoing |
| 20 | B L Meena | Flood Modelling | **Dr. P L Patel** | 22/07/2019 | Course work |

**14.0 List of Completed/ Ongoing M. Tech. Dissertations**

* **Completed – 39, Ongoing – 02**

| **Sr. No.** | **Name of Students** | **Title of Dissertation** | **M. Tech. Supervisors** | **Year** | **Status** |
| --- | --- | --- | --- | --- | --- |
| **At Delhi College of Engineering (DCE) – 1999-2006** | | | | | |
| 1 | Megha Datta Ghosh | Transport of coarse sediments | **Dr. P L Patel** | 1999-2000 | Completed |
| 2 | Farhad R M | Model studies of Dissam diversion head works | **Dr. P L Patel** | 2001-02 | Completed |
| 3 | Sunity Choudhary | Computer aided design of sediment excluder | **Dr. P L Patel** | 2002-03 | Completed |
| 4 | Satapati Deba Prakash | Efficient design of flow meter in open channel | **Dr. P L Patel** | 2002-03 | Completed |
| 5 | Anurag Jain | Studies on energy dissipators for circular outlets”. Department of Civil Engineering | **Dr. P L Patel** | 2002-03 | Completed |
| 6 | Vishal Srivastava | Design and performance of overflow dams | **Dr. P L Patel** | 2002-03 | Completed |
| 7 | Anil Kumar Sharma | Critical tractive stress of nonuniform sediments | **Dr. P L Patel** | 2002-03 | Completed |
| 8 | Ushakar Jha | Cavitation control measures in tunnel spillways | **Dr. P L Patel** | 2003-04 | Completed |
| 9 | Debesh Rajpati | Criteria for incipient motion of sediment mixtures | **Dr. P L Patel** | 2003-04 | Completed |
| 10 | Saidurga Rao | Semi-theoretical approach for transport of coarse sediments | **Dr. P L Patel** | 2003-04 | Completed |
| 11 | R S Saini | Lift and drag model for bed-load transport of non-uniform sediments | **Dr. P L Patel** | 2004-05 | Completed |
| 12 | Suchitra Rani | Computer aided design of tunnel type silt ejector | **Dr. P L Patel** | 2004-05 | Completed |
| 13 | Dilip Kumar | Computation of sediment distribution in storage reservoirs | **Dr. P L Patel** | 2004-05 | Completed |
| 14 | Misha Sinha | Prediction of sediment bed surface under equilibrium flow condition | **Dr. P L Patel** | 2004-05 | Completed |
| 15 | Kanhiya Goyal | Probabilistic model in prediction of nonuniform sedimentbed surface under equilibrium condition | **Dr. P L Patel** | 2005-06 | Completed |
| 16 | Mayank Jain | Bed load transport of bimodal sediments | **Dr. P L Patel** | 2005-06 | Completed |
| **At SVNIT Surat – 2007 onwards** | | | | | |
| 17 | Shailesh B. Patel | Entrainment characteristics of non-uniform unimodal and bimodal sediments | **Dr. P L Patel**  Dr. A D Ghare | 2007-08 | Completed |
| 18 | Nishi Bhuvandas | Application of linear programming model in optimization of irrigation benefits of Ukai command area | **Dr. P L Patel**  Shri P V Timbadiya | 2009-10 | Completed |
| 19 | Viraj Loliyana | Simulation of flood in open channel using HEC-RAS | **Dr. P L Patel** | 2010-11 | Completed |
| 20 | Sharad Patel | Finite volume technique in numerical modeling of desilting basin | **Dr. P L Patel**  Mrs. V V Bhosekar (CWPRS, Pune)  Ms. Nishi Bhuvandas | 2011-12 | Completed |
| 21 | Mandeep Singh  (M.Tech Research) | Silt erosion in hydro turbines | Dr. J Banerjee  (MED, SVNIT Surat)  **Dr. P L Patel**  Mr. Himanshu Tiwari  (RES, MP) | 2011-12 | Completed |
| 22 | Anarghya Jain | Characterization of turbulence events and bed load transport of sediment mixture | **Dr. P L Patel** | 2012-13 | Completed |
| 23 | Dhvani Patwa | Characterization of turbulence events and incipient motion of sediment mixture | **Dr. P L Patel** | 2012-13 | Completed |
| 24 | Priyank Sharma | Stochastic dynamic programming model in development of operation policy for a multipurpose reservoir | **Dr. P L Patel**  Dr. V Jothiprakash  (IIT Bombay) | 2013-14 | Completed |
| 25 | Sudhanshu Dixit | Characterization of flow turbulence in mobile boundary channels | **Dr. P L Patel** | 2013-14 | Completed |
| 26 | Apoorv Tripathi | Development of 2D hydrodynamic model and flood hazards maps of Surat city, India | **Dr. P L Patel**  Dr. P V Timbadiya | 2014-15 | Completed |
| 27 | Resmi S. R. | L-moment approach in regional flood frequency analysis of upper Tapi basin, India | **Dr. P L Patel** | 2014-15 | Completed |
| 28 | Garima Nagpal | Regional frequency analysis of rainfall using L-moment approach of lower Tapi basin, India | **Dr. P L Patel** | 2014-15 | Completed |
| 29 | P. Laxmi Narayana | Analytical and experimental investigation on bed level variation of alluvial channel due to overloading | Dr. P V Timbadiya  **Dr. P L Patel** | 2014-15 | Completed |
| 30 | Chethan S. V. | 2D Numerical modeling of river flood in coastal floodplain in lower Tapi basin, India | **Dr. P L Patel** | 2015-16 | Completed |
| 31 | Lalit Pal | Hydrological modeling under impact of climate change in upper Tapi basin, India | **Dr. P L Patel** | 2015-16 | Completed |
| 32 | Akshay Rajak | Morphological study of middle Tapi River using remote sensing and GIS techniques | **Dr. P L Patel** | 2015-16 | Completed |
| 33 | Chaitanya J C | Experimental investigation of turbulent characteristics over uniform and nonuniform sediment beds | **Dr. P L Patel** | 2016-17 | Completed |
| 34 | Neha Manoj | Development of hydraulic geometry equations and their relevance with morphological changes in middle Tapi River India | **Dr. P L Patel** | 2016-17 | Completed |
| 35 | Vishal Kachhwaha | An integrated hydrologic-hydraulic model for prediction of inflows into Hathnur reservoir | **Dr. P L Patel** | 2017-18 | Completed |
| 36 | Suhani Chaudhary | Prediction of flow resistance and morphological behaviour of middle Tapi River | **Dr. P L Patel** | 2017-18 | Completed |
| 37 | Lalit Kumar Gehlot | Assessment of turbulent flow characteristics over mobile and immobile channel beds | **Dr. P L Patel** | 2017-18 | Completed |
| 38 | Gopika Babu | Development of HEC-RTS Model for Upper Tapi Basin, India | **Dr. P L Patel** | 2018-19 | Completed |
| 39 | Kalpesh Baldaniya | An integrated Lumped Conceptual Hydrologic and Hydraulic model for Middle Tapi Basin, India | **Dr. P L Patel** | 2018-19 | Completed |
| 40 | Anju K. V. | MIKE – SHE modelling of Middle Tapi Basin | **Dr. P L Patel** | 2019-20 | *Ongoing* |
| 41 | Nikitha Saptarishy | MIKE – SHE modelling of Upper Tapi Basin | **Dr. P L Patel** | 2019-20 | *Ongoing* |

**15.0 List of B. Tech. Projects**

* **Completed – 28, Ongoing – 00**

| **Sr.**  **No.** | **Name of Students** | **Title of Project** | **Project Supervisors** | **Academic year** | **Status** |
| --- | --- | --- | --- | --- | --- |
| **At Delhi College of Engineering (DCE) – 1999-2006** | | | | | |
| 1 | Ashish Saxena | Silting problems in power channels | **Dr. P L Patel** | 1999-2000 | Completed |
| 2 | Sanjeev Kumar Rai  Sunil Varshney  Vikas Mittal  Vipin Gupta | Computer aided design of sediment excluder | **Dr. P L Patel** | 2000-2001 | Completed |
| 3 | Neha Mehta  Roshan Patnaik  Simran Kumar  Sudiksha Rani  Yamini Malna | Design of spillway and terminal structures | **Dr. P L Patel** | 2000-2001 | Completed |
| 4 | Maitrey Yadava  Nitin Prasad  Anupam Mehta  Ruchir Kalra  Kamal Dahal | Design of chute spillway for Dhauliganga hydroelectric project | **Dr. P L Patel** | 2001-2002 | Completed |
| 5 | Sameer Bhalla  Sarang Arora  Saurabh Jolly  Sarvesh Mehrotra  Sunil Negi  Venu Shankar | Stability analysis of earth Dams – A computer aided approach | **Dr. P L Patel** | 2001-2002 | Completed |
| 6 | Dharmbir Singh  Nidhi Anchal  Priyanka Srivastava  Sandeep Gaur  Vinay Sharma | Sedimentation in Indian reservoirs | **Dr. P L Patel** | 2001-2002 | Completed |
| 7 | Arun Sharma  Ashish Das  Sandeep Dayal  Sourabh Singh  Sunil Chandra  Yavnish Adlakha | Calculation of bed load for nonuniform sediments | **Dr. P L Patel** | 2002-2003 | Completed |
| 8 | Archana Meena  Rajshree Meena  Suchitra Rani | Hydraulic Design of CHIKKAR DAM | **Dr. P L Patel** | 2002-2003 | Completed |
| 9 | Asheesh Gupta  Aditya Nikhil  Bhupen Khatri  Parvinder Singh  Srivenkatesh  Swapnil Bhatnagar | Hydraulic Design of Spillway and Energy Dissipator | **Dr. P L Patel** | 2002-2003 | Completed |
| 10 | Amarjeet Kumar  Deepak Nathani  Harish Arora  Ropan Bhattacharya Yatin Aggarwal | Design of highway skew bridge over river | **Dr. P L Patel** | 2003-2004 | Completed |
| 11 | Aman Sharma, Ashish Kumar, Ruchir Singh, Wasim Siddiqui | Design of river diversion head works | **Dr. P L Patel** | 2003-2004 | Completed |
| 12 | Sudheer Goel, Sanjeev Kr. Singh, Santanu Biswas, Sudheer Kr. Arya, Vikas Kr. Meena, Virender Singh Mandal | Hydraulic Design of spillways | **Dr. P L Patel** | 2003-2004 | Completed |
| 13 | T. Anant Vaibhav, Gaurav Jaitak,  P. Rajesh,  Nikhil Kr. Yadava, Surakshit Khullar | Hydraulic design of hydroelectric power components | **Dr. P L Patel** | 2004-2005 | Completed |
| 14 | Chetan Sharma, Ajay Varshney, Amandeep,  Gopal Sharma, Praveen Bali | Computer aided design of tunnel type sediment ejector | **Dr. P L Patel** | 2004-2005 | Completed |
| 15 | Neeraj Lohani,  Amit kumar Jain, Aman Goel,  Amit kumar Bhatia,Bhupesh kumar | Condition assessment and improvement existing roads | **Dr. P L Patel** | 2005-2006 | Completed |
| 16 | Sakshi Talwar, Pooja Garg, Priyanka Mittal Neha Gupta | Water hammer analysis and design of surge tank in hydro-power plants | **Dr. P L Patel** | 2005-2006 | Completed |
| 17 | N. Krishnan,  Neeraj Gupta, Puneet sharma, Rishikesh Joshi, Tarun Arora | Prediction of ITS benefits on Delhi Roads | **Dr. P L Patel** | 2005-2006 | Completed |
| **At SVNIT Surat – 2007 onwards** | | | | | |
| 18 | Praveen Arora  Prashant Sagar  Anand Sonekar | Sediment Transport Concepts in Design of Sediment Excluders | **Dr. P L Patel**  Shri G D Kale | 2007-08 | Completed |
| 19 | Neha Agrawal  Manish Singh  Roshan Barla | Simulation of Unsteady Flow in Open Channel using HEC-RAS | **Dr. P L Patel**  Shri G D Kale | 2008-09 | Completed |
| 20 | Ankit Balyan Prem Kumar  Alok Yadav | Application of HEC HMS in Rainfall-Runoff and Flood Routing Simulations in Lower Tapi Basin | **Dr. P L Patel**  Shri P V Timbadiya | 2009-10 | Completed |
| 21 | Niket Shah  Rishabh Shah  Jaimin Trivedi  Anjali Joseph  Aditya Arekar | Application of HEC HMS and GIS Remote Sensing in Prediction of Runoff for Gopalkheda Catchment | **Dr. P L Patel**  Dr. S M Yadav | 2010-11 | Completed |
| 22 | Anshuk Garg | Analysis of Water Distribution Network of SVNIT Campus | **Dr. P L Patel**  Shri P V Timbadiya | 2011-12 | Completed |
| 23 | Subhash Chandra  Jay Tatariya  Maheep Saher  Mahavir Singh  Muddireddy Avinash | Computation of Reservoir Operation Parameters through Simulation using HEC-ResSim | **Dr. P L Patel**  Dr. P V Timbadiya | 2012-13 | Completed |
| 24 | Raj Sekhar  Shriram Meena  Dewashish Rai  Akshay Jain  Ankit Dhake | Analysis and Computation of Uniform Flow and Gradually Varied Flow | **Dr. P L Patel**  Dr. P V Timbadiya | 2013-14 | Completed |
| 25 | Pallavi Sirohi  Sunil Agarwal  Bhavika Parmar  Nausad Alam  Gurmpreet Lalana  Shailendra Singh  Dinesh Kumar | Design of Storm Water Network | **Dr. P L Patel**  Dr. P V Timbadiya | 2014-15 | Completed |
| 26 | Niraj Kumar  Alok Anand  Harsh Dalal  Pawan Kumar  Aakash Kumar | Development of IDF curve and its application in storm water network design | Dr. P V Timbadiya  **Dr. P L Patel** | 2015-16 | Completed |
| 27 | Kavisha Panchal  Ajit Sahoo  Ramkesh Meena | Comparative study of numerical models for hydraulic routing in open channels | **Dr. P L Patel** | 2016-17 | Completed |
| 28 | Esmat Khan  Anurag Kokate | Hydrologic modelling in HEC-HMS | **Dr. P L Patel** | 2018-19 | Completed |

**16.0 List of Summer Internships**

* **Completed – 04 Ongoing – 01**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr.**  **No.** | **Name of Students** | **Title of Project** | **Project Supervisors** | **Academic year** | **Status** |
| 1 | Yash Dabhaliya | Trend analysis of rainfall data in Lower Tapi basin | **Dr. P L Patel** | 2013 | Completed |
| 2 | Yaduvansh Sharma | Analysis of Hydraulic Jump for Singanpore Weir | **Dr. P L Patel** | 2015 | Completed |
| 3 | Aman Kumar Mandloi | Rainfall-Runoff Modelling for Lower Tapi basin using SWAT model | **Dr. P L Patel** | 2016 | Completed |
| 4 | Anav Vora | Comparative Study of Gradually Varied Profiles using HEC-RAS software and MATLAB code | **Dr. P L Patel** | 2017 | Completed |
| 5 | Masoud Zieay | Unsteady hydrodynamic modelling of a Lower Tapi River reach to quantify the effect of tidal levels on stage levels of Nehru Bridge using HEC-RAS software | **Dr. P L Patel** | 2013 | Ongoing |

**17.0** **Conference/ Workshop/ Seminar/ Symposium/ STTPs organized**

**SHORT TERM TRAINING PROGRAMME (STTP):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Name of Short Term Training Programme Course** | **Duration** | **Funding Agency** | **Venue** |
| 1 | Design of Storm Water Network for Smart City: Theory and Practice - II  (Co-Coordinator) | Jan. 2-7, 2017 | Self-Financed | Dept. of Civil Engineering, SVNIT Surat |
| 2 | Computational Mechanics and Modelling (CMM 2016) (Co-Coordinator) | Dec. 26-30, 2016 | Self-Financed | Dept. of Civil Engineering, SVNIT Surat |
| 3 | Fundamentals of Advanced Fluid Mechanics (FAFM 2016)  (Co-Coordinator) | Jan. 4-8, 2016 | TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 4 | Design of Storm Water Network for Smart City: Theory and Practice - I  (Coordinator) | Dec. 28, 2015-  Jan. 01, 2016 | Self-Financed | Dept. of Civil Engineering, SVNIT Surat |
| 5 | Modeling Impact of Climate Change on Water Resources  (Co-Coordinator) | Dec. 08-12, 2014 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 6 | Hydraulic and Hydrologic Modeling: Concepts and Applications (Coordinator) | July 01-05, 2013 | TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 7 | Effective Teaching; Cooperative Learning; Effective faculty Development, Outcome based education (Coordinator) | Dec.14-18, 2009 | AICTE | Dept. of Civil Engineering, SVNIT Surat |
| 8 | Advances in Water Resources  (Co-Coordinator) | Dec.22-26, 2008 | AICTE | Dept. of Civil Engineering, SVNIT Surat |
| 9 | Hydrological Modelling using SWAT including Parametric Uncertainty and Sensitivity Analysis | Feb. 08-09, 2019 | INCCC | Dept. of Civil Engineering, SVNIT Surat |
| 10 | Hydraulic and Hydrologic modelling: concepts and applications | Sep. 30 – 04. Oct, 2019 | TEQIP-III | Dept. of Civil Engineering, SVNIT Surat |

**CONFERENCES/WORKSHOP/ SEMINAR ORGANIZED:**

| **Sr. No.** | **Name of Conference/ Workshop/ Seminar** | **Duration** | **Funding Agency** | **Venue** |
| --- | --- | --- | --- | --- |
| 1 | Workshop on “Morphological study of Tapi river using remote sensing technique (Coordinator) | July. 21, 2017 | Centre Water Commission (CWC), Govt. of India | Dept. of Civil Engineering, SVNIT Surat |
| 2 | National conference on “Water Resources and Flood Management (WRFM) – 2016” with special reference to Flood modeling (Coordinator) | Oct. 14-15, 2016 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 3 | Project Appraisal Monitoring Committee (PAMC) meet of Ministry of Earth Sciences (Coordinator) | July 15,  2014 | Ministry of Earth Sciences (MoES), Govt. of India | Dept. of Civil Engineering, SVNIT Surat |
| 4 | Workshop on “Avenues for Research in the areas of Hydrology, Water Resources and Climate Change Impacts” (Coordinator) | July 14,  2014 | Ministry of Earth Sciences (MoES), Govt. of India | Dept. of Civil Engineering, SVNIT Surat |
| 5 | Workshop on “River Hydraulics and Management of Indian Rivers” (Coordinator) | March 22, 2014 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 6 | Workshop “Objective and Outcome Based Education” (Coordinator) | Dec. 21-22, 2013 | TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 7 | National Seminar on “Climate Change Impacts on Water Resources Systems”  (Co-Coordinator) | Nov. 27-29, 2013 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engg., Parul Institute of Technology & Engg., Vadodara |
| 8 | Workshop on ‘Preparing action plan for study of effect of climate change on water resources of Tapi Basin’ | April 28, 2013 | AICTE  (NCP Project) | Dept. of Civil Engineering, SVNIT Surat |
| 9 | National Conference on ‘Hydraulics and Water Resources’, HYDRO-2011  (Coordinator) | Dec.29-30, 2011 | ISH, DST, CSIR, DRDO,MNIT Jaipur, NWRWS&KD | Dept. of Civil Engineering, SVNIT Surat |
| 10 | National Workshop on ‘Flood forecasting and protection measures’- FFPM-2010 (Coordinator) | Aug.28, 2010 | NCP (AICTE) Project | Dept. of Civil Engineering, SVNIT Surat |
| 11 | Dean (Academics) meet of all NITs for foster further academic and research collaborations among the NIT systems (Coordinator) | Jan. 29, 2010 | SVNIT Surat | Dept. of Civil Engineering, SVNIT Surat |
| 12 | Workshop on Course Curriculum for up gradation of PG syllabi of ‘Water Resources Engineering’ (Coordinator) | June 14, 2008 | SVNIT Surat | Dept. of Civil Engineering, SVNIT Surat |
| 13 | National Conference on ‘Hydraulics and Water Resources’, HYDRO-2007,  (Convener; Editorial Committee) | Dec. 21-22, 2007 | ISH, SVNIT Surat | Dept. of Civil Engineering, SVNIT Surat |
| 14 | National Workshop on ‘ Vision India: Construction industry and Disaster management (Coordinator) | Nov.19, 2005 | Delhi College of Engineering | Dept. of Civil Engg  Delhi College of Engineering |
| 15 | Awareness Workshop on “ Intelligent Transportation Systems” (Coordinator) | April, 05,2005 | Delhi College of Engineering | Dept. of Civil Engg  Delhi College of Engineering |
| 16 | National conference on “Innovative Approaches in the Management of Environment” (Joint Secretary) | Oct.17-18, 2003 | Delhi College of Engineering | Dept. of Civil Engg  Delhi College of Engineering |

**SOFTWARE TRAINING PROGRAMME ORGANIZED:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Name of Software Training Programme** | **Duration** | **Funding Agency** | **Venue** |
| 1 | Bentley Water GEMS, Sewer GEMS, Storm CAD | June 16-19, 2014 | Annual Planned Grant, SVNIT Surat | Dept. of Civil Engineering, SVNIT Surat |
| 2 | MIKE URBAN | May 19, 2014 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 3 | MIKE SHE | Apr. 25, 2014 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 4 | MIKE 21 – Flood | Nov. 2,  2010 | NCP project, AICTE | Dept. of Civil Engineering, SVNIT Surat |
| 5 | ERDAS Imagine | Oct. 29-30, 2010 | NCP project, AICTE | Dept. of Civil Engineering, SVNIT Surat |
| 6 | Bentley Water GEMS, Sewer GEMS, Storm CAD | May 11-15, 2010 | Annual Plan Grant, SVNIT Surat | Dept. of Civil Engineering, SVNIT Surat |
| 7 | Arc GIS | Feb. 25-26, 2010 | NCP project, AICTE | Dept. of Civil Engineering, SVNIT Surat |
| 8 | MIKE 11 | May 5-10, 2008 | Annual Planned Grant, SVNIT Surat | Dept. of Civil Engineering, SVNIT Surat |

**SUMMER / WINTER SCHOOLS:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Name of Summer/ Winter Schools** | **Duration** | **Funding Agency** | **Venue** |
| 1 | Hydraulics of Mobile Boundary Channel (Coordinator) | Apr. 18-19, 2014 | TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 2 | Computational Hydraulics (Coordinator) | Oct. 25-26, 2013 | TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |

**EXPERT LECTURES ORGANIZED:**

| **Sr. No.** | **Name of Resource Person and Topic of Expert Lecture** | **Duration** | **Funding Agency** | **Venue** |
| --- | --- | --- | --- | --- |
| 1 | Expert Lecture by Dr. P. P. Mujumdar, Prof., IISc Bangalore, on ‘Impact of climate change on urban flooding’  (Coordinator) | July 19, 2017 | SVNIT Surat | Dept. of Civil Engineering, SVNIT Surat |
| 2 | Expert Lecture by Dr. Vishnu Prasad, Prof., NIT Bhopal, on ‘Selection of Pumps: Performance and Testing’  (Coordinator) | August 24, 2016 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 3 | Expert Lecture by Dr. Vivekanand Singh, Prof., NIT Patna, on ‘Numerical modeling for soil moisture prediction in the catchment’ (Coordinator) | August 09, 2016 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 4 | Expert Lecture by Dr. S K Jain, Scientists G, NIH Roorkee, on ‘Environmental flows’ (Coordinator) | May 11, 2016 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 5 | Expert Lecture by Dr. M L Kansal, Prof., IIT Roorkee, on ‘Issues on River Health Monitoring’ (Coordinator) | March 21, 2016 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 6 | Expert Lecture by Dr. K G Ranga Raju, Emeritus Prof., IIT Roorkee, on ‘Rivers and River Control structures’ (Coordinator) | Jan. 06, 2016 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 7 | Expert Lecture by Dr. Rakesh Mishra, Professor, University of Huddersfield, UK on ‘Industrial Applications of Computation Fluid Dynamics’  (Coordinator) | Aug. 12, 2015 | Centre of Excellence (CoE), TEQIP-II | Dept. of Mechanical Engineering,  SVNIT Surat |
| 8 | Expert Lecture by Dr. B. S. Pani, Emeritus Prof., IIT Bombay, on “Boundary Layer Theory and Turbulent Flow: Concepts” (Coordinator) | Oct. 31- Nov. 1, 2014 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 9 | Expert Lecture by Dr. B. S. Pani, Emeritus Prof., IIT Bombay, on “Concepts of open channel flow hydraulics and Resistance to flow in mobile boundary channels” (Coordinator) | Mar. 19-20, 2014 | Centre of Excellence (CoE), TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 10 | Expert Lecture by Dr. B S Mazumder, Emeritus Prof., ISI Kolkata, ‘Turbulence its measurement and analyses  in rigid and mobile boundary channels’ (Coordinator) | Mar. 21-22, 2013 | TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 11 | Expert Lecture by Dr. K G Ranga Raju, Emeritus Prof., IIT Roorkee, on ‘Rivers and River Control structures’ and ‘The Baglihar Dam and the Indus Waters Treaty’ (Coordinator) | Aug. 19, 2011 | TEQIP-II | Dept. of Civil Engineering, SVNIT Surat |
| 12 | Coordinated Expert Lectures on (a) Stability analysis of gravity dams and (b) Criteria for design of Energy dissipators in Dams | May 12, 2006 | Delhi College of Engineering | Dept. of Civil Engineering, Delhi College of Engineering |

**18.0 Expert Lecture/Talk Delivered in CEP/ QIP/STTP/ Special Lectures:**

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| --- | --- | --- | --- | --- |
| **Sr. No.** | **Title of the Invited Talk** | **Name of the Program in which the Talk is Delivered** | **Date of Talk** | **Organizer and Venue** |
| 1 | Morphological Studies- A case study on Tapi river | 31st Induction Training Program at National Water Academy, Pune | Sept. 16 2019 | GOI, CWC, NWA, Pune |
| 2 | Significance of sedimentation studies in DPR | Training on investigation and for preparation of DPR | Oct. 21, 2019 | WRD, Govt. of Gujarat. Gandhinagar |
| 3. | Hydrological routing of Floods in reservoirs and channels | Short term training Program on 'Basic Hydrology' for Water Resources Engineers of Rajasthan state | May 14-18. 2019 | MNIT Jaipur |
| 4. | Experimental Investigation on bed load transport of unimodal and bimodal sediments | 23rd International conference on Hydraulics and Water Resources HYDRO-2018 | Dec. 18-21, 2018 | NIT, Patna |
| 5. | Measurement and Quantification of Flow Turbulence in Mobile Boundary Channels | National conference on Recent Trends in Mathematics | Nov. 09-13, 2018 | University of Lucknow |
| 6. | Hydrologic and Hydraulic Aspects of Storm network Drainage Design | Technologies in Water Infrastructure Design (TWID-2018) | 17-20, September 2018 | IIT RAM, Ahmedabad |
| 7 | Development of mathematical and physical models for river engineering problems in Civil Engineering | Designing of Mathematical Modelling in different fields of Engineering (DMMDFE-2018) at Department of Applied Science & Humanities | March 22, 2018 | GIDC Degree Engineering College Abrama, Navsari |
| 8 | Pattern of sediment yield and their linkages with land-use land-cover of upper Tapi basin | Training Program on “River Morphology & amp; Sediment Management” | January 29, 2018 | National Water Academy (NWA), Central Water Commission, Pune |
| 9 | Morphological studies of Tapi River: Morphological issues and their studies using GIS & remote sensing | Training Program on “River Morphology & amp; Sediment Management” | January 29, 2018 | National Water Academy (NWA), Central Water Commission, Pune |
| 10 | Description of Tapi basin including key morphological issues in Tapi river | CWC sponsored Workshop on “Morphological study of Tapi river using remote sensing technique” | July 21, 2017 | SVNIT Surat |
| 11 | Morphological study of Tapi river using remote sensing: Objectives and detailed scope of work |
| 12 | Trend of climate and land use-land cover parameters in the basin including pattern of runoff and sediment yield, and flood frequency analyses |
| 13 | Tools and Techniques for effective teaching and Research | 2nd self-financed STTP on Tools and Techniques for Effective Teaching and Research at Dept. of Mechanical Engg. | Feb. 13-17, 2017 | SVNIT Surat |
| 14 | Measurement of rainfall and post processing of data | Self-financed STTP on “Design of Storm Water Network for Smart City: Theory and Practice-II” | Jan. 2-7, 2017 | SVNIT Surat |
| 15 | Development of IDF curve – I & II |
| 16 | Basic concepts of storm water flow – I & II |
| 17 | Estimation of design flood for storm water design |
| 18 | Hydraulic design of storm water network using spreadsheet |
| 19 | Discretization methods | TEQIP-II sponsored STTP on “Computational Mechanics and Modelling (CMM 2016)”, at Dept. of Civil Engg. | Dec. 26-30, 2016 | SVNIT Surat |

**19.0 Membership of Technical Societies/Expert Committees:**

1. Fellow Member of the Institution of Engineers, India (F-112817-1)
2. Fellow Member of Indian Society for Hydraulics (ISH) (F-389)
3. Fellow Member of Indian Water Resources Society (IWRS)
4. Member of International Association of Hydraulic Research (IAHR)
5. Life Member Of Indian Society For Technical Education (ISTE) (IM-30011)
6. Life Member Of Association of Hydrologist of India(AHI), 2009 (AHI-LM-411-703)
7. Member of Hydrological Data User Group (HDUG), State Water Data Centre (SWDC), Govt of Gujarat, 2008 onwards
8. Member of working group on climate change ‘**Fluvial Mechanism Component’ of International Association for Hydraulic Research (IAHR)**, 2008 onwards
9. Member of Interstate Committee on ‘Flood Management & Preparedness for Monsoon in Tapi Basin.
10. A member of working group of IAHR Working on effect of Climate change (Fluvial Mechanism)
11. Member, Technical Advisory Committee of Central Water & Power Research Station (CWPRS) Pune, Ministry of Water Resources, River Development & Ganga Rejuvenation, Government of India.
12. Member, Expert Committee on Assessment of Flood Situation in Rel River Bank and Dhanera Region of Banaskantha District due to Extreme Rainfall and Suggesting Remedial Measures under Narmada Water Resources, Water Supply and Kalpasar Department (NWRWS&KD), Government of Gujarat.

**20.0 International Visits:**

* Japan – 2010
* Italy – 2012,2018
* China – 2013
* Netherlands – 2015
* USA – 2012, 2016, 2017

**21.0 Administrative responsibility undertaken**

| **Sr. No.** | **Name of the Assignment** | **Duration** | **Name of responsibility shared/**  **service offered** |
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| **SVNIT Surat** | | | |
| 1 | Dy. Director | Sept. 23, 2019 till date | 1. Active involvement in administrative affairs including academics, planning and development, budgeting, implementation of online modules, ranking and accreditation of the Institute. |
| 2 | TEQIP-II and TEQIP-III  Coordinator Centre of Excellence on ‘Water Resources and Flood Management’ | July, 2013 till date | 1. Development of computational and experimental facilities in the centre. |
| 3 | Sectional Head, Water Resources Engineering | Aug. 09, 2017 to till date | 1. Development of facilities in Water Resources Section in Advance Research Building. |
| 4 | Dean Academics | Nov.27, 2015 to till date | 1. Smooth and efficient conduct of Academic Programs as per the Academic regulations approved by the Institute Senate. 2. Conduct of Institute Academic Advisory Committee (IAAC), Senate meetings, and Convocations 3. Conduct of Examinations and classes as per the Academic Calendar 4. Accreditation of UG and PG Programs |
| 5 | Chairman, 14th Convocation of SVNIT Surat | Jan. 22, 2017 | 1. Smooth and efficient conduct of 14th Convocation of the Institute |
| 6 | Head,  Department of Civil Engineering | July 05, 2013 -July 06, 2015 | 1. Administrative Head of the department 2. Smooth conduct of UG/ PG/ PhD courses in the Department 3. Handling the admissions of PG/ PhD students at the Department level 4. Taking care of laboratory and class infrastructure of the department 5. Looking after administrative needs of faculty, staff and students 6. All four eligible PG programmes got Tier I accreditation from National Board of Accreditation (NBA) New Delhi 7. The SAR for Accreditation of UG program has been submitted to NBA for accreditation 8. The concept of single subject with single teacher, where ever applicable, was introduced first time in the department for ensuring responsibility oriented teaching 9. The data base of ongoing consultancy, has been developed first time in the department for better monitoring of the projects 10. Organized Departmental Academic Advisory Committee (DAAC) meets time to time to address the academic issues of the department, and bringing the same at Institute Academic Advisory committee (IAAC) and Senate levels for discussions |
| 7 | Dean (Research and Consultancy) | 1. Aug. 01, 2016 – Jan. 31, 2017 2. May 09, 2009-Oct. 16, 2010 | 1. Revised syllabi for different PG courses were put up to the Institute Senate through BPGS&R 2. Administered smooth admission process of PG and PhD programmes 3. Meetings of BPGS&R were initiated and conducted for discussing the policy matters amongst the members and putting the same to the Institute Senate.   MoUs were initiated for collaboration between the SVNIT and Industries; and academic Institutions at National and International level |
| 8 | Dean (PG) | July 16, 2007- May 09, 2009 | 1. Modified the existing scheme of M Tech (RESEARCH) through a committee and submitted to Senate for their approval through BPGS&R. 2. The SIX PG Programmes were accredited. 3. Admission process of PG Admissions were conducted at the Institute level 4. Revised syllabi for different PG courses and put up to the Institute Senate through BPGS&R 5. Routine administrative components of PG programmes |
|  | Chairman Plagiarism committee |  |  |
|  | Chairman summer semester |  |  |
|  | Chairman PhD regulation |  |  |
| 9 | Director-in-charge  SVNIT Surat | Apr. 23, 2009-  June, 17 2011 | The duty of Director-in-charge was assigned as and when regular Director was on official duties/leaves. |
| 10 | Water Resources Lab In-charge  **(APPENDIX A)** | Aug. 27,2008- Sep. 21, 2011 | 1. Strengthened existing experimental and Computational Hydraulics Laboratory in the Department by procuring the new experimental and computational equipments as well as facilities, 2. Desired facilities for Hydraulics experiments were planned during the construction of new Advanced Hydraulics Laboratory in the Department 3. A new Sediment transport flume was procured as part of DST Project in the Advanced Hydraulics laboratory of the department |
| 11 | Departmental Coordinator of UG (accreditation) | March 2013 onwards | The team was formed; and SAR of UG accreditation is submitted to AICTE for accreditation |
| 12 | Member of Academic Performance Review Committee (APRC), SVNIT Surat | 2007 to Oct. 2010; July 2013 onwards | For discussion of policies related to academic issues |
| 13 | Member of Institute Academic Advisory Committee (IAAC), SVNIT Surat | 2007 onwards | For discussion of policies related to academic issues |
| 14 | Chairman, Institute Canteen Committee | July 2012 –  June 2013 | Advising the Institute authority for better management of the Institute canteen |
| 15 | Chairman, Scrutiny Committee for staff selection at the Institute level | Apr. 2012 | List of eligible Administrative officer/ Technical officer (Non-Technical posts) were handed over to the Institute administration. Selection process is over. |
| 16 | Member of Central Counselling Board CCB-2009 | 2009 | Conducted admission process of B.Tech students in the Institute through AIEEE-2009 |
| 17 | Member of Institute level scrutiny committee | April 2008-  March 2009 | Promotion of faculty members through CAS. |
| 18 | Mentor for the employees of Hazira LNG Private Limited, Surat | April 2008-  March 2009 | Mentor the pursuing their B Tech (Gas engineering) from their organisation |
| 19 | Member Institute Disciplinary Committee | Jan 2008-  Jan 2010 | Advising the Institute administration and students in disciplinary actions at the Institute level |
| 20 | Member Institute Purchase Committee | Jan 2008-  Jan 2009 | Advising the Institute administration in purchases at the Institute level |
| **Delhi College of Engineering (DCE)** | | | |
| 21 | Lab-in-Charge Hydraulics Lab | July 1999-June 2007 | * 1. Development of basic experimental facilities in Fluid Mechanics Lab, like Flow through Orifice, Discharge measurements through Venturimeter, Calibration of rectangular, triangular notches, minor losses, Metacentric height, free Vortex, forced Vortex etc. |
| 22 | Officer-in-charge, Examination Cell | 2001-2007 | For conducting examination working smoothly at Institute level |
| 23 | Coordinator,  Water Resources Engineering Section | June 01, 2004-2007 | For coordinating and enhancing water resources section at department level |
| 24 | Time- Table In-charge, Department of Civil Engineering | Jan 2000 –  Jan 2003 | For implementing effective time table schedule according to teaching scheme at department level |
| 25 | Warden Bhaskaracharya Hostel, vide Admn. letter no. HOO/02/2003/718-727 | May 1, 2003 – Apr. 1, 2004 | For conducting smooth working at Hostel |
| 26 | Dy. Proctor | July 29, 2005 | At Institute level |
| 27 | Coordinator for Award of PhD. scholarship | Academic Year 2000-2004 | At Institute level |

**APPENDIX A**

***Certificate***

Dr. P. L. Patel, Professor, Department of Civil Engineering was entrusted the responsibility of Lab-In-charge Water Resources Engineering Laboratory, and his lab development activities are summarized as follows:

**Office order:**

1. CED/670/2008-09, Aug. 27, 2008
2. CED/OO/1347/2011-12, Sep. 21, 2011

The following new experiments have been added in the curriculum of PG (Water Resources Engg.) along with related experimental setups in the laboratory;

1. **Incipient motion of sediments in mobile boundary channel**

* **Experimental Setup**:- A tilting re-circulating sediment transport channel (Size: 15m x 0.90m x 0.60m) with basic accessories, procured from DST project.
* **Brief Procedure**:- Uniform sediment bed is prepared on the channel bed. The discharge is allowed slowly from the upstream and uniform flow condition is maintained for each discharge. At low discharge, the sediments are at rest. The water discharge is increased in small increments, and uniform flow conditions are maintained while using the tail gate. The sediments are observed from the side walls; and a condition of flow is achieved in the channel at which sediments are just in the verge of movement. The shear stress at which sediments are just in the verge of movement is estimated from known depth of flow, and longitudinal slope. The dimensionless critical shear stress is plotted on Shield’s curve to compare the correctness of observations in the flume.
* **Significance**:- The students will have understanding of Incipient motion conditions of sediments in the mobile boundary channel which may help them in tackling the morphological processes of natural rivers.

1. **Measurement of velocity distribution in open channel flume using Pitot tube, Current meter and ADV, plotting Isovels and computation of α and β**

* **Experimental Setup**:- A tilting re-circulating open channel flume (Size: 15m x 0.90 m x 0.60m) with basic accessories procured from DST project; Current meter and Pitot tube from Institute planned grant; and Acoustic Doppler Velocimeter (ADV) from TEQIP-II.
* **Brief Procedure**:- The velocity distributions in the open channel are obtained using Pitot tube, Current meter and Acoustic Doppler Velocimeter (ADV) for a given flow condition in the channel. Using Reynolds averaging rule, average velocity distribution in the open channel are obtained for ADV observations. The velocity distributions in the open channel are integrated to obtain average flow velocity, kinetic energy correction factor (α) and momentum correction factor (β) in the open channel.
* **Significance**:- The measurement of velocity distributions and computation of average velocity, α and β, help the students in understanding the complexity of flow and estimation of discharge from measured data.

1. **Study of submergence characteristics and measurement of discharge using (i) Critical Venturiflume and (ii) Broad crested weir**

* **Experimental Setup**:- Multipurpose flume (Size: 5m x 0.07m x 0.14m) with basic accessories procured from Annual planned grant of the Institute.
* **Brief Procedure**:- The known discharge is allowed to flow in the flume while the accessory (Venturiflume or Broad crested weir) placed across the channel. The head at upstream of the Venturiflume/ Broad crested weir is measured for different discharges. The coefficient of discharge for the measuring setup (Venturiflume/ Broad crested weir) is calibrated for different flow conditions. Finally the water level in the downstream of the Venturiflume/ Broad crested weir is increased, and its affect on the upstream water levels are observed to understand the submergence characteristics of measuring setups.
* **Significance:**- The observations and analysis of data helps the students in understanding the calibration procedure of Venturiflume and Broad crested weir and also understanding their submergence characteristics.

1. **Establishment of subcritical, critical and supercritical flow in open channel, plotting specific energy diagram**

* **Experimental Setup**:- Multipurpose flume (Size: 5m x 0.07m x 0.14m), pointer gauge, etc. was procured from Annual planned grant of the Institute.
* **Brief Procedure**:- A discharge of significant quantum is allowed into the flume and uniform flow condition is maintained. The longitudinal slope of the channel is increased in increments, and depth of flow is measured for each such increments. The depth corresponding to unstable flow condition is observed which corresponds to critical condition. The slopes of the channel are increased further to obtain supercritical flow conditions. Finally, the specific energy diagram is plotted and critical depth obtained from specific energy diagram is compared with observed critical depth.
* **Significance:**- The students are able to understand the concepts of subcritical, critical and supercritical flow in open channel.

1. **Measurement and computation of gradually varied flow profiles in open channel flows**

* **Experimental Setup**:- Multipurpose flume (Size: 5m x 0.07m x 0.14m), pointer gauge, etc. was procured from Annual planned grant of the Institute.
* **Brief Procedure**:- A discharge of significant quantum is allowed into the channel and uniform flow condition is maintained. The downstream tail gate is raised to maintain M1 profile in the channel. The pointer gauge is used to measure the depth of flow. The observed M1 profile is compared with computed profile for the given discharge and channel geometry.
* **Significance:**- The students are able to understand the concepts of gradually varied flow and its computation in open channel.

Apart from additions of aforesaid experiments/ experimental setups, following equipments have been added in the Experimental Laboratory as In-charge of Water Resources Laboratory:-

1. Groundwater flow unit
2. Water Hammer pressure analysis and Surge tank
3. Cavitation demonstration setup
4. Tensiometer for measurement of moisture

The related experiments are also included in the curriculum of PG programme in Water Resources Engg.

The following softwares are added in the Computational Hydraulics Laboratory as part of **Nationally Coordinated Project (NCP) on Water Resources and Flood Management**: -

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| **Sr. No.** | **Name of Software** | **Purpose** | **Funding Source** |
| 1 | MIKE 11 | Modelling of Flood | Annual Planned Grant |
| 2 | MIKE Flood | Modelling of Flood | NCP Project |
| 3 | MIKE 11 GIS, FF | Modelling of Flood | NCP Project |
| 2 | RIVER CAD Professional | Modelling of Hydrodynamic Flow | Annual Planned Grant |
| 3 | ERDAS Imagine | Image processing | NCP Project |
| 4 | ARC GIS 10 | Analysis of Topographical data of River Basin | NCP Project |
| 5 | HEC RAS | Hydrodynamic analysis of River | Annual Planned Grant |
| 6 | HEC HMS | Hydrological modelling system of catchment | Annual Planned Grant |
| 7 | HEC-2 | Morphological of River | Annual Planned Grant |
| 8 | STATISTICA | Statistical analysis of hydrological data | Annual Planned Grant |
| 9 | MIKE 11 Lab kit | Modelling of Flood | Annual Planned Grant |
| 10 | MIKE SHE | Hydrological Modelling | Centre of Excellence, TEQIP-II |
| 11 | MIKE URBAN | Urban Flooding | Centre of Excellence, TEQIP-II |
| 12 | Bentley WaterGems, SewerGems & StormCAD (Academic Version) | Water distribution, Storm and Sewer network modelling | Annual Planned Grant |
| 13 | Bentley WaterGems, SewerGems & StormCAD (Commercial Version) | Water distribution, Storm and Sewer network modelling | Annual Planned Grant |

(Dr. P L Patel)