

Ashish Kumar (Ph D)

Professor & HOD

Department of Civil Engineering

Jaypee University of Information Technology Waknaghat

Distt. Solan (H P) INDIA- 173234



Area of Interest: Fluvial Hydraulics, Biogas Energy

Academic Qualifications:

Degree	Board/ Institution	Year of Passing	% Mark/ CGPA	Subject	Remarks
Ph. D.	I I T Roorkee	2007	-	Hydraulic Engg.	-
M. Tech.	I I T Roorkee	2002	8.19/10	Hydraulic Engg.	3 rd position
B.Tech.	K N I T Sultanpur (UP)**	1998	77.0%	Civil Engg.	Honours (Gold Medalist)
Intermediate	U P Board Allahabad	1993	62.8%	Science Stream	First Class
High School	U P Board Allahabad	1991	70.5%	Science Stream	First Class

** (*An autonomous Government Engineering Institute*)

Academic/ Research Experience:

Academic Experience

Designation	Name of Organization	Period		Duration
HOD	Jaypee University of Information Technology Waknaghat Solan (H P)	01-06-2021	Till date	7 months
Professor	Same as above	1-07-2018	31-05-2021	3 years, 3 months
Associate Professor	Same as above	1-4-2013	30-06-2018	5 years 3 months
Assistant Professor	Same as above	10-11-08	31-3-13	4 years 5 months
Sr. Lecturer	Same as above	14-12-07	09-11-08	11 months
Lecturer	Same as above	01-05-06	13-12-07	1 year 7 months

Research Experience

Research Scholar	IIT Roorkee	31-07-02	30-04-06
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Training Experience:

Trainee Apprentice Assistant Engineer	PWD Saharanpur	16-02-99	15-02-2000
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Patent Filing:

Movable biogas digester

application No. 319983-001) dated 25-07-2019

Cbr Number 14079

Research Publications:

Under review:

1. Choudhary A., Kumar A., Govil T., Sani K. R., Kumar S, Co-digestion of pine litter with food waste to improve biogas production. (Submitted to Renewable Energy).

Published/Accepted:

(A) Journals

July 21- June 22

1. Ankur Choudhary, Ankita Kumari , Gorky, Ashish Kumar, Sudhir Kumar (2021). “Managing sewage sludge and pine needles through anaerobic co-digestion in hilly terrain: A lost cost approach.” International Journal of Environment and Waste Management. (Inderscience Publishers; Scopus Indexed) <https://doi.org/10.1504/IJEW.2021.117009> (Published online 29 July 2021)
2. Ankur Choudhary, Ashish Kumar, Sudhir Kumar, Vikas Verma (2021). “Energy possibilities and future strategies for municipal solid waste in Himachal Pradesh.” Materials Today: Proceedings. <https://doi.org/10.1016/j.matpr.2021.09.224> (October 2021)

July 20- June21

3. Aakash Gupta, Pradeep Kumar, Ashok Kumar Gupta, Ashish Kumar (2020). “Rural Road Maintenance Prioritization Index Based on Functional and Structural Parameters for Rural Road Network in Himachal Pradesh.” Vol 49, No. 4, 16-27, IRC, Indian Highways (April 2021).
4. Ankur Choudhary, Ashish Kumar, and Sudhir Kumar (2021)., “Erratum for National municipal solid waste energy and global warming potential inventory: India, Journal

of Hazardous, toxic and radioactive waste. Vol. 25, Issue 1 (Jan 2021)
[https://doi.org/10.1061/\(ASCE\)HZ.2153-5515.0000568](https://doi.org/10.1061/(ASCE)HZ.2153-5515.0000568).

5. Aakash Gupta, Pradeep Kumar, Ashok Kumar Gupta, Ashish Kumar (2020)., “Development of road roughness model using analytical hierarchy process for rural road network in himachal Pradesh.” Vol 48, No. 11, 23-33, IRC, Indian Highways.
6. Ankur Choudhary, Ashish Kumar, and Sudhir Kumar (2020). “National municipal solid waste energy and global warming potential inventory: India, Journal of Hazardous, toxic and radioactive waste. Vol. 24, Issue 4 (Oct 2020) DOI: 10.1061/(ASCE) HZ.2153-5515.0000521.
7. Ankur Choudhary, Ashish Kumar, and Sudhir Kumar (2020). “Techno-economic analysis, kinetics, global warming potential comparison and optimization of a pilot-scale unheated semi-continuous anaerobic reactor in a hilly area: For north Indian hilly states.” Renewable Energy, 155, 1181–1190 (Elsevier; SCI Indexed; IF:5.439) [Volume 155](#), August 2020,

July 19-June 20

8. Ankur Choudhary, Ashish Kumar, T Govil, T., R K Sani, Gorky, Sudhir Kumar (2020). "Sustainable Production of Biogas in Large Bioreactor under Psychrophilic and Mesophilic Conditions". J. Environ. Eng. Vol. 143, No. 3. [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0001645](https://doi.org/10.1061/(ASCE)EE.1943-7870.0001645) (American Society of Civil Engineers; SCI Indexed; IF:1.657) March 20

July 18 -June 19

9. Aakash Gupta, Ashok Kumar Gupta, Ashish Kumar (2019). Development of Maintenance Management System by Functional Evaluation for Rural Roads in Himachal Pradesh. *International Journal of Recent Technology and Engineering*, Vol.8, No. 1, 1682-1690. May 2019.
10. Umesh K. Singh, Z. Ahmad, Ashish Kumar and Manish Pandey (2019). “Incipient motion for gravel particles in cohesionless sediment mixture”. C 253-262 (*Scopus/SCI Indexed*). *IF 0.514*, DOI 10.1007/s40996-018-0136-x
11. Aakash Gupta, Ashok Gupta and Ashish Kumar (2018). “Road asset management using pavement performance prediction models”. Journal of advance research in dynamical and control systems. Vol. No.: 12- special issue, Page No.: 300-310 (online: August 2018) (*Scopus Indexed*).
12. Umesh K. Singh, Z. Ahmad, and Ashish Kumar (2018). Incipient motion for gravel particles in clay-silt-gravel cohesive mixtures" Journal of Soils and Sediments. Vol. 18, No. 10 pp. 3082-3093 DOI: 10.1007/s11368-017-1869-z (*Scopus/SCI Indexed*). Oct 2018.

July17 – June18

13. Umesh K. Singh, Z. Ahmad, and Ashish Kumar (2017). “Formulation for critical shear stress of cohesive sediment mixture”. *Current Science*. VOL. 113, No. 11, 2105-2111(*Scopus/SCI Indexed*). *Dec 2017*.
14. Umesh K. Singh, Z. Ahmad, and Ashish Kumar (2017). “Turbulence characteristics of flow over the degraded cohesive bed of clay-silt-sand mixture”. *ISH Journal of Hydraulic Engineering*. VOL. 23, NO. 3, 308–318, <http://dx.doi.org/10.1080/09715010.2017.1313144> (*Scopus/SCI Indexed*). *Dec 2017*.

July 16- June 17

15. Ruchi Devi, Ashish Kumar and Sudhir Kumar (2016). “Use of Pine needles as substrate for Biogas production.” *International Journal of Renewable energy research*, Vol. 6, No. 4, pp. 1242–1247. (*Scopus Indexed*). *Dec 2016*.
16. Ruchi Devi, Ashish Kumar and Sudhir Kumar (2016). “Comparison of Biogas Production in Ambient Temperature Condition and Under Green House Canopy.” *Journal of Civil Engineering and Environmental Technology*, Vol. 3, No. 6, pp 495-499. p-ISSN: 2349-8404; e-ISSN: 2349-879X.

July 10- June 16

17. Jain R. K, Ashish Kumar and Kothiyari, U. C., (2015). “Turbulence statistics of flow through degraded channel bed of sand-gravel mixture.” *Journal of Hydro-environment Research, International Association for Hydro-Environment Engineering and Research*, Vol. 9, pp 508–518. (*Scopus/SCI Indexed*).
18. Abhilash Kumar Tripathi, Mamta Kumari, Ashish Kumar and Sudhir Kumar (2015). “Generation of Biogas using Pine needles as substrate in domestic biogas plan.” *International Journal of Renewable energy research*, Vol. 5, No. 3, pp. 716–721. (*Scopus Indexed*).
19. Abhinav Bansal, Rajiv Ganguly, Ashish Kumar, and Mudit Mishra (2014). “Application of Rain Water Harvesting scheme in Shimla region.” *Hydrology Current Research*, 5(3), 180. <http://dx.doi.org/10.4172/2157-7587.1000180>.
20. Ashish Kumar, and Kothiyari, U. C. (2012). “Three-dimensional flow characteristics within the scour hole around circular uniform and compound piers.” *Journal of Hydraulic Engineering, ASCE*, Vol. 138, No. 5, 420–429. ©ASCE (*Scopus/SCI Indexed*).
21. Kothiyari, U. C., and Ashish Kumar (2012). “Temporal Variation of Scour around Circular Uniform and Compound Bridge Piers.” *Journal of Hydraulic Engineering, ASCE*, Vol. 138, No. 11, 945–957. ©ASCE (*Scopus/SCI Indexed*).
22. Ashish Kumar, Kothiyari, U. C., and RangaRaju, K. G. (2012). “Flow structure and scour around circular compound bridge piers – a review.” *Journal of Hydro-environment Research, International Association for Hydro-Environment Engineering and Research*, Vol. 6, No. 4, 251–265. (<http://dx.doi.org/10.1016/j.jher.2012.05.006>) (*Scopus/SCI Indexed*).

23. Kothyari, U. C., and Ashish Kumar (2010). “Temporal variation of scour around circular bridge piers.” *ISH Journal of Hydraulic Engineering*, Taylor & Francis, Vol. 16, No. 3 SP-1, pp.35–48 (DOI: 10.1080/09715010.2010.10515014) (*Scopus Indexed*).
24. Ashish Kumar, Samaiya, N. K., and Kothyari, U. C. (2005). “Velocity, Discharge and Turbulence Characteristic in Straight Compound Channels.” *ISH Journal of Hydraulic Engineering*, Taylor & Francis, Vol. 11, No.3, pp.91–103. (DOI: 10.1080/09715010.2005.10514804) (*Scopus Indexed*).
25. Kothyari, U. C., and Ashish Kumar (2012). “Temporal variation of scour around circular bridge piers.” *Closure*, *ISH Journal of Hydraulic Engineering*, Taylor & Francis, Vol. 13, No. 3, pp.272–273. (DOI: 10.1080/09715010.2012.695515) (*Scopus Indexed*).
26. Ashish Kumar. (2010). “Experimental data of flow characteristics around the circular uniform and compound bridge piers using acoustic Doppler velocimeter.” http://www.juit.ac.in/Department/civil/Ashish_Experimental_Data.pdf (self pub.)

(B) Book Chapters:

1. Ankur Choudhary, Ashish Kumar, Sudhir Kumar (2022). “Co-Digestion of Lignocellulosic Wastes with Food Waste for Sustainable Biogas Production”. *Clean Energy prod Technologies, Microbial Biotechnology for Renewable and Sustainable Energy*, 978-981-16-3851-0, 498621_1_En, (Chapter 4).
2. Ashish Kumar. (2017). “Three-Dimensional Flow Measurements at Circular Pier”. *Development of Water Resources in India. Water Science and Technology Library*, Vol 75. Springer, Cham DOI: 10.1007/978-3-319-55125-8_34 pp. 397-406. (August 2017) (*Scopus Indexed- Book Chapter*).
3. Umesh K singh, Z. Ahmad and Ashish Kumar (2016). “Incipient motion for gravel particles in cohesive mixture of clay-silt-gravel.” *Proc. International Symposium on River Sedimentation, River Sedimentation – Wieprecht et al. (Eds) © 2017 Taylor & Francis Group, London, ISBN 978-1-138-02945-3, pp. 424-429. (Scopus Indexed- Book Chapter) 19-22 Sept 2016 Germany*.
4. Umesh K singh, Z. Ahmad and Ashish Kumar (2014). “Experimental study on the incipient motion of cohesive sediment mixture.” *Book chapter “Hydraulics and Water Resources, Costal and Environmental Engg”*. Ch 18., pp. 196-204, **ISBN: 978–93 – 84935–04–7** (Hydro 2014 International, MNIT Bhopal, Dec 18-20, 2014)

(c) Conferences/Poster Papers:

1. Natasha Panchal, Ashish Kumar, and Sudhir Kumar (18-19 Sep 2020). “Apple pomace: A potential source of energy and its management”. *A Virtual International Conference on Technologies for Environmental Sustainability and Smart Agriculture Centre of Excellence in Sustainable Technologies for Rural Development [CESTRD]*

Department of Biotechnology & Bioinformatics Jaypee University of Information Technology Waknaghat,

2. Ankur Choudhary, Ashish Kumar, and Sudhir Kumar (Feb. 7-8, 2020). "Biogas Production using one stage single portable reactor". In National Symposium, Biotechnology trends and Innovations, Star college scheme of Department of Biotechnology, Govt. of India, New Delhi, Page no. 15. (Abstract only; Invited Talk)
3. Ankur Choudhary, Ashish Kumar, and Sudhir Kumar (Sept. 27-29, 2019). "Waste: A silent contributor to climate change". Recent Advances in Agricultural, Environmental & Applied Sciences for Global Development, at Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh, India, Page no. 33. (Abstract only)
4. Ankur Choudhary, Ashish Kumar, and Sudhir Kumar (Nov. 27-30, 2019). "Current practices, future strategies, energy prospect, global warming potential and economic aspect of municipal solid waste: Himachal Pradesh". In 9th IconSWM 2019 at Kalinga Institute of Information and Technology, Bhubaneswar, Odisha, India during November 27-30, 2019, Page no. 113. (Abstract only)
5. Ankur Choudhary, Ashish Kumar, and Sudhir Kumar (Nov. 27-30, 2019). "Bio-methane potential and modeling studies of cow dung, food waste and pine needles at low mesophilic temperature". In 9th IconSWM 2019 at Kalinga Institute of Information and Technology, Bhubaneswar, Odisha, India during November 27-30, 2019. Page no 16. (Abstract only)
6. Ankur Choudhary Ashish Kumar, and Sudhir Kumar (Dec. 27-29, 2019). "Greenhouse gases Inventorying: Estimation of Carbon dioxide and methane from municipal solid waste in Shimla". In 10th Indian climate congress on Climate change & world peace 2019 at Orissa University of Agriculture & Technology, Bhubaneswar, India during December 27-29, 2019. (Abstract only)
7. Umesh K Singh, Z. Ahmad, Ashish Kumar, Sourojit Das, and Prasanta Biswas (2019). "Critical Shear Stress of Sand Particles in Non-Uniform Sediments". proceedings of XXIV Hydro2019 International Conference- 18-20 Dec, 2019, pp1035-1040, ISBN: 978-93-8935-484-3.
8. Sonia Sharma, Ashish Kumar and Saurav (2018). "A Review on Partial Replacement of Concrete Ingredients with Waste Materials." Book of Abstract & Souvenir, 3rd Himachal Pradesh Science Congress on Rural upliftment through Science and Technology Interventions, 22- 23 Oct, 2018, IIT Mandi. pp.101.
9. Ankur Choudhary , Ashish Kumar and Sudhir Syal (2018). "Biogas Generation From Co- Digestion of Lignocellulosic and Kitchen Waste." Book of Abstract & Souvenir, 3rd Himachal Pradesh Science Congress on Rural upliftment through Science and Technology Interventions, 22- 23 Oct, 2018, IIT Mandi. pp.149
10. Ankur Choudhary , Ashish Kumar and Sudhir Syal (2018). "Utilization of Food Waste and Lignocellulosic Biomass as a Feed Stock for Generation of Methane Production Through an Anaerobic Digestion Process for Cold Climate Regions".

Student Research Convention 2018, Feb 9-10, 2018 JUIT, Wagnaghat. (Poster presentation).

11. Gorky, Ashish Kumar and Sudhir Kumar (2017). “Development of MSW based sustainable biogas technology using single-stage digesters in Himachal.” Himachal Pradesh Science Congress, Nov. 20-21 , 2017, Shimla (H P) powerpoint presentation.
12. Kumud Razdan, Sakshi Srivastava, Tushar Singh Barwal, Ashish Kumar, Sudhir Kumar (2017). “Ground water quality assessment and designing of a portable water filter.” Himachal Pradesh Science Congress, Nov. 20-21 , 2017, Shimla (H P) Poster paper presentation.
13. Ankita Kumari, Gorkhy, Ashish Kumar and Sudhir Kumar (2017). “ Biogas Production using Sludge with Co-digestion of the Pine Needle.” 2ND International Conference on Innovative Research in engineering , science & Technology, IREST-2017, 7-8 April 2017, Eternal University , Baru Sahib , HP.(Abstract)
14. Umesh K singh, Z. Ahmad, Ashish Kumar and M. Pandey (2016). “Turbulence characteristics of flow over degraded bed of clay-silt-sand-gravel mixture.” Proc. of International Conference on Hydraulics, Water Resources and Coastal Engineering (Hydro2016), CWPRS Pune, India 8th – 10th December 2016. pp 981-987.
15. Ashish Kumar (2016). “Turbulence measurements around circular pier.” Souvenir Conference on Water Resources & Hydropower (WRHP-2016), Jun17-18, 2016, University of Petroleum & Energy Studies, Dehradun.(abstract published)
16. Nitish Kumar Sharma, Ashish Kumar (2016). “Frequency analysis of rainfall data of Dharamshala region.” Proc. 4th International Conference on Advancements in Engineering and Technology (ICAET-2016), March 18 –19, 2016, Bhai Gurdas Institute of Engineering & Technology, Sangrur– (Punjab), India [ISBN: 978-81-924893-1-5] (*Scopus Indexed*).
17. Ashish Kumar (2016). “Scour around bridge piers.” Proc. First International conference on Recent Advances in Civil Engineering, March 19-20, 2016, Jaypee University Anoopshahr, U P, India.
18. Umesh K singh, Z. Ahmad and Ashish Kumar (2015). “Incipient motion of gravel-silt mixture.” Proc. Conf. on Hydraulics and Water Resources, Costal and Environmental Engg. -HYDRO 2015 International, 17-19 Dec, IIT Roorkee, Roorkee, India.
19. Ritika Verma, Anil Kumar, Abhilash Kumar Tripathi, Ashish Kumar and Sudhir Kumar (2015). “Biogas plants for community service.” Proc. Conf. on Current & Emerging trends in Indian Biogas & Bio-fertilizer development. –National Biogas Convention- 2015, 15-16 Sept, IIT Delhi, Delhi, India.
20. Abhinav Bansal, Rajiv Ganguly, Ashish Kumar, and Mudit Mishra (2014). “ Application of Rain Water Harvesting scheme in Shimla.” Proc. 3rd International

Conference on Hydrology & Meteorology- Hydrology 2014, 15-16 sept., HICC, Hyderabad, India. (abstract)

21. Umesh K singh, Z. Ahmad and Ashish Kumar (2013). "Turbulence structure over mobile-bed of cohesive sediment mixture." Proc. Conf. on Hydraulics and Water Resources, Costal and Environmental Engg. -HYDRO 2013 International, 4-6 Dec, IIT Madras, Chennai, India.
22. Mamta Kumari, Ashish Kumar and Sudhir Kumar (2013). "Biogas production using food waste." Proc. Conf. on Environmental sustainability and Society the growing paradigm shift (ESS- 2013), Mar 30-31, Jaypee University of Engineering & Technology, Guna, MP, India
23. Ashish Kumar (2012). "Comparative study of Three-dimensional flow characteristics at Exposed nonuniform circular pier." Proc. Conf. on Hydraulics and Water Resources-HYDRO 2012, 7-8 Dec, IIT Bombay, Mumbai, India.
24. Ashish Kumar and Abhilash Shukla (2012). "Engineering Properties of Sandy Silt soils Stabilized with Fly Ash." Proc. of All India Seminar on Emerging Technologies in Civil Engineering, The Institution of Engineers (India), Haryana State centre, India.
25. Ashish Kumar (2012). "Turbulence measurements around Non-Uniform Cylindrical Pier." Proc. Conf. on River Hydraulics 2012, MMU Mullana, India.
26. Ashish Kumar, and Kothiyari, U. C. (2011). "Flow characteristics within the scour hole around exposed circular compound bridge pier." Proc. Conf. on Hydraulics and Water Resources-HYDRO 2011, SVNIT, Surat, India.
27. Ashish Kumar, and Samaiya, N. K. (2011). "Comparative study of flow characteristics around circular compound piers in rigid bed condition." Proc. Conf. on Recent Advancements in Civil Engineering & Infrastructural Developments (RACE-InD 2011), Jaypee University of Engineering & Technology, Guna, MP, India.
28. Ashish Kumar, Samaiya, N. K., and Kothiyari, U. C. (2011). "Flow resistance for rigid bed channels carrying cohesive wash load." Proc. Conf. on Recent Advancements in Civil Engineering & Infrastructural Developments (RACE-InD 2011), Jaypee University of Engineering & Technology, Guna, MP, India.
29. Kothiyari, U. C., and Ashish Kumar (2009). "Temporal variation of scour around circular bridge piers." Proc. Conf. on Hydraulics and Water Resources-HYDRO 2009, CWPRS, Pune, India.
30. Ashish Kumar, and Kothiyari, U. C. (2005). "Flow Characteristics within Scour Hole around a Circular Bridge Pier." Proc. Conf. on Hydraulics and Water Resources-HYDRO 2005, Tumkur, India.
31. Ashish Kumar, Samaiya, N. K., and Kothiyari, U. C. (2004). "Velocity and Discharge in Compound Channels." Proc. Conf. on Hydraulics and Water Resources-HYDRO 2004, Nagpur, India.

32. Ashish Kumar, Kothiyari, U. C. (2004). “Effect of Stream-wise Spacing of Bridge Piers on Scour Depth.” Proc. IInd International Conf. on Scour and Erosion, Singapore.
33. Ashish Kumar, Kothiyari, U. C., and RangaRaju, K. G. (2003). “Scour around Compound Bridge Piers.” Proc. XXX Congress of International Association for Hydraulic Engineering and Research (IAHR), AUTH ,Thessaloniki, Greece.

Research Guidance:

Sr No.	Thesis Title	Name of Supervisor(s)	Name of student	Full time/Part time	Year completed
1	Influence of cohesion on sediment transport	1. Prof. Z. Ahmad, IIT Roorkee 2. Prof. Ashish Kumar, JUIT	Mr. Umesh Kumar Singh (student at IIT Roorkee)	Full Time	2018
2	Prioritization of maintenance management decisions for rural road network in Himachal Pradesh	1.Prof. Ashok Gupta, Head CE 2.Prof. Ashish Kumar	Mr. Aakash Gupta (166605)	Part Time	2020
3	Biogas production for sustainable energy generation in rural Himachal Pradesh	1.Prof. Ashish Kumar, 2.Prof. Sudhir Kumar, Prof. & Head, Dept. of BT&BI JUIT	Mr. Ankur Chaudhary	Full Time	2021

M Tech/MSc: Completed: 8

Sr No.	Thesis Title	Name of Supervisor(s)	Name of student	Year
1	Effect of stream wise spacing on scour depth.	Dr. Ashish Kumar	Praveen Kumar	2015
2	Effect of stream-wise spacing of circular bridge piers on flow and the turbulence characteristics	Dr. Ashish Kumar	Hari Krishan Pandit	2015

3	Frequency analysis of rainfall data of Shimla and Dharamshala Region	Dr. Ashish Kumar, Dr. Rajiv Ganguly (co-supervisor)	Nitish Kumar Sharma	2016
4	Biogas production using different substrates pine needles and cow dung	Dr. Ashish Kumar, Dr. Sudhir Kumar (co-supervisor)	Ruchi Devi	2016
5	Biogas generation from sludge co-digested with pine needles	Dr. Ashish Kumar, Dr. Sudhir Kumar (co-supervisor)	Ankita Kumari	2017
6.	Utilization of food waste and pine needle for generation of methane	Dr. Ashish Kumar, Dr. Sudhir Kumar (co-supervisor)	Amit Ratol	2018
7.	Determination and optimization of biomethane potential of organic substrates using anaerobic digestion	Dr. Ashish Kumar	Sachin Sharma	2019
8	Methane emission potential from apple pomace	Dr. Ashish Kumar, Dr. Sudhir Kumar (co-supervisor)	Natasha Panchal 197813	2021

Funded Research Projects/Grants:

Sr. No.	Title	Funding Agency	Amount	From	To	Responsibility
1.	Chief Minister's Startup/Innovation Projects/New Industries Scheme	Department of Industries, H P	(Received so far:) 87.53 Lakhs)	8-05-2017	continued	Nodal officer, Incubation Centre, (Developed Incubation centre in the University. Incubated 22 startups in the incubation Centre, Organized numbers of events related to Innovation/startups.)

Sr. No.	Title of Project	Funding Agency	Amount	duration	From	To	Investigator
1	Biogas production for sustainable energy generation in	H P Council for	Rs.7.87 Lakhs	2 years	18-10-16	17-10-18	Dr. sudhir Kumar (PI) and Dr. Ashish

	rural Hp using one stage portable digester *	<i>Science, technology & Environment, (HIMCO STE)</i>					Kumar (CO-PI)
2	Effect of steam-wise spacing of circular Bridge piers on Flow characteristics and local scour	<i>DST</i>	Rs. 9.9 Lakhs	3 years	01-01-2013	30-12-15	Dr. Ashish Kumar
3	Bioconversion of Juit Mess Waste to Biogas For The Purpose of Lighting and Power Generation	<i>Jaypee Research Fund</i>	Rs.95,000	1year	01-05-2010	31-04-11	Dr. Sudhir Kumar (PI) and Dr. Ashish Kumar (CO-PI)

* Project has been rated as very good on the performance of first year by the committee of HIMCOSTE

Contribution to Departmental Work:

- 1) Responsible for smooth functioning of Dept. of Civil Engg (CED).
- 2) Chairperson & Coordinator of Centre of Excellence in Structural Engineering and Disaster Management (CESEDM)
- 3) Mentorship of students
- 4) Prepared NAAC report for Civil Engineering Department (2016-17)
- 5) Teaching Load Distribution (Since July2013- June 2021)
- 6) Coordinator of Fluid Mechanics Lab, (since Jan 2009-June 21)
- 7) Coordinator of Surveying lab (since Jan 2009-June 21)
- 8) Member BOS Civil Engineering Department JUIT (since 2006- 2021)

Contribution to Institutional Activities:

- 1) HOD – CED (from 1 June 2021)
- 2) Chairman of Disciplinary Committee (Oct 2021)
- 3) Member of Academic Council as HOD, CE (18 Aug 2021)
- 4) Chancellor's and VC's Gold medal committee member (Session 20-21)
- 5) Co-Coordinator of Centre of Excellence in Sustainable Technologies for Rural Development
- 6) NISP coordinator –National Innovation and Startup Policy, 04 Nov 2020 onwards
- 7) Chairman of Departmental Level Committee (8 Oct 2021)
- 8) Chairman of BOS, Civil Engineering (July 2021 onwards)
- 9) President of MHRD's Institute Innovation Cell (Nov, 2018 onwards)

- 10) Member BOS Department of Humanities and social Sciences of JUIT (Feb 2, 2018)
- 11) Member of Anti Ragging Flying Squad Committee (2017-18, 18-19)
- 12) Delivered lecture on Innovation and Entrepreneurship in Orientation programme of First year batch (July 2018, July 2019)
- 13) Chairman, Goonj, JYC (2017-18)
- 14) Member secretary, Screening Committee for Empaneled Incubator Centre (TIEDC) of JUIT (Since Aug 1, 2017)
- 15) Chairman of Technology Innovation and Entrepreneurship Development Cell (TIEDC) (Since Dec 21, 2016)
- 16) Member of Outreach team (Since Nov 2016) (http://www.juit.ac.in/outreach_activities/outreachTeam.php)
- 17) Departmental coordinator of Hilly Ramblings- News letter of JUIT (July 2015- June 2022)
- 18) Member of University Library Committee (Since Dec 3, 2015)
- 19) Member of Counseling Team (2014-15, 16-17, and 17-18)
- 20) Member of Anti ragging Committee (2015-16, and 2016-17, 21-22)
- 21) Additional charge of Controller of Examination, Jaypee University of Information Technology, Waknaghat from 1 June 2015 to 15 August 2015.
- 22) Member of Examination Committee of Jaypee University of Information Technology, Waknaghat (Mar, 2008- July 2018)
- 23) University Time Table Incharge for Four academic sessions from July 2009 to June 2011.
- 24) Worked as a Hostel warden for Boys hostels in Jaypee University of Information Technology, Waknaghat from July 2008 to May 2009.

Organizing events: Workshop/conferences/seminar/FDP etc.

1. One Week Online Workshop on “Innovative Solutions for Sustainable Constructions in Civil Engineering” 4th October 2021 –9th October 2021 -
2. Online Seminar on Fabrication and working of Biogas digester for participants of Mathura, UP. It was co-organized by NGO Yugadhar, Mathura, UP. Online support by Yugandhar (NGO), Mathura, UP 01 October, 2020 Organized and presented
3. “1st International Conference on Construction Materials and Environment [ICCME2021]” The Department of Civil Engineering, HP, India, and Indian Geotechnical Society (IGS), Shimla Chapter International Conference on during June 03-04, 2021
4. Organizing Committee member (Coordinator of Team CESTRD) of Two days International Conference on Technologies for Environmental Sustainability and Smart Agriculture on 18th-19th September 2020 organized by CESTRD, Dept. Of BT & BI, JUIT Waknaghat
5. Organized Guest Lecture on Basic Surveying and Remote Sensing 7 May, 2018

6. Organizing Committee member of 2nd International conference on Eco-friendly computing and communication systems (ICECCS-2013) held at JUIT Wagnaghat from 17-19 Oct, 2013.
7. Organizing committee member 4th Indian Rock Conference (INDOROCK-2013) at Jaypee University of Information Technology, Wagnaghat, Solan during 29-31 May, 2013. (Jointly organized by Indian society for rock Mechanics and Tunelling Technology, India)
8. Organizing committee member of Workshop on Critical state soil Mechanics (CSSM Shimla), JUIT Wagnaghat, Solan (H P), 30-31 May, 2012.
9. Organizing committee member of National Conference on “Recent trends in materials science” at Jaypee University of Information Technology, Wagnaghat, Solan during 08-10 Oct, 2011.
10. Organizing committee member of Workshop on “Construction of Dams and Tunnels in Weak Rocks” at Jaypee University of Information Technology, Wagnaghat, Solan during 25-26 May, 2011. (Jointly organized by CBIP New Delhi)
11. Organizing committee member of 2nd International symposium on Emerging trends & Technologies in Libraries and Information Services –ETTLIS 2010 held at JUIT Wagnaghat from 3-5 Jun, 2010
12. Course coordinator for the National Workshop on “Hydropower Development: Issue & Challenges” held at JUIT Wagnaghat from 23-25 Jan, 2009.

Lecture delivered:

- 1) Delivered Expert lecture on the topic “Flow behaviour in scour around piers” in the FDP on Flow characteristics and turbulence statistics in alluvial channels " organized by the Department of Civil Engineering, L. D. College of Engineering, Ahmedabad and sponsored by AICTE Training and Learning (ATAL) Academy, Ministry of Education, Government of India, New Delhi, from 06-10 December 2021.
- 2) Delivered Expert lecture on the topic “ Vector Analysis of flow pattern during scour around pier” in the FDP on Flow characteristics and turbulence statistics in alluvial channels " organized by the Department of Civil Engineering, L. D. College of Engineering, Ahmedabad and sponsored by AICTE Training and Learning (ATAL) Academy, Ministry of Education, Government of India, New Delhi, from 06-10 December 2021.
- 3) Panel member in the webinar on “ Gender Issues and Challenges, Amidst COVID-19 Crisis” held on 24th August, 2020, at Department of Humanities and Social Sciences, JUIT Wagnaghat
- 4) Resource person in one week FDP on Advances in Civil Engineering held at Dept. of Civil Engg. At JUIT Wagnaghat 14-19 Jan, 2019.
- 5) Resource person in one week FDP on application of computational methods in Civil Engineering Education held at Dept. of Civil Engg. At JUIT Wagnaghat 18-23 Jan, 2016.

- 6) Delivered Expert Lecture on “Introduction of Hydropower Engineering.”: in National Workshop on Hydropower Development: Issue & Challenges held at JUIT Waknaghat from 23rd Jan to 25th Jan 2009

Contribution to Startups and Innovation related activities:

As a Nodal Officer of Incubation centre, I have responsibility (Since Dec 2016) to manage the Incubation centre. With the support of funding received from Dept of Industries HP under CM startup schemes and Jaypee University of Information Technology, Incubation centre has been developed. The main objectives of the incubation centre is to help budding Entrepreneurs to acquire necessary managerial skills to run their business venture through the process on mentoring support and by the same time to conduct Entrepreneurship Program and Workshops in order to develop Entrepreneurship, Innovation skills among the youths.

The centre has screened 100+ startups proposals and has Incubated 22 startups in the Incubation Centre, 5 startups are under incubation.

Till date I have managed numbers of **Workshops/ hackathons/ Ideathons/seminars/bootcamps/webinars** (startup related). More information about the Centre (TIEDC) is available at <http://www.juit.ac.in/tiedc-cell>.

Events organised related to Startups and Innovation

- 1) eSummit-2021, 15th-17th Oct 2021
- 2) VICHARANA 3.0: Sustainable Development, 09th Oct 2021
- 3) Virtual Road Show on EV-focused Grand Challenge "EVangelise", 05th Sep 2021
- 4) Biz Quiz - Unlocking Knowledge at the Speed of Thought on 31st July - 1st August, 2021
- 5) Can't Unsee, 13th July 2021
- 6) College to Corporate Webinar by Mr. Vibhor Suri , 9th July 2021
- 7) College to Corporate Webinar by Mr. Shreevallabh Chouganjkar, 4th July 2021
- 8) Vicharana 2.0: Toy Innovation Challenge, 16th Jan 2021
- 9) [Entrepreneurship Workshop 2020, 21-22 November 2020](#)
- 10) Vicharana-2020, 17th Oct 2020
- 11) LinkedIn-Mtv Get a job Internship Fair, 22nd Jan 2020
- 12) Adventum 1.0: Internal round of Smart India Hackathon, 18th - 19th Jan 2020
- 13) Organized E summit 2019 , 28-29 Sept. 2019
- 14) Organized R&D Expo, 19th - 21th April 2019
- 15) Live session with Dr. Abhay Jere, Chief Innovation Officer, MHRD Innovation Cell, 14th Feb 2020
- 16) Interaction with Additional Chief Secretary- Home & Industries, Himachal Pradesh at TIEDC, JUIT on 30th Jan 2020
- 17) Startup Yatra Boot camp, an initiative of Dept. of Industries HP and Startup India Team on 16-11-2018

- 18) One day seminar on Innovation and Entrepreneurship in the sector of Renewable Energy . 29 Oct 2018
- 19) Organized Startup weekend powered by Google, 14-16 Sept, 2018
- 20) One day Workshop on Photography and Filmmaking, 21st April 2018
- 21) Organized R&D Expo, 13th - 14th April 2018
- 22) Guest Lecture on Entrepreneurship organised by CEC & TIEDC, 23rd March 2018
- 23) Interaction with Alumni, 17th March 2018
- 24) One day Workshop on Graphic Designing, 6th March 2018
- 25) Organized Two days Student Research Convention, 9th Feb 2018
- 26) Seminar on Artificial Intelligence and Entrepreneurship, 29-31 Jan, 2018
- 27) Organized Two days Workshop on Engineering and Entrepreneurship Engineering and Entrepreneurship: A step towards fulfilling dreams, 16-17 Nov, 2017
- 28) One day Workshop cum Hands-on-GitHub, 30th Oct , 2017
- 29) Logo Design Competition TIEDC, 9th Oct, 2017
- 30) Orientation Program for TIEDC, 6th Oct, 2017
- 31) Organized One day Seminar on Startups/Innovation Projects – STARTUP PROTOTHON 17: Contest For Demonstrating Innovative Project Proposals, 16 May, 2017
- 32) CV Making Workshop: 04 May, 2017

Workshop/conferences/seminar/FDP's attended

1. Attended Online One week Faculty Development Program on “Waste Management for Sustainable Development” organized by Department of Civil Engineering, JUIT Wagnaghat during January 04-08, 2021.
2. Two Days Workshop: ‘Waste management - Issues and Concerns’ during 20th - 21st August, 2020, organized by CE, JUIT Wagnaghat
3. One Week Workshop on “Sustainable Construction Practice for Civil Engineers” during 3rd - 8th, August, 2020, organized by CE, JUIT Wagnaghat.
4. Continuing Education Program (CEP) on Current Aspects and Research Opportunities in Civil Engineering during 20th – 24th July, 2020 organized by by CE, JUIT Wagnaghat.
5. Attended online “TEQIP-III Sponsored one week Faculty Development Programme on “Green Energy: The Energy of Future (GEEF-2020)” held from 7th – 11th Sep, 2020 at “Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur
6. One Day National Webinar on "Highway Infrastructure: Planning and Construction" on 19th July, 2020 at 10:15 AM organized by IIIT Guna and IIT Jammu.
7. One Day National Webinar on Water Resources: Challenges & Research Needs Central University of Haryana, 9 June 2020.
8. Completed 2 days training programme on “IIC Innovation Ambassador Training Series” Organized by Institution’s Innovation Council of MHRD’s Innovation Cell,

AICTE held at Lovely Professional University, Jalandhar, Punjab on 16-17 January 2020.

9. One day workshop on startup connect & Pitching session under CM Startup scheme on 21 May 2019 at PeterHoff , Shimla (HP)
10. One week Faculty Development Program at Jaypee University of Information Technology, Wagnaghat, Solan during 14-19 Jan, 2019
11. One day workshop on SME funding : Role of capital Markets in collaboration of with securities and Exchange Board of India on 26.10.2018 at Shimla (HP).
12. One day workshop on Conclave of Himalayan States on 05-10-2018 at PeterHoff, Shimla (H P).
13. 3rd Himachal Pradesh Science Congress on Rural upliftment through Science and Technology Interventions on 22- 23 Oct, 2018 IIT Mandi.
14. Interactive session with startups under CM Startup scheme on 27 July 2018 at Udyog Bhawan, Bemloi Shimla.
15. Workshop on Startups and Innovation “Startup Jalsa -2017” on during 16-17 Dec, 2017 at lake Club, sector 1, Chandiragh.
16. 2nd Himachal Pradesh Science Congress, Science and Technology For Sustainable Livelihood in Indian Himalayan Region on 20- 21 Nov , 2017, PeterHoff, Shimla (H P)
17. 2nd International Conference on Innovative Research in engineering , science & Technology, IREST-2017, 7-8 April, 2017, Eternal University , Baru Sahib , HP.
18. One day Seminar on “Renewable Energy: Sustaining Green Future” organised by ENVIS Centre, State Council for Science, Technology & Environment, HP in collaboration with TERI, New Delhi. 23-03-2017 at Hotel Holiday Home Shimla.
19. IPR Workshop on Patent Filing & Geographical Indications - 27 Feb, 2017 at JUIT Wagnaghat.
20. One Day IPR workshop on "Innovation and Intellectual Property Rights" on 9 Dec, 2016 at JUIT Wagnaghat.
21. Himachal Pradesh State Meet on Promoting Space technology based Tools and Applications in Governance & Development, 23 Sept, 2016, at HP Secretariat, Shimla, HP.
22. National Conference on Water Resources & Hydropower (WRHP-2016), 17-18 Jun, 2016, University of Petroleum & Energy Studies, Dehradun.
23. One week Faculty Development Program at Jaypee University of Information Technology, Wagnaghat, Solan during 18-23 Jan, 2016
24. First International conference on Recent Advances in Civil Engineering, (RACE-2016) 19-20 Mar, 2016, Jaypee University Anoopshahr, U P, India.
25. Attended Faculty Development Programme at Jaypee University of Information Technology, Wagnaghat, Solan during 14-19 July 2014

26. 4th Indian Rock Conference (INDOROCK-2013) at Jaypee University of Information Technology, Wagnaghat, Solan during 29-31 May, 2013. (Jointly organized by Indian society for rock Mechanics and Tunelling Technology, India)
27. IUCEE Workshop on Introduction to Finite element analysis for Civil Engineers, 30 Jul- 3 Aug, 2012, JUIT Wagnaghat, India
28. Workshop on Critical state soil Mechanics (CSSM Shimla), 30-31 May 2012, JUIT Wagnaghat, Solan (H P),
29. Second National Conference on River Hydraulics, 23-24 Mar, 2012, MMU Ambala, India,
30. National Conference on Hydraulics and Water Resources - HYDRO 2011, 29-30 Dec, 2011, SVNIT Surat, India,
31. Workshop on Construction of Dams & Tunnels in weak Rocks, 25-26 May, 2011, JUIT Wagnaghat, Solan (H P),
32. National Workshop on “Hydropower Development: Issue & Challenges” from 23-25 Jan 2009, JUIT Wagnaghat
33. Indo- Australian International Conference on Information Technology in Civil Engineering – IAC –ITCE 2006, Roorkee, India.
34. National Conference on Hydraulics and Water Resources - HYDRO 2005, Tumkur, Karnataka, India.
35. National Conference on Hydraulics and Water Resources - HYDRO 2004, Nagpur, Maharastra, India.
36. International Conference on Hydraulic Engineering: Research and Practice (ICON-HERP-2004), IIT Roorkee, Roorkee, India.

Laboratories/Centres Developed:

Developed the Fluvial hydraulics lab in Civil Dept.
 Development of Technology Incubation and Entrepreneurship Development Cell (TIED Cell)

Membership of Technical Societies:

- 1) Associate Member of Institution of Engineers, India
- 2) Life Member of Indian water Resources Society (IWRS), India
- 3) Life Member of Indian Society for Hydraulics (ISH) , India
- 4) Life Member of Indian Geotechnical Society (IGS) , India

Involvement in extracurricular activities: University/Department

- 1) Actively participated in 25th HP State Level Children’s Science Congress- 2017 held during 12-15 November 2017 at Dr. Y. S. Parmar University of Horticulture & Forestry

[.http://www.juit.ac.in/outreach_activities/CHILDREN%20SCIENCE%20CONGRESS%20NAUNI.pdf](http://www.juit.ac.in/outreach_activities/CHILDREN%20SCIENCE%20CONGRESS%20NAUNI.pdf)

- 2) Actively participated in 24th HP State Level Children's Science Congress- 2016 held during 15-17 November 2016 at Nahan, HP. <http://www.juit.ac.in/ipr/outreach%20activity.pdf>
- 3) Officers of Ministry of Rural Development, Government of Himachal Pradesh, 10-12 Pradhans (heads) of Gram Panchyats of villages of various districts including Burmana, Bilaspur, Civil engineers and Technicians visited JUIT on 23 Sep. 2014 to see the live demonstration of biogas digester.
- 4) Community Service: I and Dr. Sudhir Kumar (Prof. & Head) of Department of Biotechnology, Jaypee University of Information Technology, are involved in the community service by installing the cost-effective Biogas digesters in the HP and nearby area. These biogas digesters run on waste food, vegetables, rotten fruits. Our motive is to produce energy from high calorific value waste and do community service. At present we are having a Research project granted by H P Council for Science, Technology & Environment, (HIMCOSTE) to further improve the technology in respect of HP and disseminate the technology at rural level.

Biogas Plant Installation and Training Programme: As community service

- 1) One day Training Programme on Fabrication and working of Biogas Plant under the Project funded by HPSCT& E, Hp on 10 May 2018 at Dhar Ki Anji, Dharampur, Distt Solan
- 2) One Day Training Program on Fabrication and working of Biogas Plant at Government Primary School, Pooghat village, Distt. Solan (29-05-2017)
- 3) Officers of Ministry of Rural Development, Government of Himachal Pradesh, 10-12 Pradhans (heads) of Gram Panchyats of villages of various districts including Burmana, Bilaspur, Civil engineers and Technicians visited JUIT on 23 Sep. 2014 to see the live demonstration of biogas digester.

Biogas Plant Installation:

- 1) Biogas Technology transferred to 3 BRD, Air Force Station, Chandigarh. Fabrication and Installation of Biogas Digesters (03 in number) (1500 litre digester and 1000 litre gas holder for each) at 3BRD Air man mess, (year of establishment – October 2020, sponsored by 3BRD, Chandigarh).
- 2) Installation of Biogas plant at JIIT Noida
- 3) Biogas plant(3000 Liters) for marginal families in JUIT 10 October, 2018
- 4) Fabrication and Installation of a biogas reactor at Govt. Senior Secondary Girls School, Solan, HP (20 September, 2019)
- 5) Biogas Digester (3000 Liters)-Kanpur Fertilizers and Cement Ltd, Kanpur UP,15-16 July 2019, sponsored by Jaypee Group.
- 6) Biogas Digester (1500 Liters)- Government middle School, Matal Bakhog Panchayat in Rajgarh Block of District Sirmour (Year of establishment – 2018, Mar 30), under Vigyan Gram Scheme, sponsored by HIMCOSTE, HP

- 7) Biogas digester (2000 Liters) – Eternal University, Baru Sahib, Sirmour, Himachal Pradesh. (Year of establishment – **2015**, Jan. 16), sponsored by Eternal University, HP.
- 8) Biogas Digester (3000 Liters) - Govt. Senior Secondary School, Burmana of Distt. Bilaspur (HP) under Nirmal Bharat Abhiyan. (Year of establishment – **2014**, Dec. 26), sponsored by Burmana Panchyat of Distt. Bilaspur. HP)
- 9) Biogas Digester (1000 Liters), Govt. School, Jabli, HP. (year of establishment – **2010**, sponsored by Ministry of Rural Development, HP Govt.)
- 10) Biogas Digester (3000 Liters) - Ayurved Industry, Baddi, HP (year of establishment – **2009**, sponsored by Ayurved Industry.)

Biogas Plant Installation: under sponsored projects

- 11) Biogas Digester (1500 Liters)- Government Primary School, Dhar Ki Anji, Dharampur, Distt Solan (Year of establishment – 2017, June 7), under project sponsored by HIMCOSTE, HP
- 12) Biogas Digester (1500 Liters)- Government Primary School, Pooghat village, (Year of establishment – 2016, Dec. 28), under project sponsored by HIMCOSTE, HP
- 13) Biogas Digester (3000 Liters) - Jaypee University Campus, Waknaghat, Solan, HP (year of establishment – 2009, sponsored by Jaypee University.)
- 14) Biogas Digester (1000 Liters) - Jaypee University Campus, Waknaghat, Solan, HP (year of establishment – 2008, sponsored by Jaypee University.)

Reviewer of Journals:

- Journal of Hydraulic Engineering, Indian society for Hydraulics (ISH) , Taylor & Francis
- Water Science and Engineering, Elsevier Science Publication.
- Canadian journal of Civil Engineering
- Environmental Fluid mechanics
- Natural hazards

Awards Obtained:

A. Fellowship awards

- Institute Fellowship Granted by MHRD during Ph. D
- GATE Fellowship Granted by MHRD during M. Tech
- Awarded Institute Merit Scholarship during B.Tech in II, III and IV Year
- Awarded U P State Merit Scholarship during XI and XII class
- Awarded Scholarship under scheme “Ekikrat Chatravati Pariksha” during IX and X class

B. Academic Awards

- Selected as **EFIP Candidate** (Early Faculty Induction Programme) under AICTE Scheme in year 2005
 - Vice Chancellor **Gold Medal** in B. Tech
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