

GAUTAM NARULA

Assistant Professor (Contractual),
School of Civil Engineering
Shri Mata Vaishno Devi University
Katra, Jammu and Kashmir, INDIA-182320
gautam.narula@smvdu.ac.in; gautamnarula@hotmail.com;
+91-8057657655



Area of Interest

Teaching , Research, Consultancy and Administration

Education

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2017	Civil Engineering	College of Engineering Roorkee / Uttarakhand Technical University	82.5 %
2019	M.Tech	Indian Institute of Technology, Roorkee	8.294

Experience

Assistant Professor, Department of Civil Engineering | KIET Group of Institutions, Ghaziabad

July 2019 - January 2020

- Took lecture and Lab of Fluid Mechanics through conventional and interactive methods and achieved a student rating of 9.3/10.
- Worked as a member of the Examination Committee for internal and university examinations.
- Managed International level event Innompics – 2019
- Had been part of organizing team for Hackathon 2019.
- Attended 3-Day Teaching Pedagogy Workshop.

Assistant Professor, School of Civil Engineering | Shri Mata Vaishno Devi University, Katra

December 2021 – Ongoing

Subjects taken as Faculty Coordinator/ Guide:

S.NO.	Subject Code	Subject Name	L-T-P	Semester	Batch
Skill Enhancement / Interdisciplinary Course					
1.	CEL SE 201	Introduction to Hydropower	2-0-0	III	2023
Core Courses					
2.	CEL 2041	Fluid Mechanics- I	3-0-0	III	2019, 2020, 2021, 2022
3.	CEL ES 101	Fluid Mechanics	3-0-0	III	2023
4.	CEL 2042	Fluid Mechanics- II	3-1-0	IV	2019, 2020, 2021, 2022
5.	CEL 3043	Water Resource Engineering	3-0-0	VI	2019, 2020, 2021
6.	CEL 3033	Design of Steel Structures-I	3-0-0	VI	2021
7.	CEL 4034	Design of Steel Structures-II	3-0-0	VII	2020, 2021
School Electives					
8.	CEE 3112	Glass in buildings : Design and applications	3-0-0	V	2019
9.	CEE 3044	Advance Hydraulic	3-0-0	V	2020, 2021, 2022
10.	CEE 3102	Construction Equipment & Automation	3-0-0	VI	2021
Laboratory					
11.	CEP 2041	Fluid Mechanics- I Lab	0-0-2	III	2019, 2020, 2021, 2022
12.	CEP ES 101	Fluid Mechanics Lab	0-0-2	III	2023
13.	CEP 3033	Design of Steel Structures-I Lab	0-0-2	VI	2021
14.	CEP 3043	Water Resource Engineering Lab	0-0-2	VI	2019, 2020, 2021
15.	CEP 4034	Design of Steel Structures-II Lab	0-0-2	VII	2020, 2021
Projects/ Internships					
16.	CED 4111	Minor Project	0-0-4	VII	2019, 2020, 2021
17.	CEE 4112	Internship / Industrial Training	0-0-20	VIII	2019, 2020
18.	CED 4112	Major Project	0-0-20	VIII	2020

Responsibilities served/ serving:

S.NO.	Section	Responsibility
1.	Undergraduate Coordination, SoCE	Coordinator
2.	Classroom and Lab Maintenance, SoCE	Coordinator
3.	Sponsored Research and Consultancy, SoCE	Co-Coordinator
4.	Workshop/ Seminar/ FDP/ Industrial visits, SoCE	Co-Coordinator
5.	School Newsletter/ Monthly Data and Publication, SoCE	Co-Coordinator
6.	SAMARTH Portal, SoCE	Co-Coordinator
7.	School Result Review and identification of slow learners and backlog students committee, SoCE	Co-Coordinator

8.	Professional Club, SoCE	Co-Coordinator
9.	Academic Affairs Committee, SoCE	Member Secretary
10.	Quality Circle, SoCE	Member Secretary
11.	School Council, SoCE	Member Secretary
12.	Examination Committee, SoCE	Member
13.	Board of Studies, SoCE	Member
14.	Reception Committee for Convocation 2022, SMVDU	Member
15.	Reception Committee for Convocation 2023, SMVDU	Member
16.	Lab Development	Survey Lab
17.	Lab Development	Transportation Engineering Lab

Activities Organized:

S.NO.	Activity Name	Activity Type	Audience/ Attendees	Date(s)	Duration (Days)
1.	Trip to Baglihar Hydropower Project	Site Visit	2019 Batch SoCE	March 16, 2022	1
2.	Guest lecture on Rubber Dam: Advanced Water Management System	Expert Lecture	All faculty and students of SoCE	March 30, 2022	1
3.	International Webinar on "Systems Engineering Of Wastewater Engineering And Asset Management"	Expert Lecture	All faculty and students of SoCE	May 17, 2022	1
4.	Workshop on Applications of Drones in Civil Engineering.	Workshop	2019 and 2020 Batch of SoCE	August 29-30, 2022	2
5.	Delivered lecture on "Understanding Ground Water Management" at KG Reddy College of Engineering and Technology	Expert Lecture	KG Reddy College of Engineering and Technology, Chillukur	September 21, 2022	1
6.	Guest Lecture on Floating Solar Photovoltaic and Landslides	Expert Lecture	All faculty and students of SoCE	October 18, 2023	1
7.	Trip to Baglihar Hydropower Project	Site Visit	2020 Batch, SoCE	November 29, 2023	1
8.	University Open Day Events	National Level Open Day	Students from various Institutions of Jammu Province	February 10, 2024	1
9.	Workshop on DGPS with integration in GIS.	Workshop	2020, 2021 and 2022 batch of SoCE	March 04-06, 2024	3
10.	Curriculum Development Workshop	Workshop	Faculty of SoCE	March 07, 2024	1
11.	Seminar on Geotech Talks: Navigating the Depths of Engineering Innovation	Seminar	All faculty and students of SoCE	March 12-13, 2024	2
12.	Survey Camp	Camp	2021 and 2022 Batch SoCE	July 22-28, 2024	7

B.Tech Projects Guided:

S.NO.	Project Title	Batch
1.	Analysis and improvement of scouring control techniques in Tawi River.	2020
2.	Design of Mini Hydropower Project.	2020
3.	Optimization of Gharad	2020
4.	Energy optimization of New Academic Building of SMVDU.	2019

In-house Summer Internship Guided:

S.NO.	Internship Title	Number of Candidates
1.	Impact of the longitudinal slope on the self-purification capacity of the river.	04

Other Activities:

1. Consultancy projects under Dr. V. K. Dogra, Head, SoCE
2. Proposed Solar Steam cooking system for SMVDU Mess
3. Working on Mini Hydropower Project for pumping station of SMVDU
4. Memorandum of Understanding of SMVDU with Megadrones Pvt. Ltd (In-process)

Consultancy Projects

Structural Design of Rajasthan Atomic Power Plant | Spectrum Techno Consultants Private Limited, Mumbai

June 10, 2016 to June 28, 2016

- Designed and analyzed the staircase and cold water outlet of the Natural Draught Cooling Tower of Rajasthan Atomic Power Plant.
- The work included the use of excel sheets and the data generated from the Staad Pro
- This was followed by checking of drawings

Structural Design of Girls Hostel | Shri Mata Vaishno Devi University, Katra

June 28, 2022 to October 02, 2023

- Design of staircase of Girls Hostel of Shri Mata Vaishno Devi University, Katra
- Design of three interior dog legged staircases is completed
- Design of one exterior straight flight staircase is under progress.

- Design of framing plan of all the floors using Staad.Pro and Microsoft Excel.
- Drawing of framing plan.

Vetting of Girls School | Shri Mata Vaishno Devi Shrine Board, Katra

November 13, 2023 -Ongoing

- Vetted the drawing of Girls' School of Shri Mata Vaishno Devi Shrine Board

Other Projects /Studies

Development of Solar Cooking System for SMVDU Mess | Shri Mata Vaishno Devi University, Katra

January 15, 2022- Ongoing

- Setting up Solar Thermal Concentrator Cooking System for Mess of SMVDU.
- The system shall reduce LPG consumption to half.
- The project shall achieve the break even in almost 3.5 years.

Development of Mini Hydropower Project | Shri Mata Vaishno Devi University, Katra

March 22, 2022- Ongoing

- Setting up Micro hydropower Plant of 200 kW capacity.
- The plant shall cater the water supply pumping needs of the university.
- The project shall achieve the break even in almost 8 years
- Rubber dam technology is preferred for water impoundment

Patents Filed

S.NO.	Title of Patent	Date of Filing
1.	Agro Basket Having Washing Capability	March 24, 2024
2.	Hiking Stick With Bag Holder	April 26, 2024

Research Papers

S.NO.	Title of Paper	Journal/ Book/ Conference	Indexing	Status
1.	Captive use mini hydropower project for pumping station	Lecture Notes in Civil Engineering	SCOPUS	Published
2.	Siphon for SHP Projects	International Association for Small Hydro (IASH) Journal	-	Published
3.	Effect of Fly Ash on Geotechnical Properties of Soft Soil: A Critical Review	Engineering Proceedings	SCOPUS	Published
4.	Planning of Solar Steam Cooking System at SMVDU	Engineering Proceedings	SCOPUS	Published
5.	SMVDU Small Hydropower Project-A Case Study	Water and Energy International	SCOPUS	In-Press
6.	Techno-Economic Analysis of Solar Wind Hybrid System- A Case Study	Indian Journal of Environmental Protection	SCOPUS	In-press
7.	The Role of Socio-Cultural aspect in sustainable rural Development: Case of Dhau Kalan Village in the Westmost Block of Verka, District Amritsar, India	Indian Journal of Environmental Protection	SCOPUS	In-press
8.	Behavioral study of Reinforced Soft Soil Bed Supporting Embankment: Numerical Analysis	Lecture Notes in Civil Engineering	SCOPUS	In-press
9.	A Review on Performance Evaluation of Soil Stabilized with Sustainable Materials.	International Journal of Sustainable Construction Engineering and Technology	SCOPUS	Accepted
10.	Sustainable Materials Used in Soft Soil Stabilization for Improved Geotechnical Performance: A Systematic Review	Innovative Infrastructure Solutions	SCOPUS	Accepted

B.Tech Project

The solution to the water logging problem of College of Engineering Roorkee | College of Engineering Roorkee

August 2016 to May 2017

- The college faced problems with water logging during the rainy season.
- The low-lying ground of the college and the exposure to water table during monsoon due to flooding of the Ratmau River flowing adjacent to the college posed problems in natural groundwater seepage.
- As a solution, prioritizing the need for roads for walking, side drain capacity was increased, and water from the surface was collected in the college ground, where the water will seep down through an inverted filter. Secondly, the water on the roofs shall be collected on the roof of one building. This already has the head and hence can be drawn in laundry whenever needed.

M.Tech Seminar

Siphon for SHP Projects | HRED (formerly AHEC)-. IIT Roorkee

January 2018-May 2018

- Studied literature available on black water and aerated siphon.
- Under this, the design, material for construction, operation, model studies and case studies of aerated and blackwater siphons.

M.Tech Dissertation

Siphon for SHP Projects | HRED (formerly AHEC). IIT Roorkee

May 2018- June 2019

- Design of the siphon intake and siphon spillway for ten small hydropower plants installed in India.
- The designs are compared to the conventionally installed intake and spillway on economic grounds.
- The comparison is made on the basis of construction, power gain or loss etc.

Workshop/ Conference/ Seminar Attended

S.N.	Title	Organizing Institute	Venue	Date	Duration (Days)
1.	Science Camp	Internal Quality Assurance Cell, Kumaun University, Nainital	Kumaun Univerity	November 02 to 07, 2011	6
2.	Civil Simplified National Level Bridge Challenge	Civil Simplified and Technex'14, IIT BHU	College of Engineering Roorkee	March 03, 2014	1
3.	Workshop on Staad.Pro	CETPA Infortech and College of Engineering Roorkee	College of Engineering Roorkee	February 19 to 20, 2015	2
4.	National Conference on "Research and Innovation in Engineering and Technology"	College of Engineering Roorkee and Institutions of Engineer's India	College of Engineering Roorkee	March 28 to 29, 2015	2
5.	Seminar on "R&D: Make in India – I"	Institutions of Engineer's India	Institutions of Engineer's India (Roorkee Local Chapter)	April 30, 2015	1
6.	Workshop on "Innovative Trends in Engineering"	Institutions of Engineer's India	Institutions of Engineer's India (Roorkee Local Chapter)	April 05, 2016	1
7.	Workshop on "Education and Research -3"	Institutions of Engineer's India	Institutions of Engineer's India (Roorkee Local Chapter)	May 03, 2016	1
8.	Primavera Workshop	Synergy School of Bussiness	Project Management Institute, CP, New Delhi	October 17 to 18, 2016	2
9.	Workshop on "Renewable Energy and Urban Planning "	Institute of Town Planners, India, URC, Uttarakhand	AHEC, IIT Roorkee	November 07, 2017	1
10.	Workshop on "Innovative Teaching and Learning Pedagogy"	Department of Information Technology, KIET Group of Institutions, Ghaziabad	KIET Group of Institutions, Ghaziabad	July 04 to 06, 2019	4
11.	Workshop on "Waste Management In Residential Society"	Faculty Development Centre, SMVDU	Shri Mata Vaishno Devi University	December 17, 2021	1
12.	Disaster Management Action Frontiers	Centre for Excellence in Disaster Management, Indian Institute of Technology Roorkee	Centre for Excellence in Disaster Management, Indian Institute of Technology Roorkee	October 10 to 13, 2023	3
13.	7 th International Conference on Civil Engineering, Singapore	Secretariat, International Conference on Civil Engineering, Singapore	National University of Singapore	March 24 to 26, 2023	3
14.	5th Neo-International Conference on Habitable Environments & International Professional Meet (NICHE IPM 2023)	Lovely Professional University	Lovely Professional University	October 13 to 14, 2023	2
15.	The 4th International Electronic Conference on Applied Sciences	MDPI	Online	October 27 to November 10, 2023	15
16.	Global Trends in Water Resources, Power & RE Sectors	Central Board of Irrigation & Power and IIT Roorkee	Indian Institute of Technology Roorkee	February 08 to 09, 2024	2
17.	Sustainable Development in	Thapar Institute of	Thapar Institute of Technology	February 22 to 24,	3

Chemical and Environmental Engineering	Technology		2024	
--	------------	--	------	--

Awards / Scholarships / Academic Achievements/ Honors

- Won Dwarka Dass Balwant Kaur Thapar Cash Prize at IIT Roorkee
- Silver Medalist in Civil Engineering, College of Engineering Roorkee
- Worked as scribe to physically challenged student of IIT Roorkee.
- Won Ganga Quest 2021 Under the Flora Fauna category organized by the Ministry of Jal Shakti.
- Winner of Beat-d-Euclid(AutoCAD event) and Edifice(Structure Design Event) at Megalith 2016, IIT Kharagpur
- Runner up of Revival of Rivers (Kosi and Rispana) at Cognizance 2019, IIT Roorkee Technical fest.

Positions of Responsibility & Extra Curricular During Education

Staad Pro Workshop	2015
<ul style="list-style-type: none"> • As the coordinator and with the team, successfully organized two days workshop on Staad Pro at the College of Engineering Roorkee. • Also attended the same. 	
Joint Secretary, Cognizance 2018, IIT Roorkee	2018
<ul style="list-style-type: none"> • As joint secretary, managed four events at the departmental level. • The fest had total budget of INR 1.5 Cr 	
Center Representative-PG, HRED (formerly AHEC), IIT Roorkee	2018-19
<ul style="list-style-type: none"> • Held the position of Centre Representative for P.G. in the HRED (formerly AHEC) department for the year 2018-19. 	
Secretary, Cognizance 2019, IIT Roorkee	2019
<ul style="list-style-type: none"> • Organized Technical Fest of IIT Roorkee, Cognizance 2019, at the departmental level. • The fest had total budget of 1.75 Cr. 	

Skills

Computer languages	:	C++, C, Matlab
Software Packages	:	AutoCAD, Staad Pro, Primavera
Minor/Honors Courses	:	Course on AutoCAD 2D from CADD Centre, 30 hours Training of Staad Pro
Languages Known	:	English (SRW), Hindi (SRW), Japanese (SRW), Punjabi (SO), Bangla(SO)

References

Dr. Arun Kumar
Professor Emeritus
HRED (formerly AHEC), IIT Roorkee
aheciitr.ak@gmail.com
+91-9837016919

Dr. Subhash Mitra
Former Chief Engineer (R&D)
Irrigation Department, Uttarakhand Government
s_mitra6@yahoo.co.in
+91-9719241486

Dr. V. K Dogra
Head, School of Civil Engineering
Shri Mata Vaishno Devi University, Katra
hod.dce@smvdu.ac.in
+91-7889619481