

December 2023

High-Resolution UAV (Drone) and Hydrodynamic Modeling for Disaster Risk Reduction and Damage Assessment

Event Date : 01-12-2023
Venue: Civil Engineering
Department PDEU



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About Civil Engineering @ PDEU Gandhinagar

Civil Engineering is considered to be the most versatile branch among all the engineering branches. The Department of Civil Engineering since its formation is committed to research and development in civil engineering. The vision of the department is to give exposure to budding technocrats to various challenges in the profession.

The department offers courses at the undergraduate level, graduate level, and Ph.D. doctorate level. The main areas of research include Project Management, Construction Management, Geotechnical Engineering, Structural Engineering, Hydrology, GIS and GPS systems, Environmental Engineering, Concrete Technology, and Transportation Engineering. The department also handles consultancy works and projects in the above-mentioned areas.

Mission and Vision

To prepare competent Civil Engineers through technovations, research and excellence in education for serving evolving human needs and infusing sustainable developments.

Mission

1. To ignite and energize young minds and arm them with the Roots of Knowledge and Wings of Creativity.
2. To excel as a Problem Solver by promoting and supporting cutting-edge research, innovations, and excellence in education.
3. To Unfold new realms of Civil Engineering addressing the needs of the Industry and Society for sustainable development.

UAV Technology

High-Resolution UAV (Unmanned Aerial Vehicle) technology coupled with Hydrodynamic Modeling stands as a pivotal cornerstone in the realm of Disaster Risk Reduction and Damage Assessment. This synergistic approach offers an unparalleled advantage in comprehensively understanding, predicting, and mitigating the impacts of natural disasters.

UAVs equipped with high-resolution capabilities empower responders and decision-makers by providing real-time, detailed aerial imagery of disaster-affected areas. These invaluable visuals offer swift and precise insights into the extent of damage, enabling efficient resource allocation and strategic planning for rescue and recovery operations.

Moreover, the integration of Hydrodynamic Modeling complements UAV data by simulating and analyzing fluid behaviors in disaster scenarios. This modeling technique facilitates the prediction of flood patterns, storm surges, and other hydrological phenomena, allowing for proactive measures to be implemented in vulnerable regions.

The fusion of these technologies empowers stakeholders to assess risks, identify vulnerable zones, and design resilient infrastructure to mitigate future disasters. By amalgamating real-time visual data with predictive modeling, authorities can make informed decisions swiftly, reducing human casualties, economic losses, and expediting post-disaster rehabilitation efforts.

About the Event

The Civil Engineering Department at PDEU successfully organized a comprehensive one-day Skill Development Program centered on "High-Resolution UAV (Drone) and Hydrodynamic Modeling for Disaster Risk Reduction and Damage Assessment." This significant event catered to over 60 newly recruited Government Officials from the Narmada Water Resources, Water Supply, and Kalpsar Department (NWRWS&KP).

The program encompassed a series of expert lectures delivered by accomplished professionals in the field. It further featured practical sessions on Drone Flight planning, hands-on experience, and in-depth Data Analysis exercises.

Heartfelt appreciation goes out to Paritosh Shukla sir for meticulously coordinating this impactful event. Further, special regards to Civil Engineering PDEU faculty and staff members i.e. Dr Dhruvesh Patel, Dr. Shobhit Chaturvedi, Dr. Ankit Deshmukh, Dr. Naimish Bhatt and staff, Dr. Kishan, and Mr. Jitubhai Patel.

Their collective efforts in conducting the expert sessions and facilitating hands-on field activities played a pivotal role in enriching the program's content and overall success.

Also, sincere thanks to Dr. Dhaval Pujara (Director, SoT) for all required approval, guidance, encouragement and support for the successful conduction of this training program..

Event Schedule

Innuagral Address: Dr Dhruvesh Patel (HoD, Civil Eng PDEU)

Keynote Adress : Dr Dhaval Pujara (Director SOT, PDEU)

TEA BREAK

Expert Lecture on Drone UAV : Dr Ankit Deshmukh (Asst Prof, Civil PDEU)

Expert Lecture on RS-GIS for Land Use Land Cover Mapping : Dr Shobhit Chaturvedi, Dr Naimish Bhatt (Asst Proffs, Civil Eng PDEU)

LUNCH BREAK

Expert Lecture on Drone Flight & Flood Control : Dr Dhruvesh Patel

Field Drone Flying Sessions : Dr Kishan Darji, Mr Jitendra Patel

Valedictory Session and Photographs

List of Participants

Sr No	Name	Designation
1	Ms Charvi S Patel	Superintending Engineer
2	Shri Divyesh Prakashabhai Kansagra	EE
3	Shri Kripalkumar Sureshachandra Patel	EE
4	Shri Bhavinbhai Harishabhai Gamit	EE
5	Shri Akshay Jitendrakumar Vaghasiya	EE
6	Shri Prince shrenikkumar Doshi	EE
7	Shri Kedarbhai Rajeshabhai Dave	EE
8	K.V.Chotaliya	EE
9	Kum. Mansi Kiritbhai Pandya	DEE
10	Shri Vijaykumar Jayantkumar Chaudhary	DEE
11	Shri Gauravbhai Dasharthbhai Prajapati	DEE
12	Shri Nisvargkumar Bhagvanbhai Chaudhari	DEE
13	Kum. Shuchi Rameshbhai Bhoya	DEE
14	Shri Piyushkumar Raghavbhai Rethaliya	DEE
15	Shri Rajeshkumar Jeshingbhai Khata	DEE
16	Kum. Mittalkumari Kanubhai Bodar	DEE
17	Kum. Charmi Hiteshbhai Thakkar	DEE
18	Kum. Drashti Chiragbhai Shah	DEE
19	Kum. Jahnvi Hitesh Shah	DEE
20	Shri Dhruv Rohitkumar Patel	DEE
21	Shri Jagdishbhai Dineshbhai Patel	DEE
22	Shri Jaydeep Bhagavanbhai Lavadiya	DEE
23	Kum. Krina Rajeshkumar Rathod	DEE
24	Shri Krupal Karshanbhai Dhanani	DEE
25	Shri Piyushkumar Jagdishbhai Gajera	DEE
26	Shri Hiteshbhai Narsinhbhai Sisara	DEE
27	Kum. Forum Shaileshbhai Bhanvadiya	DEE
28	Shri Suresh Khodabhai Shingala	DEE
29	Shri Chetankumar Pravinbhai Parmar	DEE
30	Shri Dip Trilokkumar Mehta	DEE
31	Kum. Deeptija Omkarnath Pandey	DEE
32	Shri Pradipbhai Govindbhai Chaudhari	DEE
33	Shri Milan Pravinbhai Sorathiya	DEE
34	Shri Dhyey Manharbhai Limbasiya	DEE
35	Shri Darshan Jitendrabhai Savaliya	DEE
36	Shri Jayendrakumar Bharatbhai Solanki	DEE
37	Shri Paras Pravinbhai Darji	DEE
38	Shri Mehulkumar Yogeshbhai Vasava	DEE
39	Shri Divyangkumar Bakulbhai Chaudhari	DEE
40	Shri Ronakbhai Girishbhai Bagul	DEE
41	Shri Nitinkumar Mahendrabhai Prajapati	DEE
42	Shri Manthan Sureshbhai Parmar	DEE
43	Shri Ajaybhai Lalabhai Hathila	DEE
44	Shri Harshal Hemanshubhai Shah	DEE
45	Kum. Bhavyaben Sureshbhai Gavit	DEE
46	Kum. Shivangi Ketanbhai Sukhiyajiwala	DEE
47	Kum. Shivani Hiteshkumar Patel	DEE
48	Shri Vipul Pababhai Prajapati	DEE
49	Shri Parimal Rajeshbhai Galchar	DEE
50	Shri Ketankumar Ramjibhai Vora	DEE
51	Shri Hemang Harshadbhai Hapani	DEE
52	Shri Yash Ashokbhai Patel	DEE
53	Shri Vinay Tilak Raj Puri	DEE
54	Shri Chirag Narottambhai Mandaviya	DEE
55	Shri Niravkumar Mansinhbhai Chaudhari	DEE
56	Shri Alpeshkumar Ramchandra Patel	DEE
57	M.M.Faldu	AE
58	Paritosh L Shukla	DEE
59	Ashish Vijay	DEE
60	Parth Patel	DEE
61	Sumit Mallik	AE
62	Sheetal Solanki	AE
63	Ripal Chavda	AE

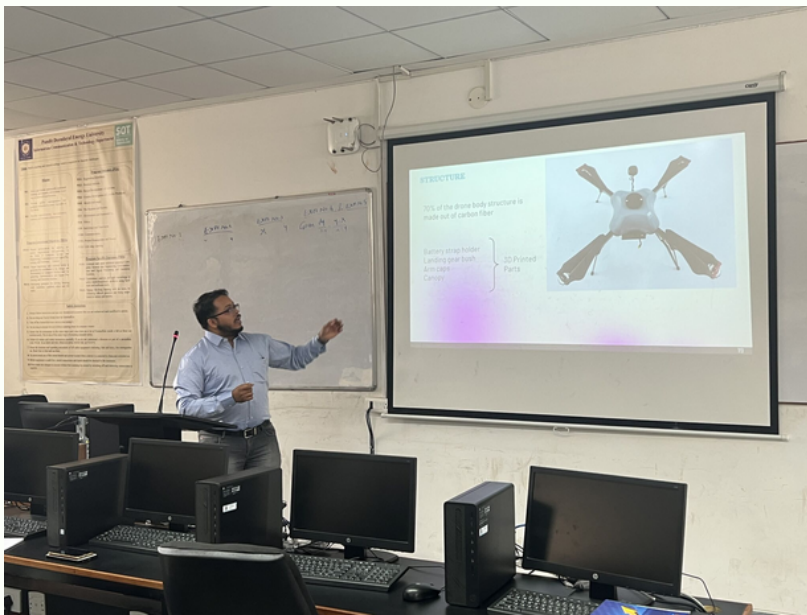
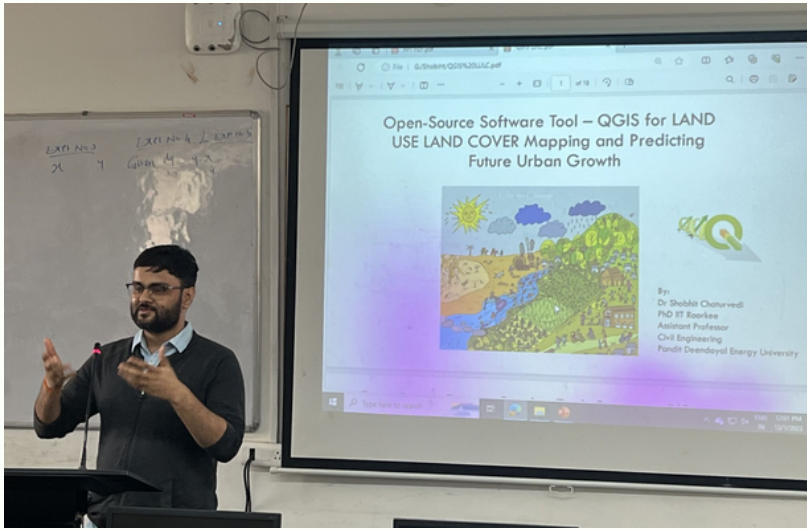
Event Photographs



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Event Coordinators



Dr. Dhruvesh Patel

Associate Professor & Head
Civil Engineering Department,
Pandit Deendayal Energy University
Gandhinagar



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