Academic Year: 2022 – 23

Report on 'Vidnyan Dhara' lecture

Organizing Department/Committee: School of Physical and Applied Sciences (SPAS), Directorate of Higher Education, Goa State Higher education Council

Name of the Activity: **'Vidnyan Dhara' lecture**

Date: 16th February 2023

Time: 10:30am to 12:00pm

Venue: Room AG-40, SPAS (Physics)

Details of participants: 76 Students of M.Sc. (Physics, Mathematics & Electronics)

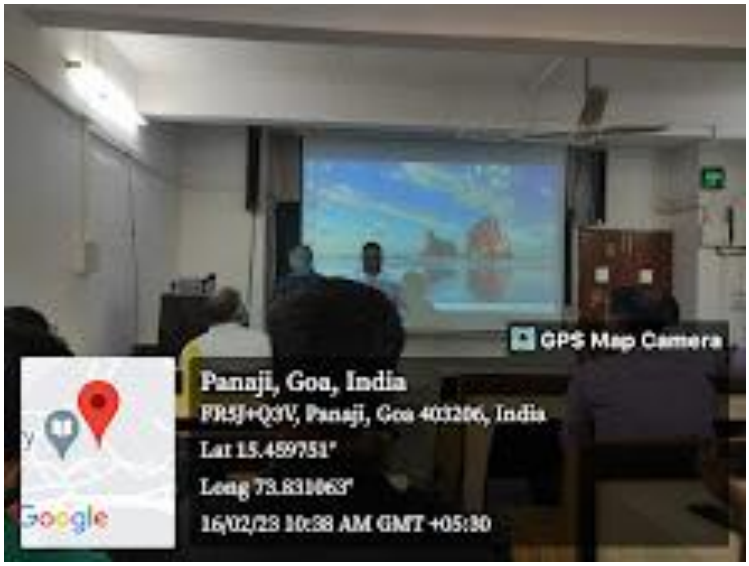
Under 'Vidnyan Dhara' – A Mega Science Series organised by the Directorate of Higher education and the Goa State Higher Education Council, Govt. of Goa, lectures were organised in various Schools of Goa University from 13th to 17th February 2023. The School of Physical and Applied Sciences (SPAS) hosted a lecture under this series, on the topic "Himalayan Glacier Observation through Space" on 16th February 2023. The resource person for the lecture was Dr. Lavkush Kumar Patel (Scientist NCPOR).

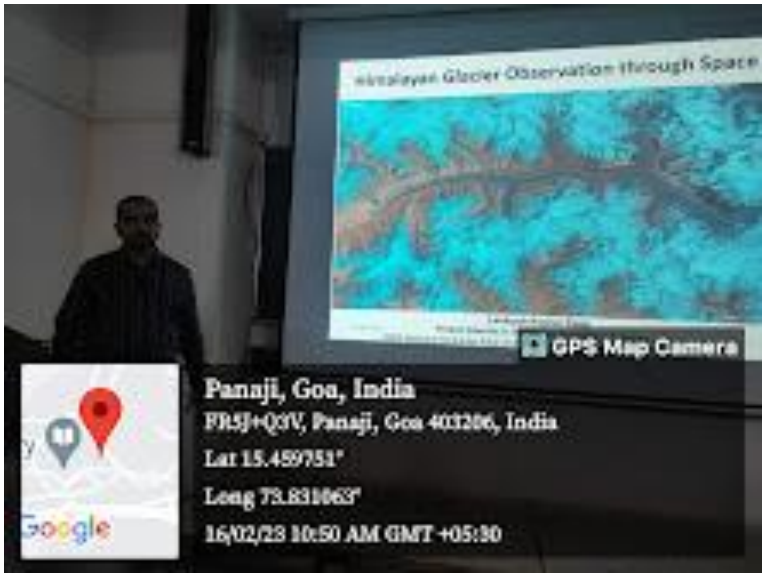
During the lecture, the resource person touched upon the topics like expeditions he had done in the past along with his group to Himalayas, what are the different types of instrument and sensors used. He has shown lot of pictures and six minutes video of one of their expedition. He also showcased the glacier movement through different regions with respect to long, time intervals using different images taken by remote sensing satellites and processing softwares. He has shown the pictures taken by satellite CORONA of the Panjim taken in 1968 and in recent past i.e. 2018 and made us understand the different changes in the water bodies due to concretization of the Panjim and some parts of Goa. He has touched upon the reason behind the Uttarakhand natural disaster and tried to make us understand the role of Glacier melting and its consequences.

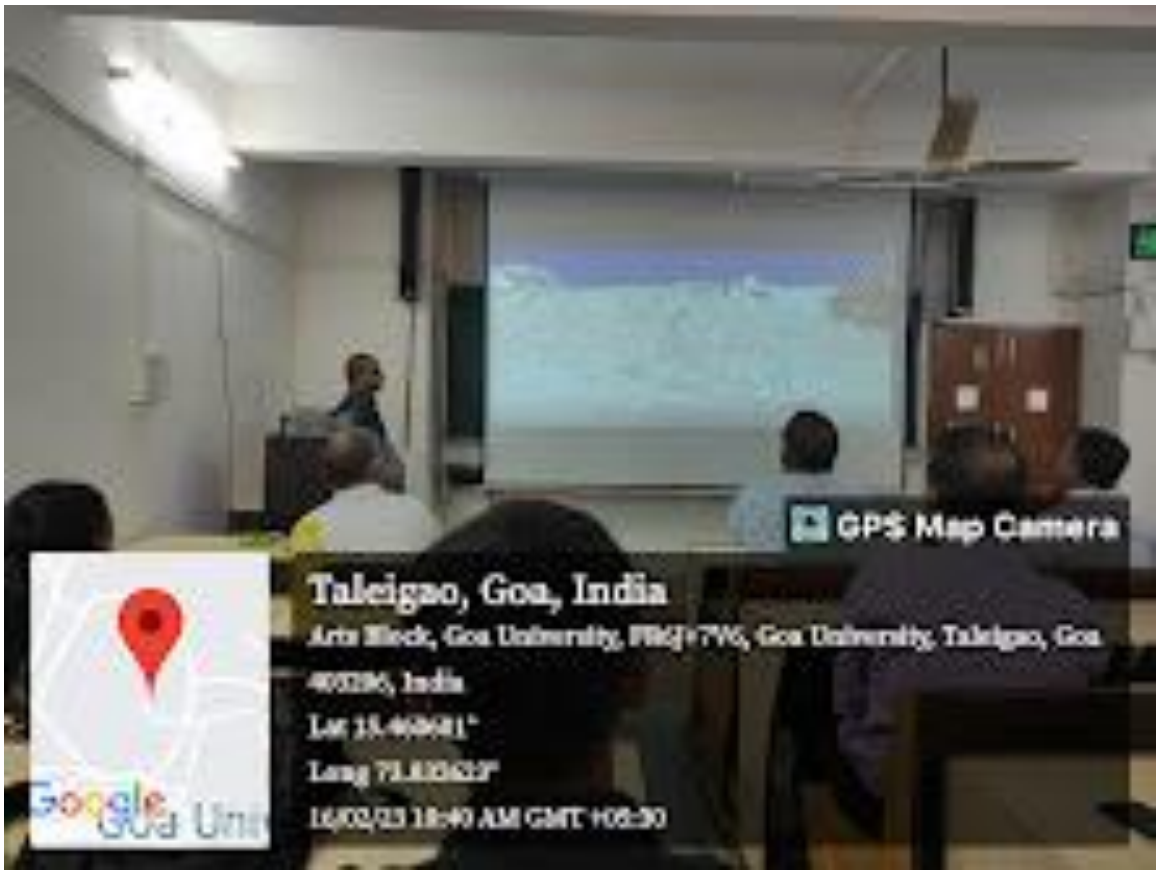
Abstract: Mountain glaciers are very sensitive to temperature and precipitation variations and most importantly, glaciers have raised a great deal of concern in terms of changes in glacier area, changes in thickness, mass balance and their impact on water resources, as well as the associated hazards. The contribution of glacial mass loss to global sea-level rise and the increasing number of glacier-related hazards are the most important and topical socio-economic concerns. Therefore, understanding the dynamics of change and constant

monitoring of glaciers are essential for studying climate, water resource management and hydropower, and for predicting and preventing glacier-related hazards. Recent advances in Earth observation techniques have proved a boon for the study of glaciers and glacier-related hazards. The remote sensing technology enables the extraction of glacier parameters such as albedo/reflection/scatter, glacier area, glacier zones and faces, equilibrium line, glacier thickness, volume, mass balance, velocity and glacier topography. This talk highlights the prospects of remote sensing technology for understanding and mapping glaciers formed in high, inaccessible mountains and glacial hazards.

The lecture was held in room AG-40, SPAS (School of Physical and Applied Sciences), Goa University from 10:30am to 12:00 pm. It was attended by Dean SPAS, Prof. Pai, Assoc. Prof. Jeevan, Dr. Narayan, Dr. Marlon Sequera, Dr. Aniket, Mr. Brandon and others which includes students of M.Sc. course.



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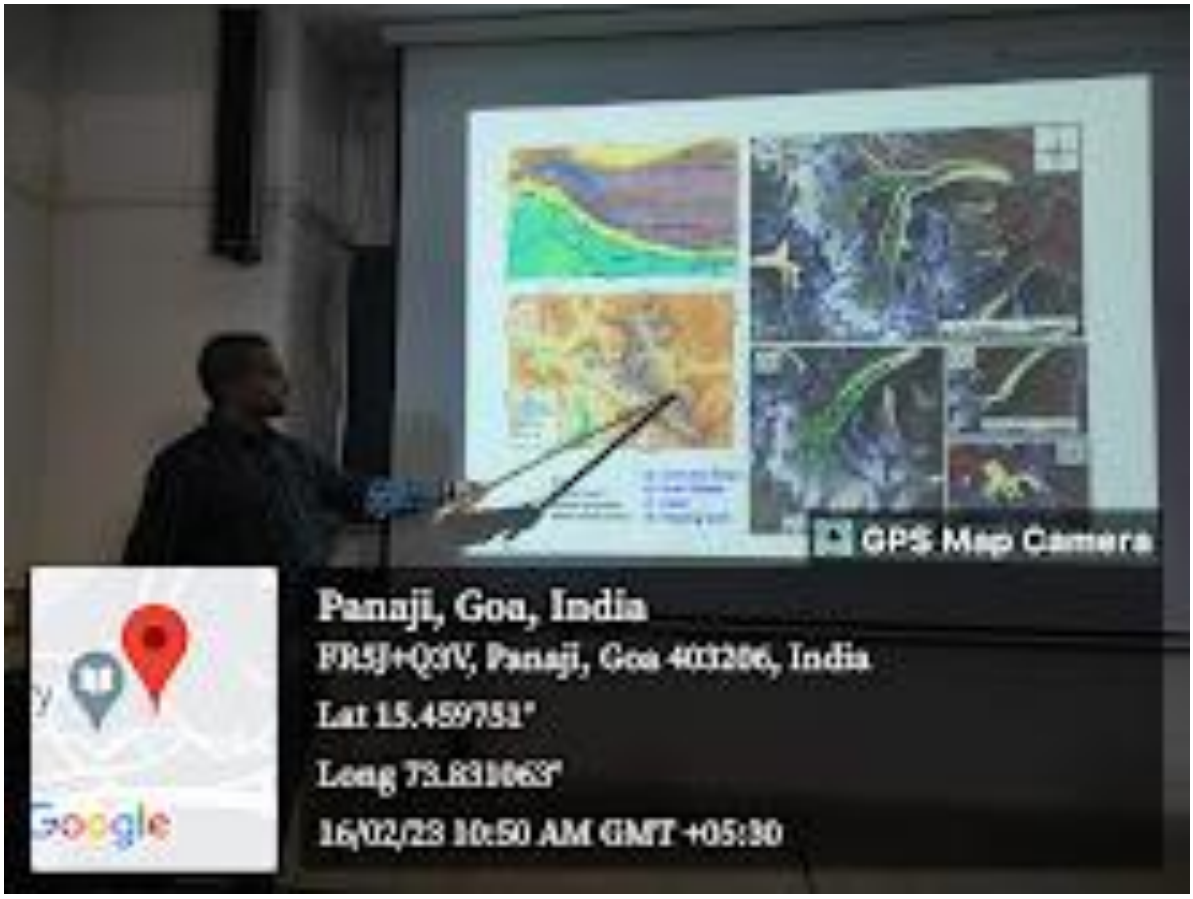
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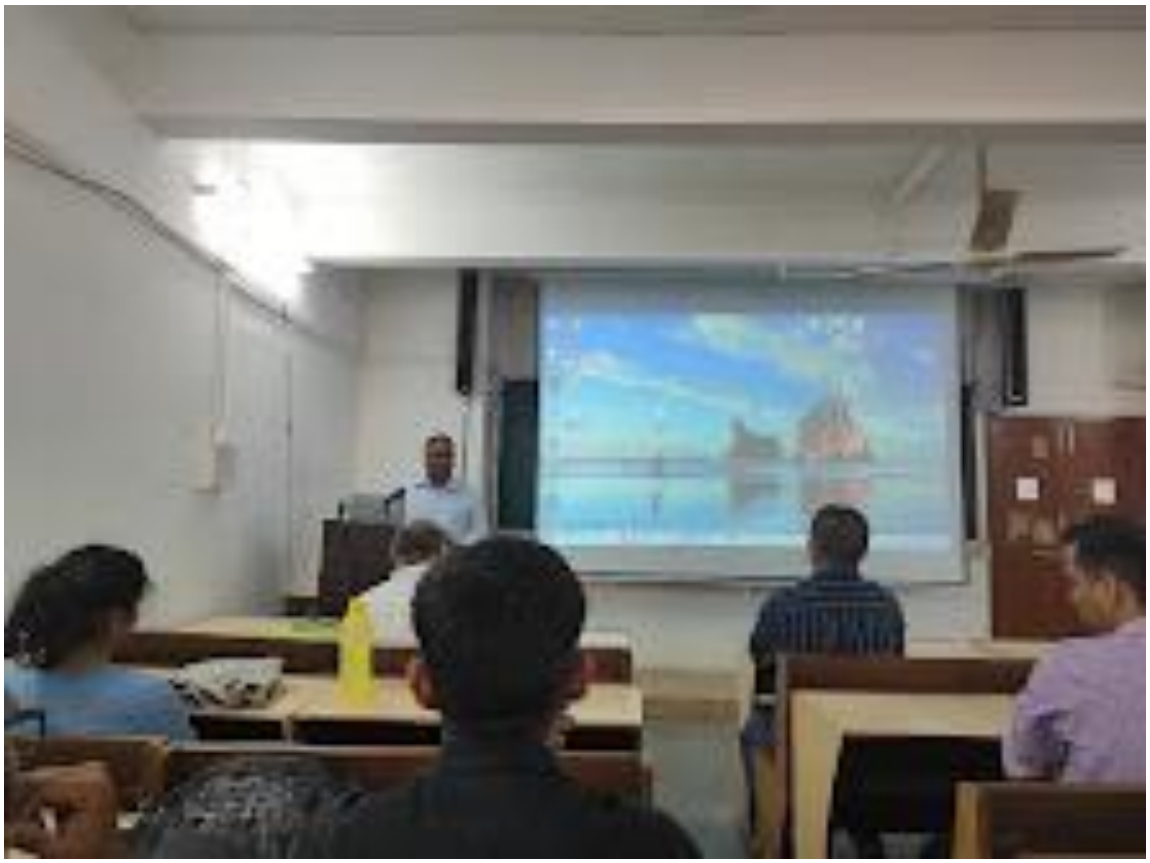


Panaji, Goa, India

Goa State Higher Education Council & Directorate of Higher Education

In Association With

School Of Physical & Applied Sciences, Goa University

Organizes: VIDNYAN DHARA 2023" A Mega Science Series
Topic: Himalayan Glacier Observation through Space
RESOURCE PERSON Dr. Lavkush Kumar Patel Scientist, NCPOR
DATE: 16th February 2023, Thursday TIME: 10.30 am VENUE: AG41, SPAS (Physics) Goa University

Sr. No.	Name	Disciplines	Signature
1.	Sanjana Palyekar	Msc student	
2.	Vijaykumar Salunke	Msc student	
3.	Shivnath Sangodkar	Msc student	
4.	Rutik Shanbag	Msc student	
5.	Shaileshkumar Nishad	Msc student	
6.	Prajyot Sangodkar	Msc student	
	~~Rutik shanbag~~	ms	
7.	Tukaram Rane	M.Sc. student	
8.	Nafisa Memon	ph.D	
9.	Nandesh Kinlekar	PhD	
10.	Shatakshi Jakhi	Project	
11.	Namita Rane	PhD	
12.	Neha Phadte	PhD	
13.	Najmeh Dehkordi	phD	
14.	Aniksha Mayekar	MSc student	
15	Lincy Costa	MSc Student	
16.	Riya Mhapne	MSc Student	
17	Amisha D. Haldankar	MSc student	
18.	Sanya Naik	MSc Student	
19.	Poojal H. Shetye	Msc student	
20	Saisha. Dessai	Msc student	
21	Saloni Dessai	Msc student	

22.	Rizma Fernandes	MSc. Mathematics	
23.	Aniruddh Naik.	Msc. Mathematics	
24.	Kevin Anthony Pereira	M.Sc Mathematics	
25.	Almaiz Kamal	MSc Mathematics	
26	Prasad. M. Pattayla	MSc. Physics	
27	Vedhant V. Chari	MSc. Mathematics	
28	Sanket S. Kambli	MSc. Mathematics	
29	Tanvesh Mandrekar	MSc Mathematics	
30	Milosha Vaz	MSc Mathematics	
31	CLARYCE DIAS	MSc Mathematics	
32	Dikshita Digambar Shirodkar	Msc Physics	
33	Lakitisha R. Gaude	Msc Physics	
34	Shruti S. Desai	MSc Physics	
35	Ninette V. R. Gomes	MSc Physics	
36.	Shilpa Amonkar	phd Phys	
37.	Mrunal U. Shetkar	MSc Physics	
38.	Vaishnavi T. Shet Narvekar	MSc Physics	
39	Aisha Carvalho	MSc Mathematics	
40	Atmesh Sardesai	MSc Physics	
41	Nagraj B. Virnodkar	MSc Mathematics	
42	Manojkumar P. Mohanta	MSc Physics	
43	Bhawana Chauhan	MSc Physics	
44	Myren Azavedo	Ph.D. Physics	
45.	Mushtira Banu Bengare.	M.Sc Mathematics	
46.	Mansi. S. Nara	MSc. Mathematics	
47.	Pratishtha P. Halarnekar	Msc Mathematics	
48.	Chetna Vernekar	Msc. Mathematics	
49.	Kashinath Gaude	Msc Physics	
50	Ramesh Hanchamani	Msc Physics.	
51	Sumiksha Gaonkar	Msc Physics.	
52	MAHANANDA MAYEKAR	M.Sc PHYSICS	

53	Bhushan. Raut	M.Sc physics	
54	Jafer Dsuza	MSc Physci	
55.	Vaishnavi S. Ambe	Msc physics	
56.	Twinkle S. Bukkam	Msc physics	
57	Shreya Mahantesh Godi	MSc Physics	
58	Rahul B. Gawas	Msc Physics	
59.	Raghuraj S. Parvatkar	Msc physics	
60.	Sayali S. Karbotkar	Msc physics	
61.	Trupti T. Gaonkar	Msc physics	
62	Sweeny Royella Pereira	Msc physics	
63	Mayur Abhisheki	Msc Physics	
64	Kunal K. Vaze	Msc Electronics	
65	Reshma Raut Dessai	Asst. Professor	
66.	Scarlet Ava Fernandes	Asst. Professor	
67	Kaustubh Priolkar	Professor	
68	Jivan Parab	Associate Professor	
69	Narayan Vetrekar	Assistant Professor	
70	Bholanath Pahari	Asst. Prof.	
71	Brandon Fernandes	Asst. Professor	
72	RAJESHKUMAR HYAM	ASSIN. Prof.	
73	Ramesh V Pai	Prof.	
74	Venkatesha R. Hathwar	Asst. Prof	
75	Marlon Sequeira	Asst. Prof	
76	Aniketh Gaonkar	Asst Prof	