

Global Initiative of Academic Networks  
Course on

## VIRTUAL AND AUGMENTED REALITY: THE FUTURE TECHNOLOGY

@ NIT Rourkela  
14 – 19 March, 2022

(Online Mode)



Organized by

Department of  
Computer Science and Engineering  
National Institute of Technology  
Rourkela, Odisha, India.



## About GIAN

### GLOBAL INITIATIVE OF ACADEMIC NETWORKS

Govt. of India introduced a new program titled Global Initiative of Academic Networks (GIAN) in Higher Education aimed at tapping the talent pool of scientists and entrepreneurs, internationally to encourage their engagement with the institutes of Higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence.

### Course Instructor



**Dr. Federica Battisti** is a faculty member in the Department of Information Engineering at University of Padova, Padua, Italy. She earned her Ph.D. degree in Telecommunication Engineering at Università degli Studi Roma Tre in 2010. Prior to her Ph.D., she completed Master degree in in Electronic Engineering from Università degli Studi Roma Tre, Rome, Italy, in July 2006. She has been involved in several national and European projects. She has been regular instructor of the course Multimedia Communications and Telecommunication Security, and now of Digital Signal Processing. She has

### Course Coordinator



**Dr. Bidyut Kumar Patra** is a faculty in the Engineering at National Institute of Technology Rourkela. He earned his Ph.D. degree in Computer Science and Engineering from IIT Guwahati. He was awarded Marie-Curie Fellowship for conducting Postdoctoral Research in Finland. His research areas include recommender systems, machine learning and data mining.

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## About the course

The recent years have witnessed a large spread in the use of Virtual and Augmented Reality (VR and AR). In the past, these technologies were mainly exploited in gaming applications, while in the last years their use started spreading in many other fields, thanks to the advancements in the rendering devices and of the available computational capacity. The capabilities offered by AR and VR are numerous: from training operators to perform specialized tasks, to remote maintenance and artistic applications. VR can grant to the user a high degree of immersion in the virtual content thanks to the exploitation of Head Mounted Displays (HMD) that project the viewer in a virtual world while disconnecting him from reality. On the other hand, VR allows to augment the real world with synthetic content while allowing the viewer not to lose contact with the surrounding world.

### You should attend if...

- You are graduate or undergraduate student in Electronics, Computer Science, Electrical, Mathematics, and Statistics.
- You are a data scientist and working with e-commerce company or want to pursue your career as a data scientist.
- You are a Ph.D. student or faculty from academic institution interested in learning how to do research on Recommender System or how to apply Machine Learning Techniques in Recommender System.

### Course Schedule

Duration	Modules
14 - 19 March, 2022	<ul style="list-style-type: none"><li>• Augmented Reality and Virtual Reality; its applications.</li><li>• Display technologies and rendering devices for Augmented and Virtual Reality.</li><li>• Interaction modalities for Augmented Reality and Virtual Reality with focus on the challenges on usability and perceived quality of experience</li></ul>



## Registration Steps

1. Please follow the link below for GIAN registration portal and register yourself on or before 8<sup>th</sup> March, 2022.

<http://www.gian.iitkgp.ac.in/GREGN/index>

2. The course registration fee has to be paid through a Demand Draft which should be drawn in favor of 'Continuing Education, NIT Rourkela' payable at SBI, NIT Rourkela Branch (Code: 2109).

3. Please add the DD number and other details in the following course registration form.

<https://forms.gle/WoS3knGtXu9aqyw9A>

4. Please send the DD and registration copy (from GIAN) by post to Dr. Bidyut Kumar Patra, Department of Computer Science & Engg, NIT Rourkela, Rourkela – 769008. The DD and the registration copy must reach the coordinator on or before 10<sup>th</sup> March, 2022.

## Registration Fee

The participation fee for taking the course is as follow:

Participants from abroad: US \$150

Industry/ Research Organizations:  
INR 5000

Academic Institutions (Faculty):  
INR 600

Students: INR 300

The registration includes instructional materials