IEEE ISMAR 2020 Workshop

Title of the workshop

Towards Designing a Mobile Augmented Reality Learning Experience

Call for Participation

Augmented Reality (AR) is one of the emerging technologies in several domains including education. When adopted for classrooms, this technology holds great potential in enhancing the motivation in the students to master the course content. Studies have also claimed that there is an increase in student learning and achievement in the educational environment using an AR experience. Enhancement of certain capabilities like problem-solving skills, collaborative learning, and spatial abilities have been the stated reasons for the increased learning achievement. While the AR applications are developed to be used in classrooms using hand-held devices like mobile or tablets, certain guidelines are suggested in creating such an AR learning environment. These guidelines are drawn towards providing an enriched learning experience for the students while using the AR-based solutions in classrooms, thus challenging the traditional teaching-learning process. However, it is required to understand why and what strategies, decisions, methods lie behind the guidelines that are adopted while designing a mobile AR learning experience for K12 classrooms.

The goal of the workshop is to provide an opportunity for the researchers, designers, developers, and practitioners to come together and submit their original ideas in the form of work-in-progress papers, position papers, and demos regarding mobile-based AR learning experience for K12 classrooms. At the workshop, we will have activities and collaborative discussions to encourage active participation among the participants to have insights generated on the strategies and patterns that are commonly followed while designing such an experience.

We invite submissions concerning, but not limited to, the following subjects/topics for a Mobile AR learning experience for K12 classrooms:
1. Applications and use cases, their design and development
2. User Interface, User Experience design for such applications
3. Components of AR impacting the learning process
4. The methods of designing and research
5. Guidelines considered in the design process
6. Decisions and challenges in the design of the content
7. The role of designer, developer, researcher and/or practitioner
8. Evaluation and/or usability of the designed learning content

The workshop's papers will be published in ISMAR 2020 adjunct Proceedings and IEEE Xplore.

Important Dates

17th August 2020 (23:59 AoE): Paper submission deadline
4th September 2020: Notification of paper acceptance to authors
21st September 2020: Camera-ready manuscripts of accepted papers due
9th November 2020: Workshop date

Submission
Paper Length: Anonymized 2-6 pages (excluding references) Paper
Format:
VGTC Word Template.zip
VGTC LaTeX Template.zip
VGTC Sample PDF Paper.pdf

Please email your submission to workshop.marle.k12@gmail.com with the heading *'ISMAR 2020*

 workshop participation'. At least one author of each accepted paper must attend the workshop

and register for the conference.

Workshop Agenda
The workshop will be held online. The one-day workshop will involve paper presentations, demonstrations, and hands-on sessions. The participants are expected to present their work involving the outlook, and/or approaches taken in providing an AR learning experience in K12 classrooms. The videos demonstrating the different types of applications or solutions can be shown and discussed. The participants will also be encouraged to ideate and create a paper prototype in designing such an experience based on certain given scenarios.

20 mins - Ice-Breaker:
The participants and the organizers do a quick round of introduction

30 mins - Presentation (Round 1):
Presentation of the submitted papers and analyzing the strategies, guidelines, methods, and/or decisions involved in the work.

45 mins - Collaborative Activity 1:
Participants are given a context. They collaborate and work in groups to generate the design briefs around the given context.

10 mins: Break
45 mins - Discussion:

The design briefs generated based on the scenario and discussions are discussed for each group.

30 mins - Presentation (Round 2):
Presentation of the submitted papers and analyzing the strategies, guidelines, methods, and/or decisions involved in the work.

1 hour: Break

45 mins - Collaborative Activity 2:
Based on the design briefs generated, the groups continue to work on discussing and generating the strategies, design decisions, and/or guidelines for designing a mobile-based AR learning experience for K12 classrooms.

15 mins - Break

1 hr - Presentation and Discussion:
The groups present, discuss, argue, and reflect upon the strategies, design decisions, and methods adopted.

Remaining Time - Reflections:
Summary and concluding notes on identifying the design patterns.

Organizers

Pratiti Sarkar

E-mail: pratiti@iitb.ac.in

Affiliation: IDC School of Design, Indian Institute of Technology Bombay, India
Interests: Augmented/Virtual Reality, User Experience Design, HCI and Educational Technology

Pratiti is a PhD student at IDC School of Design, IIT Bombay, India. She is a researcher and UI/UX designer. Her research interest lies in establishing Augmented Reality technology in Indian school education. She is interested in investigating the design strategies for Augmented Reality based learning experience in K12 classrooms. Currently, she is also involved in a project that looks for building up a solution in providing Accessible and Affordable Digital Learning Aids for Children in Rural Communities. Her recent work includes the 'ScholAR' project which involves the design and development of an AR learning experience in the classroom with Geometry as the use case. One of her works recently got published in the journal of Smart Learning Environments, SpringerOpen. Her profile can be accessed here.

Jayesh S. Pillai

E-mail: jay@iitb.ac.in

Affiliation: IDC School of Design, Indian Institute of Technology Bombay, India
Interests: Communication Design, Augmented/Virtual Reality, Visual Design, Video Communication

Dr. Jayesh S. Pillai is presently a faculty at the IDC School of Design, IIT Bombay, India. He works in the domain of immersive media design (virtual, augmented, and extended reality) and interaction design. His work explores the potential of design in evolving immersive technologies. His current research involves understanding the grammar and exploring the potential of storytelling in virtual reality. Jayesh holds a PhD in the field of Virtual Reality from Arts et Métiers ParisTech, France. His short film narratives 'Beyond' and 'Gulzar' were selected for the Cannes
Film Festival Short Film Corner 2011 and 2016 respectively. His latest works include VR film 'Dragonfly' and experimental VR narrative 'Till We Meet Again', which have been showcased at film and VR symposiums including VRCAI2019, Australia, and the VR-art festival of Laval Virtual, France. His profile can be accessed her   e.

Amarnath Murugan

E-mail:amarnath.m@iitb.ac.in

Affiliation: IDC School of Design, Indian Institute of Technology Bombay, India Interests: Augmented/Virtual Reality, Graphics, HCI

Amarnath is a researcher and developer at the IMXD Lab, IDC School of Design, IITB. His specialization is in Extended Reality, and he has been collaborating with pioneering startups and researchers in the field for almost four years. Amarnath's work on a passively interactive framework for VR films has been published in multiple international conferences such as VRST, VRCAI & INTERACT; furthermore, his recent work on embodiment in VR was presented at IEEEVR. He has also been an invited speaker at the largest HCI and Game Development conferences in India. Prior to joining IMXD Lab, he was a student ambassador for Unity Technologies, and team lead for the XR & HCI group in a student-run multidisciplinary research lab. His profile can be accessed here.

Contact

For any queries, feel free to mail us at workshop.marle.k12@gmail.com