

***IEEE EMBS (Engineering in Medicine and Biology Society)
Student Branch Chapter (SBC31061F)
Karunya Institute of Technology and Sciences
Event Report***

Name of the event: Technical Webinar - “From Innovation to Implementation: Clinical XR (AR/VR) and the Evolving Role of Biomedical Engineers”

Event Mode: Online

Date: 18 August 2026

Participants Count: 98

Venue: Virtual via Gmeet <https://meet.google.com/jwt-hvoa-ddq>

Funding Support (If Any): Nil

Budget: Nil

Event Objective:

- To introduce participants to Clinical XR technologies such as Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR), and their applications in healthcare, patient care, rehabilitation, medical education, and training.
- To demonstrate the role of immersive technologies in biomedical engineering through practical examples of clinical simulations, equipment training, surgical planning, safety training, and experiential learning.
- To enhance participants’ understanding of effective XR design and implementation by highlighting real-world challenges, design principles, user interaction, empathy, safe failure, and the evolving career opportunities for biomedical engineers in Clinical XR.

Event Description:

The technical webinar “From Innovation to Implementation: Clinical XR (AR/VR) and the Evolving Role of Biomedical Engineers” was organized by the IEEE EMBS Student Branch Chapter (SBC31061F) to provide participants with an understanding of the emerging role of Extended Reality (XR) technologies in healthcare. The session introduced the concepts of Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR), highlighting their potential to transform medical education, training, rehabilitation, patient support, and clinical practice.

The session was delivered by Ms. Swathi Balaji, who shared her professional journey from engineering and manufacturing to software, instructional design, and immersive technology. Through practical examples and demonstrations, she explained how XR can be used for medical equipment training, surgical planning, clinical simulations, biosafety procedures, patient therapy, and healthcare education. A demonstration of a VR module based on the Azurion imaging system helped participants understand how complex clinical environments and workflows can be recreated in an immersive virtual setting.

The webinar also emphasized important principles of effective XR design, including user interaction, immersion, empathy, experiential learning, safe failure, repetition, and spatial understanding. Ms. Swathi discussed common design challenges and explained how well-designed VR experiences can improve learning, safety, and skill development while reducing the risks and limitations associated with physical training. The interactive Q&A and participant discussions further enabled students to explore the practical applications of Clinical XR and understand the evolving opportunities for biomedical engineers in this interdisciplinary field.

Event Outcome / Impact:

The webinar provided participants with a clear understanding of Clinical XR technologies such as AR, VR, and MR and their growing applications in healthcare. Participants learned how immersive technologies can support medical education, clinical training, rehabilitation, patient care, and safety simulations. The session also helped them understand important XR design principles such as interaction, immersion, empathy, experiential learning, and safe failure. Through practical examples and demonstrations, participants gained insights into how VR can enable safe, repetitive, and effective skill development. Overall, the webinar enhanced awareness of the evolving role and career opportunities for biomedical engineers in the field of Clinical XR.

Event Poster:

The poster is for a webinar organized by the Department of Biomedical Engineering at Karunya Institute of Technology and Sciences. It features logos for IEEE, IEEE EMBS, and Karunya at the top. The main title is "DEPARTMENT OF BIOMEDICAL ENGINEERING WEBINAR ON Clinical XR (AR/VR) and the Evolving Role of Biomedical Engineers" with the subtitle "From Innovation to Implementation". A central circular portrait shows Ms. Swathi, the Lead Learning Experience Designer for AutoVRse. To the left of the portrait, the date "18 Aug 2026" is displayed. To the right, the time "6.30 PM IST" is shown. Below the portrait is a QR code and a "Register now" button. A text box on the right states "Open to everyone & Certificates will be provided". At the bottom, a table lists the Co-ordinators: Dr. Samuelraj Chrysolite (Faculty Advisor), Mr. Jewzon (Vice Chair), and Ms. Shekina (Joint Secretary), along with their contact numbers. Social media links for IEEE EMBS Student Branch Chapter - Karunya are also provided.

IEEE Advancing Technology for Humanity

IEEE EMBS Engineering Medicine & Biology Society

IEEE EMBS Engineering Medicine & Biology Society

Karunya DEEMED UNIVERSITY

DEPARTMENT OF BIOMEDICAL ENGINEERING

WEBINAR

ON

Clinical XR (AR/VR) and the Evolving Role of Biomedical Engineers

"From Innovation to Implementation"

18 Aug 2026

6.30 PM IST

Ms. Swathi
Lead Learning Experience Designer
AutoVRse

Register now

Open to everyone & Certificates will be provided

CO ORDINATORS

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Event Photo:

OPENING PRAYER Ms. Emmimal STUDENT MEMBER EMBS KITS, Coimbatore  18 AUGUST 2026 IEEE EMBS STUDENT BRANCH CHAPTER SBCT060F		INTRODUCTION TO IEEE EMBS SBC Mr. Jewzon Ravindra VICE CHAIR EMBS KITS, Coimbatore  18 AUGUST 2026 IEEE EMBS STUDENT BRANCH CHAPTER SBCT060F	
SPEAKER INTRODUCTION Mr. Steve Anson STUDENT MEMBER EMBS KITS, Coimbatore  18 AUGUST 2026 IEEE EMBS STUDENT BRANCH CHAPTER SBCT060F		SPEAKER ADDRESS Ms. Swathi Balaji RESOURCE PERSON Lead Instruction Designer / Experience Designer at AutoVRse,  28 AUGUST 2026 IEEE EMBS STUDENT BRANCH CHAPTER SBCT060F	
02 Think of this webinar as Everything I wish someone told me before designing my first clinical VR module!! or even a build log. I'll show you what fails, why it fails.		03 TONIGHT'S ROADMAP 01 What is clinical XR? 02 What breaks? 03 How I design it 04 Why healthcare is different 05 where biomedical engineers fit? 06 what comes next?	
13 MISTAKE - 05 Literal translation - Aim is to master the task not suffer through reality - Did not enhance learning - Increased gameplay time significantly 		35 SOP: Design a patient being injected 	
VOTE OF THANKS Ms. Vaishnavi.S STUDENT MEMBER EMBS KITS, Coimbatore  18 AUGUST 2026 IEEE EMBS STUDENT BRANCH CHAPTER SBCT060F		FEEDBACK SESSION  18 AUGUST 2026 IEEE EMBS STUDENT BRANCH CHAPTER SBCT060F	

Event Screenshots:

6:45 PM | IEEE EMBS Webinar- From Innovation to Implement...

jewzon (Presenting, annotating)

SPEAKER ADDRESS

Ms. Swathi Balaji
RESOURCE PERSON
Lead Instruction Designer /
Experience Designer at
AutoVRse,

28 AUGUST 2026

IEEE EMBS STUDENT BRANCH CHAPTER SBC31061F

URK25BM2030 NIKITHA D

51 others

URK24BM3001 SHEKINA K

6:44 PM | IEEE EMBS Webinar- From Innovation to Implement...

jewzon (Presenting, annotating)

SPEAKER INTRODUCTION

Mr. Steve Anson
STUDENT MEMBER
EMBS
KITS, Coimbatore

18 AUGUST 2026

IEEE EMBS STUDENT BRANCH CHAPTER SBC31061F

URK25BM1001 ...

URK25BM2030 NIKITHA...

54 others

URK24BM3001 SHEKINA K

6:33 PM | jwt-hvov-ddq

jewzon (Presenting, annotating)

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IEEE Engineering Medicine & Biology Society

Karunya
DEEMED UNIVERSITY

WEBINAR
From Innovation to Implementation:
Clinical XR (AR/VR) and the Evolving
Role of Biomedical Engineers

18 AUGUST 2026

IEEE EMBS STUDENT BRANCH CHAPTER SBC31061F

People

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IN THE MEETING

Contributors 48

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- Akash Mohan
- ANGELA ANNA
- ANNILYN SHAUNA CHRI...
- Binny Siga
- Dhanu
- Dr.Samuelraj Chrysolite ... Meeting host

Event Group Photo :



Drive Link:

https://drive.google.com/drive/folders/1iqWK7sMz2u8lFYk-eKCoRbqvQLrD4HEM?usp=drive_link

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