AuReLiA
Future learning

PERSONAL

NAME	Augmented Reality Learning and Accessibility (AuReLiA)
DATE OF BIRTH	2019
PLACE OF BIRTH	Heidenheim

CONTACT

Heidenheim:
Prof. in Dr. Sabine Möbs
Wolfgang Faber, MBA
Deogratias Shidende, M.Sc.
Kevin Adamy, M.Sc.
Stuttgart:
Prof. Dr. Dirk Reichardt
Prof. Dr. Thomas Kessel

Website for further information:

LANGUAGE

ENGLISH
SWAHILI
GERMAN
SWABIAN

PROJECTS & PARTNERS

PhD Projects

Education Competence Network (EdCoN)

graustich

DHBW PARTNERS

DHBW Stuttgart
Duale Hochschule Baden-Württemberg

DHBW
Duale Hochschule Baden-Württemberg
Heidenheim

As of Q1/2022

PROFILE

AuReLiA is the lab, combining development of Augmented Reality (AR) authoring with learning and open-source software, researching accessible open educational resources with great UX (user experience) available for learning for all. This includes the following **activities**:

1. Setting up a **living lab infrastructure** available and open **for all interested people** (students, industry partners, partner universities)
2. PhD research
3. Involving student activities through these topics, research-based learning and student research projects

EXPERIENCE & SKILLS

2019: Foundation by Prof. Dr. Sabine Möbs, Wolfgang Faber, MBA

2020: Prof. Dr. Dirk Reichardt, Prof. Dr. Thomas Kessel, René Götzenbrugger joined, 1st successful funding proposal

2021: Deogratias Shidende (M.Sc.), Kevin Adamy (M.Sc.) joined; 1st lab equipment arrived

- User Experience
- Human Computer Interaction
- Accessibility
- AR Programming
- Instructional Design for AR
- Learning Experience Journey
- AR-Open-Source-Knowledge
- Cooperation of Learning Locations
- Eye Tracking
- Virtual Reality
- Mixed Reality
- Extended Reality
- Augmented Reality
- Technology-Enhanced Learning
- Use of AR/VR Hardware
- Usability

LAB EQUIPMENT

The following equipment is available and serviced in the AuReLiA lab:

Augmented Reality
- HoloLens 2
- Tooz Glasses

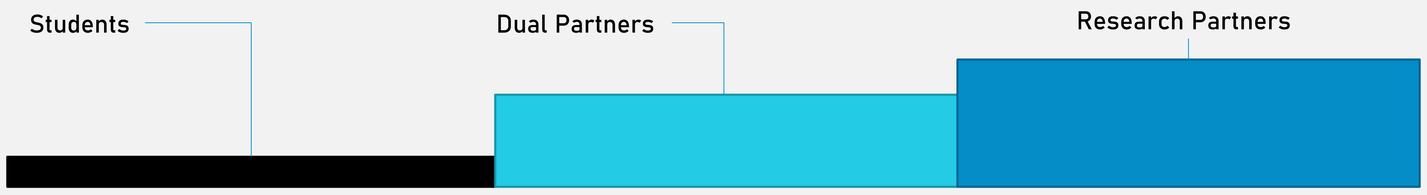
Virtual Reality
- HTC Vive Cosmos
- HTC Vive Pro Eye

Mobile Devices
- Android / iOS-based smartphones
- Android / iOS-based tablets
- 3D Leo Scanner

Usability
- Tobii Glasses 2
- Tobii Fusion
- Wearable Sensing EEG
- Pulsoximeter

Accessibility
- Adaptive Controller
- Touch Develop-ment Kit
- Haptics Gloves

TARGET GROUPS



Students
- AR is discussed in various lectures
- Students can explore AuReLiA lab equipment and use it for projects and research
- Joint Interdisciplinary Projects allowing students to elaborate ideas with relevance for (their) dual partners

Dual Partners
- Knowledge exchange on AR development and devices
- Collaborative creation of teaching content (company-specific)
- Joint Interdisciplinary Projects allowing dual partners to gather ideas from an interdisciplinary student´s team

Research Partners
- Collaboration on common research topics / projects
- Exchange of Students
- Creation of publications
- Network Setup to share further related work and increase the exchange among each other

AR IN LECTURES

Course: International Business
- Module: Communication and Technology
- Module: Interdisciplinary Communication

Course: Economics in Industry
- Module: Industry 4.0

Course: Computer Science
- Module: Augmented Reality Programming

SOME OF OUR TOOLS

- Accessibility Evaluation
- AR Foundation
- EEG
- EyeTracking Software
- Mixed Reality Toolkit
- MS Visual Studio
- three.js
- Unity
- Usability Testing
- Vuforia
- WebGL