

Title: VR/XR for Zero G Training

Conference: AR/VR for Space Programmes 2023

Time and place: 11-12 Dec 2023, ESA/ESTEC

Technical themes: VR, XR, astronaut training, Zero G, parabolic flight

Description: PaleBlue develops VR simulation for Zero G astronaut training together with ESA. The usage areas include Zero G locomotion in VR, familiarization with the digital twin of the International Space Station, and developing resistance to Zero G and motion sickness. The system is used at ESA for astronaut training with the ESA astronaut class of 2022. PaleBlue has conducted VR/XR experiments in weightlessness aboard parabolic flights for software and hardware development. This presentation will cover the topics of training astronauts for Zero Gravity in VR and XR, applicable technology, and will address on-ground and parabolic cases.

Speaker: Dr. Felix Gorbatsevich

Affiliation: PaleBlue AS, Prof Olav Hanssensvei 7A, 4021 Stavanger, Norway

Bio: Felix Gorbatsevich is CEO and the leading technical expert at PaleBlue - Industrial VR company. Felix Gorbatsevich has been working at technology and software companies, in roles ranging from software engineer and systems architect to project manager and managing director. Now at PaleBlue, Gorbatsevich leads the development of XR and 3D simulators for the real world - creating immersive solutions for PaleBlue clients, such as ESA, Saudi Aramco, Neptune Energy, and Baker Hughes.



Images: See next pages.



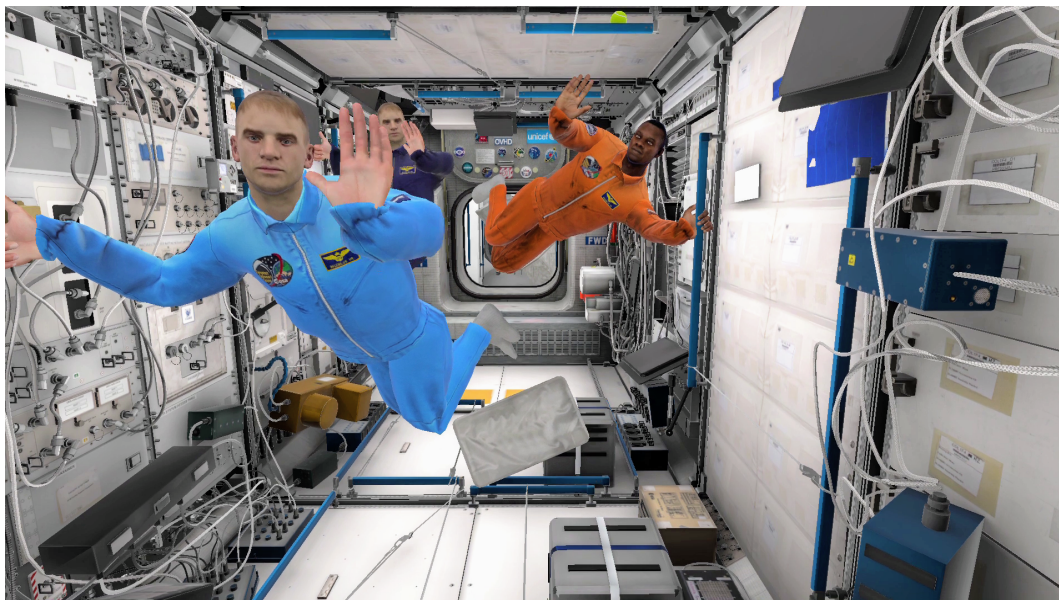
Motion capture and XR equipment test in parabolic flight



VR equipment test in parabolic flight



ESA astronaut Marcus Wandt trained on PaleBlue VR Zero G system (image released by ESA)



Virtual training environment with multi-user training inside the ISS 3D model