

Dr.med. Tanja Birrenbach, MME

Leitung AG Virtual Reality

Contact

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Research statement

My research focusses on the development and application of virtual and mixed reality (VR/MR) simulations for medical education in emergency medicine. Furthermore, we are exploring the possibilities of therapeutic application of VR in the clinical acute emergency setting. I am co-leading the VISL (virtual insel simulation lab) with Prof. Dr. T.C. Sauter, where we collaborate with different national and international partners in developing VR/MR simulations in emergency medicine, including projects on MR training for medical first responders, and VR training for emergency medicine for medical students.

Recent publications

Tanja Birrenbach, Josua Zbinden, George Papagiannakis, Aristomenis K Exadaktylos, Martin Müller, Wolf E Hautz, Thomas Christian Sauter (2021). Effectiveness and Utility of Virtual Reality Simulation as an Educational Tool for Safe Performance of COVID-19 Diagnostics: Prospective, Randomized Pilot Trial. *JMIR Serious Games* 2021;9(4):e29586). <https://doi.org/10.2196/29586>.

Zikas P, Kateros S, Lydatakis N, Kentros M, Geronikolakis E, Kamarianakis M, Evangelou G, Kartsonaki I, Apostolou A, **Birrenbach T**, Exadaktylos AK, Sauter TC, Papagiannakis G. Virtual reality medical training for Covid-19 swab testing and proper handling of personal protective equipment: development and usability. *Front. Virtual Real.* 2:740197. doi: 10.3389/frvir.2021.740197.

Birrenbach T, Bühlmann F, Exadaktylos AK, Hautz WE, Müller M, Sauter TC. Virtual Reality for Pain Relief in the Emergency Room (VIPER) - a prospective, interventional feasibility study. *BMC Emerg Med.* 2022 Jun 21;22(1):113. doi: 10.1186/s12873-022-00671-z. PMID: 35729502.

Sarah Rickenbacher-Frey, Selina Adam, Aristomenis K. Exadaktylos, Martin Müller, Thomas C. Sauter, **Tanja Birrenbach**.: Framework-based development and evaluation of a virtual reality training for emergency treatment of shortness of breath. Submitted GMS Journal for Medical Education (JME)

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www.visl.ch