



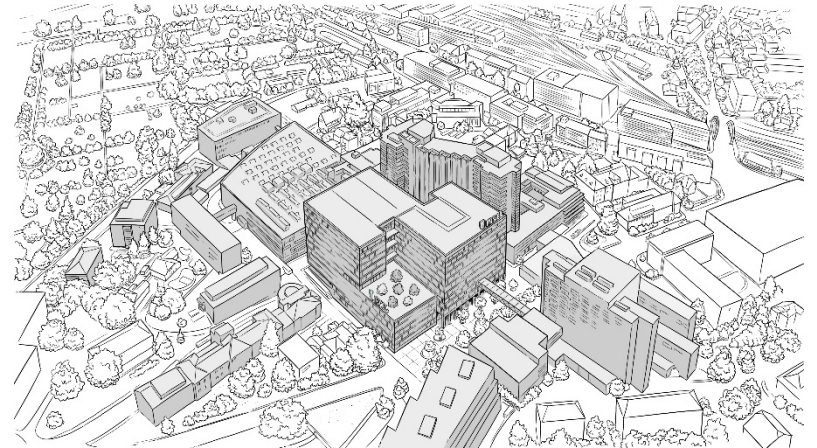
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Virtual Insel Simulation Lab

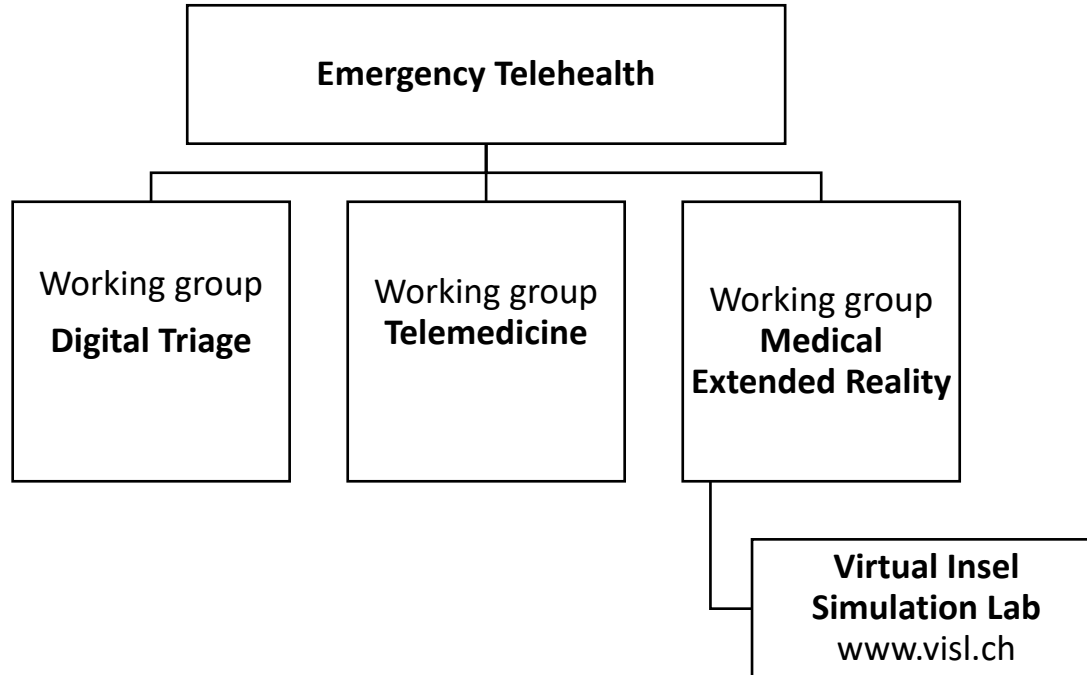
Rafael Wespi und Thomas Sauter

Montag, 20.3.2023





Emergency Telehealth



Virtual Insel Simulation Lab

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VR education in acute care medicine

Research about and with VR

www.visl.ch

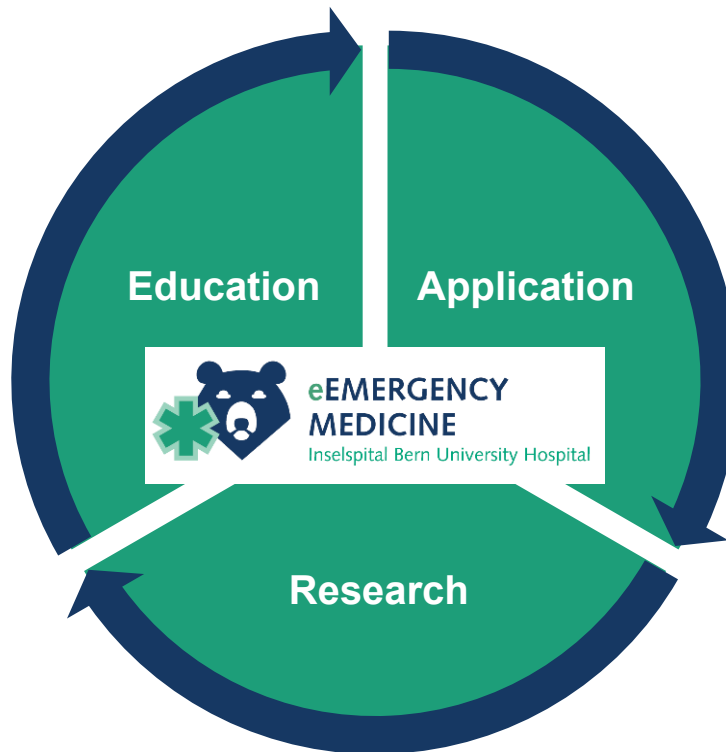




Prof. Dr. med.
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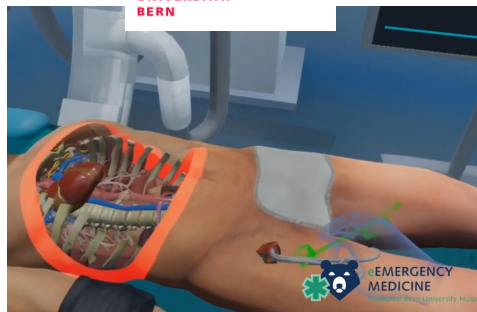
PhD cand. Rafael Wespi
MSc. Psychologie

Translation Research – Clinical practice

VIPER –
Virtual
Reality for
Pain Relief



REBOA -VR



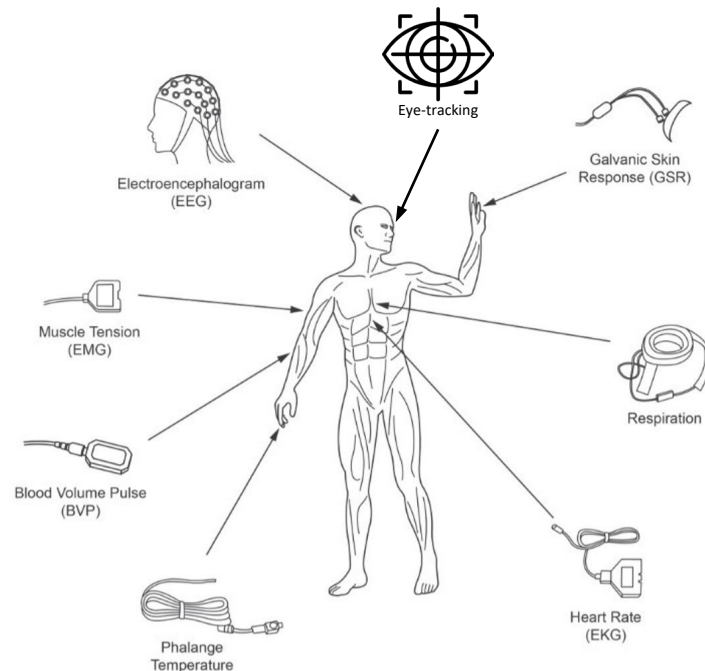
Psychophysiology

Hard Outcomes for „soft“ Constructs?

Find measures for team-performance

Based on physiological measures

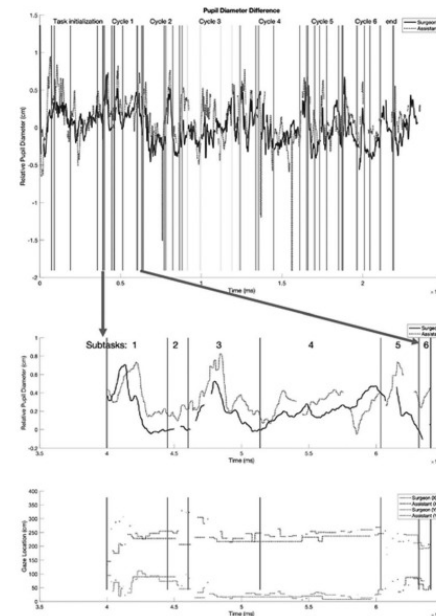
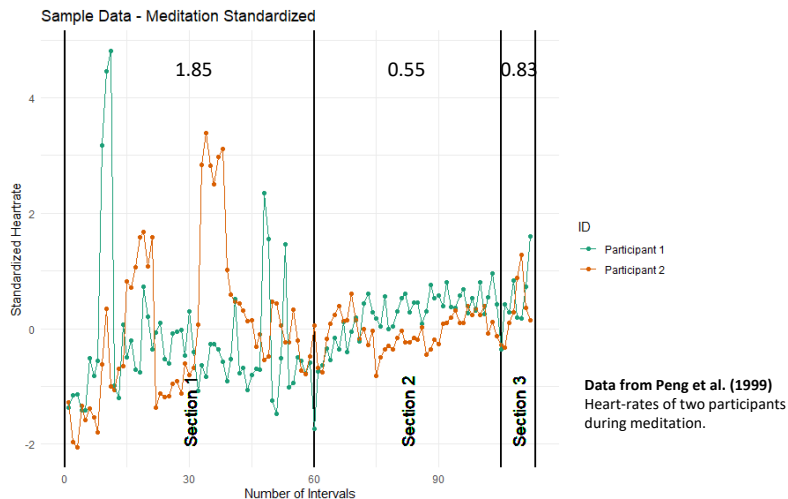
Combining measures with
physiological synchronizazion



Physiological Synchronization

Some Examples

Dynamic time warping (dtw) or Euclidian distances (small values = higher synchronization)



He et al. (2021)
Pupilligraphy synchronization and team-performance.

FIGURE 4. An example of joint pupil changes. A, The whole trial of the example data, with different color group vertical lines for different cycles. B, One of the cycle joint pupil changes data (upper panel) and the corresponding gaze locations (bottom panel).



COVID 19 – VR strikes back

Train healthcare professionals how to correctly and safely perform nasopharyngeal swabs for diagnostic purposes



MED1stMR

H2020 funded project “Medical First Responder Training using a Mixed Reality Approach” to prepare medical first responders for emergency situations. UBERN: Team performance evaluation with objective measures

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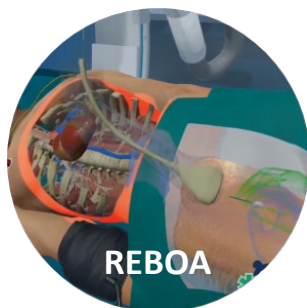
Viva VOCE

A Innosuisse project in cooperation with IML UBERN and the University of Geneva on the topic of "assessment in VR"



Interprofessional team training in Virtual Reality

BeLearn supported development of an interprofessional team training that can be carried out independently of time and place thanks to VR technology



Resuscitative endovascular balloon occlusion of the aorta

Train the insertion of a REBOA catheter – a complex emergency intervention, mainly for the care of polytraumatised, heavily bleeding patients.



ATLS meets VR

Prospective randomized controlled feasibility and quality control pilot study to study the use of a VR-ATLS-training for medical students



www.telenotfallmedizin.ch

4. Schweizer Telenotfallmedizin
und Digital Health Kongress

28.4.2023



Medical VR Edition