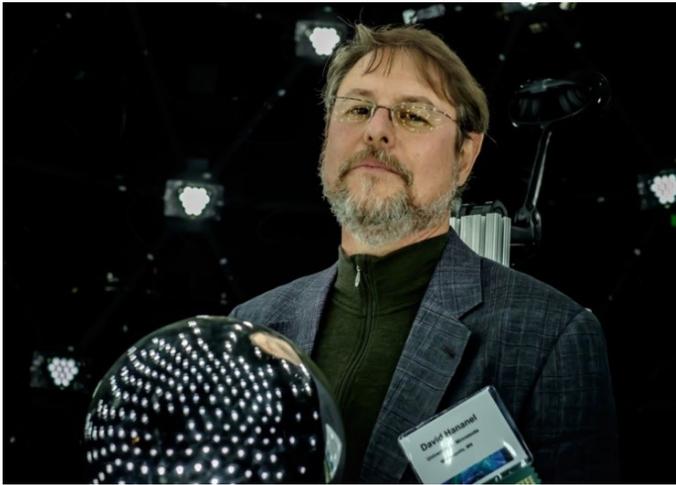


FACULTY RESEARCHER HIGHLIGHT—DAVID HANANEL



Hananel during a visit to the Institute for Creative Technologies at USC during MMVR 2014.

David Hananel joined the Department of Surgery together with several colleagues from the University of Minnesota Center for Research in Simulation and Education Technologies (CREST) as part of the recruitment of Dr. Robert Sweet, Chief, Division of Healthcare Simulation Sciences, and the transition of CREST to UW. He has been with CREST now for 9 years, most of that time as Director, and was recently also appointed as Lecturer in the new Division of Healthcare Simulation Science, which brings together CREST and the WWAMI Institute for Simulation in Healthcare (WISH) under the leadership of Dr. Sweet.

Mr. Hananel was born in Istanbul, Turkey and moved to Berlin, at the time West Germany, to study Electrical Engineering and then came to the US to continue his studies in Computer Science.

He has been deeply involved in healthcare simulation since its early years, going back over 25 years when he was working in device development for minimally invasive surgical procedures in Cincinnati in the 90's. Some of the projects he was involved in required re-training of surgeons when the use of new technology required skills significantly different from their original training. At the time, the only re-training opportunities involved porcine cases and his quest to find alternatives set him on a path that eventually led him to join a Swedish company with government funding that was working on a Virtual Reality (VR) platform for arthroscopic shoulder surgery.

Shortly after Mr. Hananel's introduction to the VR platform, and recognizing the need to incorporate educational content into what otherwise would be just an interesting game to play, he began working with Dr. Ajit Sachdeva, at the time at Hahnemann University in Philadelphia, to learn more about adult education principles and educational design methodologies. The result of these encounters is the now standard outline for medical simulator content, following sound educational principles seen on many commercial products.

Mr. Hananel went on to work for a number of healthcare simulation companies in various roles, always collaborating with Academic Medicine as a source of inspiration and direction. Mr. Hananel joined CREST as Associate Program Director in 2011, almost ten years after first meeting Dr. Sweet, then a resident at University of Washington, who shared his passion for simulation in healthcare education.

The reason to switch from industry to academia was two-fold: to gain access to government research funds to push state-of-the-art simulation further, faster, and to start establishing the science of healthcare simulation and train others in the field. That desire for research funds became reality when CREST expanded a working relationship on a large scale study with the Department of Defense (DoD) to a number of ongoing projects for the team that followed them to UW.

A series of smaller projects opened the door to one of the most significant development projects in healthcare simulation to date: the Advanced Modular Manikin (AMM). The project was a 5-year effort that began in Minneapolis and finished at UW, led by Dr. Sweet as Principal Investigator (PI) and Mr. Hananel as Systems Architect and UW PI. The first of its kind, the AMM provided a modular, distributed, interoperable platform for healthcare simulation. It resulted in a set of open standards, and work funded by the DoD has been published as open source so that any interested party can build upon the platform and create new simulation products based on this effort at no cost to them.



Hananel (left) at an Arthroscopic Association of North America (AANA) event in 2001

With the successful completion of the AMM program, Mr. Hananel is now looking forward to the next few projects for CREST, targeting many levels of care ranging from first responders to rural surgeons building upon that platform. In addition to that, Mr. Hananel is working to develop curricula for a new Master's Degree in Healthcare Simulation Science. Mr. Hananel is hoping that with the energizing and collaborative spirit here at UW, this focus on the Science of Healthcare Simulation will lead to many new breakthroughs and truly establish it as a Science.