

SANTOS VIRTUAL SOLDIER RESEARCH

Santos is a physics-based and physiological responsebased human modeling and simulation ecosystem. 215 of movement for hands, feet, With degrees Santos can assess human performance, and eyes, predict muscle forces, and, through cause and effect, replicate human actions when fatigued. As a replacement for live exercise, Santos allows for modeling essential for task and mission prediction contingency planning. For example, if Santos is carrying a heavy load, the user can see the decreasing levels of hydration and energy, as well as the increasing levels of fatigue. Santos, and female counterpart Sophia, are designed to save time, lives, and money.

Santos was first ideated in 2003 at the University of Iowa and was matured through a multidisciplinary research team based at Virtual Soldier Research (VSR). VSR has received research funding from the U.S. Department of Defense and other partners, including Caterpillar and General Motors.

Features

Digital twin technology Only physics-based virtual human Human behavior prediction Predict and measure human performance Calculate "human cost" Human systems integration Predict musculoskeletal injuries

Technology





APPLICATIONS

- Army Combat Fitness Test
- GruntSim
- Enhanced Technologies for Optimization of Warfighter Load (ETOWL)
- Santos posture prediction in real time
- Employs scientific military data including NSRDEC, USARIEM, AFC DAC, USMC, and others.



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schedule a visit

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