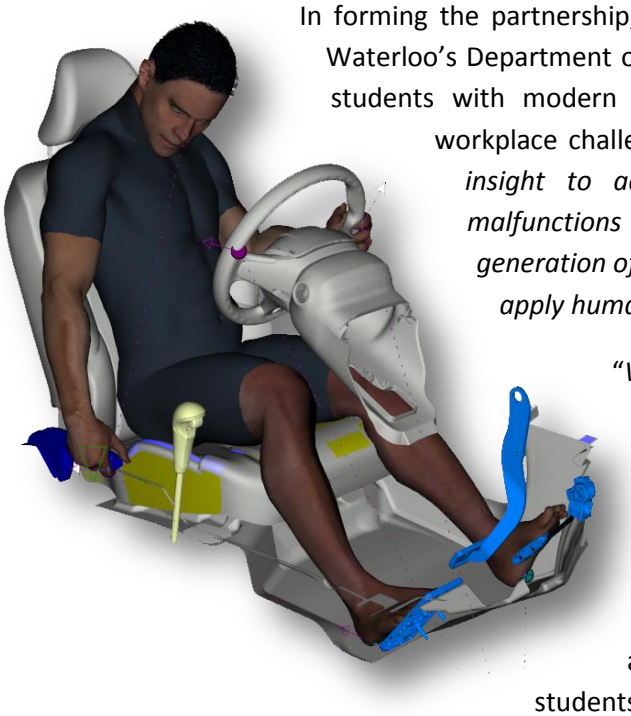
University of Waterloo and SantosHuman Inc. Partner to Educate Next Generation of Engineers

The University of Waterloo has partnered with SantosHuman Inc. (SHI) to educate the next generation of ergonomists in optimizing human performance and well-being in the workplace through the use of state of the art virtual human performance simulation.



In forming the partnership, Dr. Steven Fischer, Assistant Professor in the University of Waterloo's Department of Kinesiology, sees an opportunity to prepare his ergonomics students with modern approaches that can be targeted to address tomorrow's workplace challenges. "*Virtual human performance simulation offers unique insight to address potential problems proactively, before a product malfunctions or someone suffers an injury*" Fischer says, "*and the next generation of design engineers and ergonomist needs to understand how to apply human simulation to strengthen customer oriented design.*"

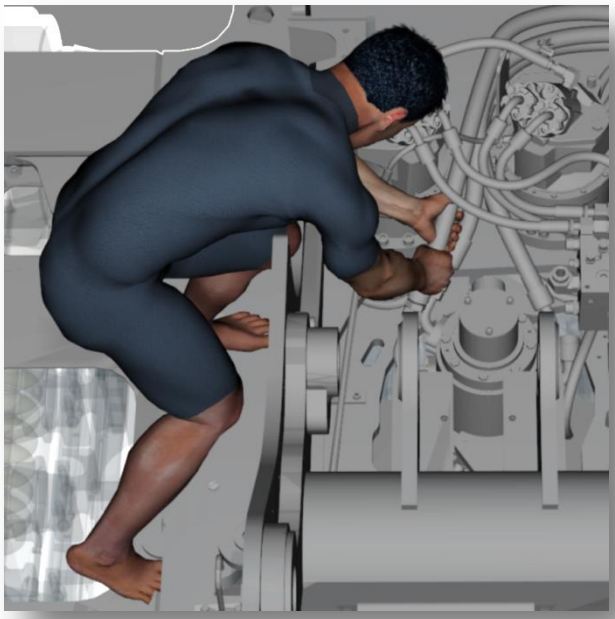
"*We will be using Santos® as a teaching tool for our upper year students interested in ergonomics*," says Fischer. Use of Santos® technologies will enable students to apply human simulation-based analyses to estimate important metrics of interest when evaluating the design and layout of products and work spaces. "The opportunity to use *Santos® as a tool to* visualize the impact of different designs and work space layouts on key metrics will help to reinforce students' learning of formative principles in occupational biomechanics", Fischer says.

SHI's virtual human-in-the-loop solutions are a key component to next generation design processes. While the use of Digital Human Modeling (DHM) to analyze products and processes is common, the ability to consider the human-in-the-loop at the earliest stages of any design process is relatively new. SHI's first principles-based approach to predicting human performance provides designers and engineers with the ability to develop truly human-centric design processes. Through this partnership, the University of Waterloo has also identified the value of SHI's virtual human-in-the-loop solutions and is excited to train the next generation of designers and ergonomists with this skill set.

"*Classes often use software as one of many tools, or they focus on one system and teach students how to use that system*", Dr. Tim Marler, SHI's Chief Research Officer and Director of The Santos® Institute said. "*But what if professional analysis software could be fully integrated with education, not just as a tool students will use in the real world, but also as a means for facilitating hands-on education, as a critical piece of a curriculum?*" "*This is especially critical in the field of ergonomics*", continues Marler, "*where practitioners are expected to use DHM software frequently and Santos® technologies can help play a role as instructor as well as design consultant.*"

Memorization and regurgitation is a well-accepted relic in modern education. Consistent and relevant interaction is the key to efficient learning. *"What's exciting is that this isn't just about changing how we design products and processes in industry*," says Marler. *"We now have the opportunity to inherently change the process of learning."*

"We look forward to providing our students with access to the cutting edge Santos® software permitting advanced ergonomic analysis", says Fischer, *"and ensuring that our graduates continue to be relevant, informed and sought-after by industry."*



All manufactured products (from cars to toasters) are now developed within computer design environments. While these virtual design environments provide significant benefits with regards to traditional engineering problems, designing and assessing those virtual designs specifically to optimize human interaction continues to be a challenge. Because consumers today are more sophisticated and therefore more demanding in terms of comfort and user experience (UX), human centric design processes are more important now than ever before.

Provided through the ***Santos® Institute***, the **Santos® University Program** is designed to complement and/or foster projects, courses, and curricula related to:

- Industrial Design
- Computer science
- Digital Human Modeling
- Simulation
- Engineering
- Occupational Health & Safety
- Ergonomics
- Human Factors
- Objective Analysis of Motion Capture
- Biomechanics
- Robotics (the foundation of the Santos® predictive models)

In addition, the ***Santos® Institute*** can assist in the development of new and related curricula.

The **Santos® University Program** represents yet another way in which we strive to match our state of the art, human-centric, virtual product design and analysis methods, technologies, and resources with industry requirements.