INTERNSHIP/FINAL THESIS EXPRESSURE – THE SMART SENSOR SOCK

Foot ulcers are important complications of diabetic patients. The risk of diabetic foot-ulcers could be decreased, by early indication of the risk and produce fitted, orthopedic shoes to minimize pressure on the foot. However, at the moment there is no system available that measures the pressure between the entire foot and the shoe.

Within the Expressure project, the goal is to develop a textile sock with integrated sensors, that can 3D map the pressure of the foot, to give an optimal indication and minimize the risk of foot-ulcers. Would you like to work on the design and development of this smart sensor sock and reduce the high risk of foot ulcers for diabetic patients?

TASK DESCRIPTION

- You will work at the textile lab in the Epy Drost building and the FabLab on further optimizing the current smart sensor sock.
- Prototyping covers topics from pattern making, smart textiles, sensor lamination, sensor testing.
- Collaborate with material experts, designers, and textile engineers within research group, but also the whole project team (Voetencentrum Wender, University of Twente, Saxion Ambient Intelligence) is open for collaboration and support of your research.

PRACTICAL INFORMATION

- **Student profile:** Fashion & Textile Technologies or Innovative Textile Development student with an interest in smart textiles and medical textiles; Either as an internship or graduation research
- We are looking for a student that can work very precisely. You will mainly work independently in the lab, however, as a group we work together to achieve the best results in our projects.
- **Contact person(s) for this assignment:** Carlos Kuhlmann (**j.c.kuhlmann@saxion.nl**)
- **Research group Sustainable and Functional Textiles: saxion.edu/sft**