**Satakunta University of Applied Sciences**

Training Brochure

­**Training Brochure**

**SERVICE ROBOTS AND EXOSKELETONS**

Title:

Service Robots and Exoskeletons

Description:

This training aims to offer insight in state of the art service robotics and exoskeletons. It will provide knowledge on service robots in various fields, in particular mobile robots in smart manufacturing and factory logistics. The training will demonstrate how easy it is to program a mobile robot. In addition, various exoskeletons, both in industry and healthcare, will be presented, including their benefits and limitations. Concrete examples and practical demoing of a medical lower-limb exoskeleton.

Training dates:

8. 3. 2021 online

9. 3. 2021 assignment (in own free time)

10. 3. 2021 online

11. 3. 2021 online

Duration:

1 pm – 3 pm (CET)

Location:

Online

Price:

Free

Software used:

MS Teams, Padlet, Podcast platform.

Learning objectives:

The participants in Service robots and Exoskeletons training will:

* Understand what a service robot is.
* Gain an overview of various service robots in smart manufacturing and other fields.
* Gain a deeper understanding of mobile robots.
* Understand the ease of programming a mobile robot.
* Gain an overview of industrial and medical exoskeletons.
* Learn about the possibilities for exoskeletons to be used in industry and healthcare.
* Learn about the health benefits of industrial and medical exoskeletons.
* Learn how to utilize Indego medical lower limb exoskeleton in rehabilitation.

Structure of the training

1. Webinar 1
2. Individual work
3. Webinar 2
4. Webinar 3

Who should enrol:

Teachers, educators, enterprises and start-ups who want to learn about a broad field of service robotic technologies and exoskeletons.

Why choose this training:

The training will provide knowledge on existing service robots and exoskeletons in various fields. It will offer ideas and practical hints, how to bring different knowledge and examples of service robots and exoskeletons to education and work life.

Skills and knowledge gained:

Participants will gain insight in state of the art service robotics and exoskeletons. Mobile robots driving versatile smart manufacturing and factory logistics. Application of other service robots in various fields. Participants will be provided knowledge on the utilization of industrial exoskeletons empowering and supporting workers. Utilization of medical exoskeletons for patient rehabilitation. Exoskeletons’ mechanisms of functioning, the benefits that they offer as well as their limitations. Concrete examples and practical demoing of a medical lower-limb exoskeleton. At the end of the training, participants will understand the possibilities of various applications of service robots and exoskeletons.

Lecturers:

Anja Poberžnik, BA Physiotherapy, Project Researcher in Well-being Enhancing Technology Research Group, Satakunta University of Applied Sciences (SAMK)

LinkedIn: Anja Poberžnik <https://www.linkedin.com/in/anja-poberžnik-0850539b>

Janika Tommiska, BEng Automation, Lecturer, Satakunta University of Applied Sciences (SAMK)

Certificate:

Participants in the Service Robots and Exoskeletons training will receive a Talentjourney certificate with the trainers´ signature.

Reflect, learn and internalize:

Participants will develop their ability to recognize the potential of service robots and exoskeletons in smart manufacturing and healthcare. They will understand the benefits and limitations of these technologies. Participants will be encouraged to find new ways, how to utilize service robots and exoskeletons related to their own areas of interest.

Learn from the best:

Anja Poberžnik is currently working as a project researcher in well-being enhancing technology research group at Satakunta University of Applied Sciences. She received Bachelor’s degrees in Slovakian language and literature, general linguistics and physiotherapy. She is a certified Indego exoskeleton specialist. Her main areas of interest are rehabilitation, neurological physiotherapy, and robot-assisted therapy. She currently utilizes Indego exoskeleton in patient robot-assisted gait rehabilitation.

Janika Tommiska has a BEng degree in automation and has worked as a researcher/lecturer at Satakunta University of Applied Sciences. She has participated in several applied automation technology and welfare technology research projects. Currently she is doing her MSc thesis concerning technology knowledge transfer between teachers, students and companies.

Guests: Taina Jyräkoski (Kuntotutka physiotherapy clinic & project researcher, SAMK) and Santeri Saari (project researcher, SAMK)

Networking:

Participants will be encouraged to interact and collaborate with different stakeholders, and when possible, in cross-disciplinary teams. The training will combine individual and teamwork.