Lower Limb Soft Exosuit - Personalized Gait Control/ Bionic Mechanical Design

Project Description:

In recent years, the application of soft exosuit in elderly assistance and rehabilitation has garnered increasing international attention. This project aims to conduct in-depth research into key control technologies for lower limb soft exosuit in the elderly assistance scenario. It covers various specific aspects including gait control, scene recognition, human-machine interaction and bionic mechanical design. Our goal is to enhance the personalization and effectiveness of lower limb soft exosuit in gait assistance through this research, laying the groundwork for the widespread application of the exosuit in elderly assistance scenarios.

Job Description:

We are seeking a research assistant who is self-driven, interested in control systems/mechanical design, and willing to conduct research. The ideal candidate should have a background in robotics and control theory, and be passionate about exoskeleton research and development. The candidate will focus on the control systems and algorithms (or bionic mechanical design) of the lower limb flexible exoskeleton, and publish relevant academic papers in well-known journals through close cooperation with team members. Through the Focused Research Extension Program (FREE), candidates will have the opportunity to acquire the professional and practical skills required to conduct research, thereby increasing the probability of applying for a doctoral or master's degree program and the opportunity to obtain long-term employment in the industry.

This position commences in or after early 2025, with individuals anticipated to initiate their responsibilities no later than Spring 2025. The term of employment spans two years, and the contract is structured for annual renewal.

Qualifications:

- Bachelor’s or Master’s degree in Mechanical, Electrical, Automation or Computer Science, or a related field with a focus on control, mechatronics, and autonomous system.
- Experience with control algorithm design, simulation and mechanical design.
- At least proficient in one programming language (such as C/C++/Python/Matlab) with practical experience.