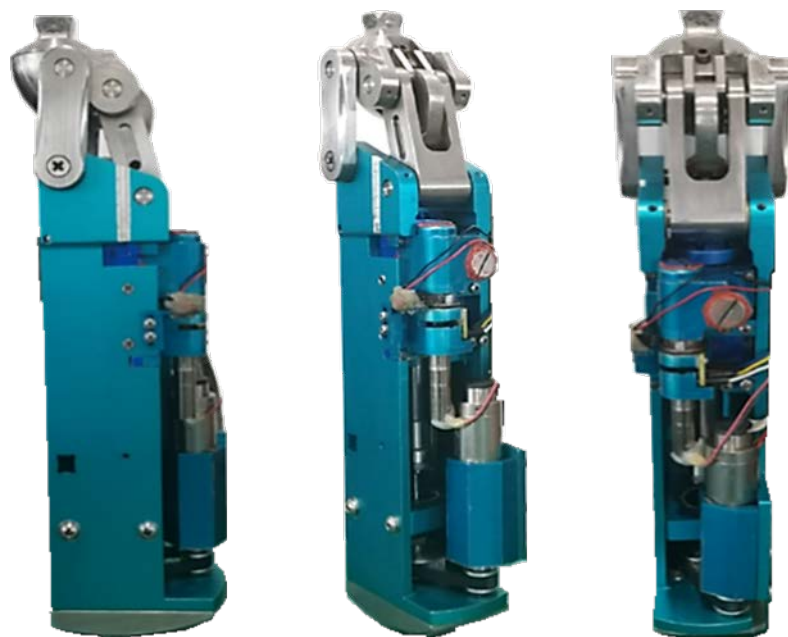


## 主被动混驱仿生膝关节假肢

### (1) 主被动混驱仿生膝关节假肢实验教学装置照片



(2) 获奖  
无

### (3) 专利

- 1) 发明专利：用于智能膝关节假肢的单回路双向流量预调节阻尼缸. 中国, 申请号: 2020106754949.
- 2) 发明专利：一种用于智能膝关节的键形槽式流量调节阻尼缸. 中国, 申请号: 201910248943.9.
- 3) 发明专利：一种主被动混合控制型液压四连杆假肢膝关节. 中国, 申请号: 201910249495.4.
- 4) 发明专利：一种主被动混合驱动智能假肢膝关节结构. 中国, 申请号: 202010045730.9.
- 5) 发明专利：一种用于智能膝关节的扇叶型式流量调节阻尼缸. 中国, 申请号: 202010045729.6.

(4) 主被动混驱仿生膝关节假肢实验教学装置相关论文目录

- 1) Xiaoming Wang, Qiaoling Meng, Shaoping Bai, et al. Hybrid active-passive prosthetic knee: a gait kinematics and muscle activity comparison with mechanical and microprocessor-controlled passive prostheses[J]. Journal of Bionic Engineering, 2023, 20(1): 119-135. (SCI收录)
- 2) Xiaoming Wang, Qiaoling Meng, Zhewen Zhang, et al. Design and evaluation of a hybrid passive-active knee prosthesis on energy consumption[J].

- Mechanical Sciences, 2020, 11(2): 425-436. (SCI收录)
- 3) Xiaoming Wang, Qiaoling Meng, He Lan, et al. Neural network predictive control of swing phase for a variable-damping knee prosthesis with novel hydraulic valve[J]. IEEE Access, 2020, 8: 201622-201634. (SCI收录)
  - 4) Xiaoming Wang, Qiaoling Meng and Hongliu Yu. Design and preliminary testing of a novel variable-damping prosthetic knee[J]. IETE Journal of Research, 2022:1-8. (SCI收录)
  - 5) 汪晓铭, 黎林荣, 陈长龙, 孙洁, 张哲文, 孟巧玲, 喻洪流.人-机-环境共融的智能假肢膝关节研究进展[J]. 中国生物医学工程学报. (已录用, 北大核心, 校定A类期刊)
  - 6) Xiaoming Wang, Hongliu Yu, Søren Kold, et al. Wearable sensors for activity monitoring and motion control: A review[J]. Biomimetic Intelligence and Robotics, 2023, 3(1): 100089. (EI收录)
  - 7) Xiaoming Wang, Hongliu Yu, Kejing Li, et al. Study on Force Interaction System of Upper Limb Rehabilitation Robot[C]/IOP Conference Series: Materials Science and Engineering. IOP Publishing, 2019, 631(3): 032051. (EI收录)
  - 8) L. Li\*, X. Wang, Q. Meng, and H. Yu. “A Wearable Computer Vision System With Gimbal Enables Position-, Speed- and Phase-independent Terrain Classification for Lower Limb Prostheses,” IEEE Trans. Neural Syst. Rehabil. Eng., vol. 31, 4539 – 4548, Nov. 2023. (SCI 收录)
- L. Li\*, X. Wang, Q. Meng, C. Chen, J. Sun, and H. Yu. “Intelligent Knee Prostheses: A Systematic Review of Control Strategies,” J. Bionic Eng., vol. 19, 1242–1260, Mar. 2022. (SCI 收录)