Ningquan Gu

gu.ningquan.t1@dc.tohoku.ac.jp

Education

- **Tohoku University** — *10/2024 - Present*
  Ph.D. student in Robotics — Sendai, Japan
- **Wuhan Textile University** — *09/2021 - 07/2024*
  Master of Software Engineering — Wuhan, China

Research Interests

Robotic manipulation, imitation learning, multimodal learning in robotics, deformable object manipulation, LLMs.

Working Experience

- **KIA Motors / Geely Motors / SANY Group** — *07/2011 - 09/2021*
  Engineer / Assistant Manager / Project Supervisor — China

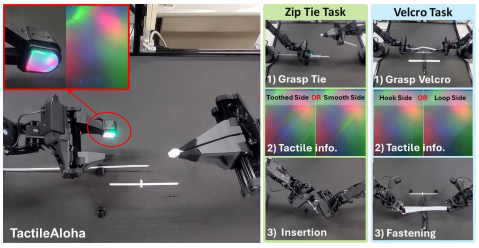
Academic Publications

TactileAloha: Learning Bimanual Manipulation With Tactile Sensing

Ningquan Gu, Kazuhiro Kosuge, Mitsuhiro Hayashibe*

IEEE Robotics and Automation Letters, vol. 10, no. 8, pp. 8348–8355, 2025.

• Website • GitHub • Video

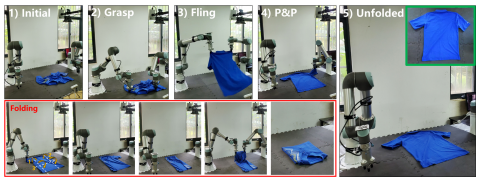


Learning to Unfold Garment Effectively Into Oriented Direction

Ningquan Gu, Ruhan He*, Lianqing Yu

IEEE Robotics and Automation Letters, vol. 9, no. 2, pp. 1051-1058, Feb. 2024.

• GitHub • Video

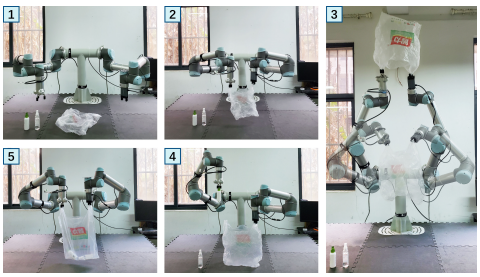


ShakingBot: Dynamic Manipulation for Bagging

Ningquan Gu, Zhizhong Zhang, Ruhan He*, Lianqing Yu

Robotica, vol. 42, no. 3, pp. 775–791, 2024. (Cover Article)

• arXiv

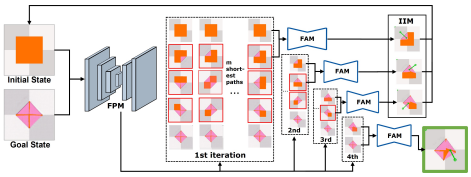


DeFNet: Deconstructed Strategy for Multi-step Fabric Folding Tasks

Ningquan Gu, Ruhan He*, Lianqing Yu

The Journal of The Textile Institute, vol. 116, no. 8, pp. 1779–1787, 2024.

• arXiv



Competition Achievements

- **China Robotics and Artificial Intelligence Competition** — *08/2022*
  Awarding Institution: Chinese Association for Artificial Intelligence
  - Humanoid Robot Sprint Project, First Prize
  - Humanoid Robot Penalty Kick Project, First Prize

Skills

- **Algorithms**: Proficient in deep learning, with strong expertise in reinforcement learning and imitation learning applied to robotic manipulation tasks;
- **Multimodal Data Processing**: Skilled in processing vision, audio, tactile sensing, and text for perception and control in robotic systems;
- **Engineering**: Hands-on experience in designing, building, and programming robotic systems, including dual-arm platforms (UR5, Trossen, Denso), with extensive use of Robot Operating System (ROS) for integration, coordination, and real-world deployment;
- **Coding**: Proficient in Python and PyTorch; experienced in model training, deployment, and optimization for robotic applications; experienced with Linux development, Git-based version control, and Docker containerization for scalable, reproducible workflows;