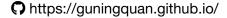


# Ningquan Gu

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### Education

| Tohoku University              | Robotics (Neuro-Robotics Lab) | Ph.D.  | 10/2024 - Current |
|--------------------------------|-------------------------------|--------|-------------------|
| Wuhan Textile University       | Software Engineering          | M.Eng. | 09/2021 - 07/2024 |
| Wuhan University of Technology | Industrial Design             | B.Eng. | 09/2007 - 07/2011 |

### ▲ Research Interests

Embodied AI, robotic manipulation, multimodal learning, deformable object manipulation, LLMs in robotics, and industrial applications of robotics.

## Working Experience

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Technology and Quality-related

07/2011 - 09/2021

#### Publications

- 1. N. Gu, K. Kosuge and M. Hayashibe, "TactileAloha: Learning Bimanual Manipulation With Tactile Sensing," in IEEE Robotics and Automation Letters, vol. 10, no. 8, pp. 8348-8355, Aug. 2025. (JCR Q1)
- 2. N. Gu, R. He and L. Yu, "Learning to Unfold Garment Effectively Into Oriented Direction," in IEEE Robotics and Automation Letters, vol. 9, no. 2, pp. 1051-1058, Feb. 2024. (JCR Q1)
- 3. **N. Gu**, Z. Zhang, R. He, and L. Yu, "ShakingBot: dynamic manipulation for bagging," **Robotica**, vol. 42, no. 3, pp. 775–791, 2024. (Cover Article, JCR Q3).

### Z Under Review

- 1. N. Gu, Y. Li, K. Kosuge and M. Hayashibe, "Hierarchical LLM-Guided Multi-Task Manipulation with Multi-modal Learning and Action-Mask Policy," under review at the International Conference on Learning Representations (ICLR 2026).
- 2. **N.** Gu, K. Kosuge and M. Hayashibe, "SonicAloha: Learning Auditory-Enhanced Bimanual Manipulation with Audio-Visual Transformer," under review at the **IEEE Transactions on Industrial Informatics**.

#### Patents

- 1. **N. Gu**, R. He, "A dual-arm humanoid intelligent folding robot," Chinese Invention Patent, Patent No. ZL 2023 1 0557628.0, authorized on Jan. 5, 2024.
- 2. **N. Gu**, R. He, "Ultraviolet-based high-precision keypoint detection method and application for textiles," Chinese Invention Patent, Patent No. ZL 2023 1 0617337.6, authorized on Jul. 22, 2025.

# T Competition Achievements

- 1. China Robotics and Artificial Intelligence Competition (organized by the Chinese Association for Artificial Intelligence), Humanoid Robot Sprint Project, First Prize, 2022/08.
- 2. China Robotics and Artificial Intelligence Competition (organized by the Chinese Association for Artificial Intelligence), Humanoid Robot Penalty Kick Project, First Prize, 2022/08.

#### Skills

- Algorithms & AI: Deep learning; reinforcement learning; imitation learning; LLMs.
- Multimodal & Engineering: Vision, audio, tactile, text modalities; robotic system design and building.
- Programming: Python, PyTorch, Linux, and Robot Operating System (ROS).