

Gangyong Gu

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Summary

Until recently, I had worked on development of an sensor system for acquiring sEMG and motion intention, and had experience of projects using microcontroller and analog/digital circuits. I am passionate about robotic system development and integration and biosignal processing.

Education

B.S. Mechanical Engineering, Pusan National University, 2012-2016.

- GPA 3.78/4.5
- Capstone project : Design of RFID based Path Following Automated Guided Vehicle
- Advisor : Jong Shik Kim

M.S. Mechanical Engineering, Pohang University of Science and Technology, 2016-2018.

- GPA 3.57/4.3
- Thesis : "Development of High-Density sEMG Acquisition System for use in Dynamic State"
- Advisor : Wan Kyun Chung

Working experience

Robotics Laboratory(POSTECH), 2016-2018

Task : Development of High-Density sEMG acquisition system

- Design of data acquisition system circuits.
- System integration for sEMG acquisition and processing.

Task : Development of pneumatic sleeve system for stable sEMG acquisition

- Design of control board for vacuum pump and solenoid valve.
- System integration of control board and data acquisition board.

Publications

Kim, M., Gu, G., Chung, W. K. (2017, June). Skin grasping sEMG interface based on microneedle array electrode. In Ubiquitous Robots and Ambient Intelligence (URAI), 2017 14th International Conference on (pp. 839-840). IEEE.

Kim, M., **Gu, G.**, Cha, K. J., Kim, D. S., Chung, W. K. (2017). Wireless sEMG System with a Microneedle-Based High-Density Electrode Array on a Flexible Substrate. *Sensors*, 18(1), 92.

Kim, M., **Gu, G.**, Chung, W. K.(2018). Pneumatic Microneedle-based High-Density sEMG Sleeve for Stable and Comfortable Skin Contact during Dynamic Motion. In *Intelligent Robots and Systems (IROS), 2018 IEEE/RSJ International Conference*. IEEE. (accepted)

Skills

Software : Pro/Engineer (3D CAD), C++, Python, MATLAB, Keras (Deep learning library), EAGLE (PCB design).

Hardware : Various microcontroller (Arduino, Intel EDISON board and so on.), NI DAQ system

Language : English (TOEIC 835, 2016)

Scholarship

Academic scholarship in Pusan National University (2014 Spring, 2016 Spring)