NAOYA MURAMATSU

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1-2 Kasuga, Tsukuba, Ibaraki Pref., Japan

EDUCATION

University of Tsukuba April 2018 – Present
Master of Information Science
Department of Library, Information and Media Studies, Graduate School of Library, Information and Media Studies

University of Tsukuba April 2016 – March 2018
Bachelor of Library and Information Science
College of Knowledge and Library Sciences

National Institute of Technology, Nagano College April 2011 – March 2016
Foundation Degree
Department of Electrical and Electronic Engineering

RESEARCH EXPERIENCE

University of Tsukuba April 2018 – Present
Master Research

· Developed the robot control system, able to walk even if a few legs are broken using hierarchy Q-learning.

University of Tsukuba April 2016 – March 2018
Undergraduate Research

· Analyzed reviews of EC site to find out points of variation.
· Developed Sonoliards optimizing the direction of a parametric speaker with a ray tracing algorithm.
· Developed DeepHolo that recognizes 3D objects using a deep neural network and computer-generated holography for convert 3D data to 2D data leaving depth information.
· Developed DeepWear, a method using deep convolutional generative adversarial networks (DCGANs) for clothes design.

National Institute of Technology, Nagano College April 2015 – March 2016
Undergraduate Research

· Developed the noise filter that greatly suppresses the influence of radio noise in indoor position information system using Link Quality Indication(LQI) value of radio waves.

TECHNICAL STRENGTHS

Programming	Python, C Language, C++, Ruby, LaTex, JavaScript, SQL
Software	Docker, Autodesk Fusion360, Processing, mbed
Hardware	Arduino, mbed, PhantomX AX Metal Hexapod

PUBLICATIONS

Naoya Muramatsu, Tetsuji Satoh, Takayasu Fushimi. 2017. **TODO:** *Product Attribute Extraction Method Based on Transition Pattern of Review Point of View*. In *Data Engineering and Information Management 2017* (DEIM '17).

Naoya Muramatsu, Ooi Chun Wei, Takashi Miyazaki. 2017. Development of High Performance Filter for Indoor Positioning System. In *ICISIP 2017 Oral*.

Naoya Muramatsu, Chun Wei Ooi, Yuta Itoh, and Yoichi Ochiai. 2017. DeepHolo: Recognizing 3D Objects using a Binary-weighted Computer-Generated Hologram. In *SIGGRAPH Asia 2017 Posters* (SA '17), November 27 - 30, 2017, Bangkok, Thailand. ACM, New York, NY, USA, 2 pages. DOI: https://doi.org/10.1145/3145690.3145725 (to appear)

Naoya Muramatsu, Kazuki Ohshima, Ryota Kawamura, Ooi Chun Wei, Yuta Sato, and Yoichi Ochiai. 2017. Sonoliards: Rendering Audible Sound Spots by Reflecting the Ultrasound Beams. In *Adjunct Publication of the 30th Annual ACM Symposium on User Interface Software and Technology* (UIST ' 17). ACM, New York, NY, USA, 57-59. DOI: https://doi.org/10.1145/3131785.3131807

Chun Wei Ooi, **Naoya Muramatsu**, and Yoichi Ochiai. 2018. Eholo glass: Electroholography glass. A lensless approach to holographic augmented reality near-eye display. In *SIGGRAPH Asia 2018 Technical Briefs* (SA ' 18), December 4 - 7, 2018, Tokyo, Japan. ACM, New York, NY, USA, 4 pages. DOI: https://doi.org/10.1145/3283254.3283288

Natsumi Kato, Hiroyuki Osone, Daitetsu Sato, **Naoya Muramatsu**, and Yoichi Ochiai. 2017. Crowd Sourcing Clothes Design Directed by Adversarial Neural Networks. In *NIPS 2017 Workshop* (NIPS ' 17).

Natsumi Kato*, Hiroyuki Osone*, Daitetsu Sato, **Naoya Muramatsu**, and Yoichi Ochiai. 2018. DeepWear: a Case Study of Collaborative Design between Human and Artificial Intelligence. In *Proceedings of the Twelfth International Conference on Tangible, Embedded, and Embodied Interaction* (TEI ' 18). ACM, New York, NY, USA, 529-536. DOI: https://doi.org/10.1145/3173225.3173302 (* Joint first authorship.)

Mose Sakashita, Yuta Sato, Ayaka Ebisu, Keisuke Kawahara, Satoshi Hashizume, **Naoya Muramatsu**, Yoichi Ochiai. 2017. Haptic Marionette: Wrist Control Technology Combined with Electrical Muscle Stimulation and Hanger Reflex. In *SIGGRAPH Asia 2017 Posters* (SA '17). ACM, New York, NY, USA, Article 33, 2 pages. DOI: https://doi.org/10.1145/3145690.3145743

WORK EXPERIENCE

Fixstars Corporation August 2014 – Septenber 2014
Software Engineer Intern

· Worked on software optimization for the microcomputer of cars.

Fixstars Corporation August 2016 – December 2016
Software Engineer Intern

· Worked on development of semantic segmentation system for self-driving cars.

Pixie Dust Technologies, Inc. August 2017 – Present
Software Engineer

· Worked on development of management systems and web applications.

Information-technology Promotion Agency, Japan. Exploratory Software Project (MITOU) June 2018 – March 2019
Creator

· Developed the robot control system, able to walk even if a few legs are broken using hierarchy Q-learning.

AWARDS AND HONORS

2018 University of Tsukuba, **President's Award for Students**
2017 DEIM 2017, **Student Presentation Award**.