

Yuya Moroto

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RESEARCH INTERESTS My researches lie in affective computing, especially, how to make computers understand the semantics perceived by humans. I am interested in the relationships between multimedia contents and biological signals, and then apply techniques from various fields such as multi-modal machine learning, probabilistic generative model, tensor analysis and so on.

EDUCATION **Hokkaido University**, Hokkaido, Japan Apr 2021 - Present
Ph.D. Student in Information Science and Technology
Adviser: Miki Haseyama

Hokkaido University, Hokkaido, Japan Apr 2019 - Mar 2021
M.S. in Information Science and Technology
Adviser: Miki Haseyama
GPA: 3.40/4.00

Hokkaido University, Hokkaido, Japan Apr 2015 - Mar 2019
B.E. in Electronics and Information Engineering
Adviser: Miki Haseyama
Major GPA: 3.92/4.30, Cumulative GPA: 3.64/4.30

PUBLICATIONS **Peer-reviewed journals**
[J1] Human-Centric Emotion Estimation Based on Correlation Maximization Considering Changes with Time in Visual Attention and Brain Activity.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE Access, 2020. (2019IF 3.745)
[J2] Few-shot Personalized Saliency Prediction Based on Adaptive Image Selection Considering Object and Visual Attention.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
Sensors, 2020. (2019IF 3.275)
[J3] Tensor-Based Emotional Category Classification via Visual Attention-Based Heterogeneous CNN Feature Fusion.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
Sensors, 2020. (2019IF 3.275)

Peer-reviewed international conferences (Regular papers)

[C1] Few-Shot Personalized Saliency Prediction Using Person Similarity Based on Collaborative Multi-Output Gaussian Process Regression.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE International Conf. Image Processing (ICIP), 2021. (Accepted)
[C2] Human Emotion Estimation Using Multi-Modal Variational AutoEncoder with Time Changes.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE Global Conf. Life Sciences and Technologies (LifeTech), 2021.
[C3] Estimation of User-Specific Visual Attention Considering Individual Tendency Toward Gazed Objects.

- Yuya Moroto**, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE Global Conf. Consumer Electronics (GCCE), 2020.
- [C4] Estimation of Person-Specific Visual Attention via Selection of Similar Persons.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE International Conf. Consumer Electronics - Taiwan (ICCE-TW), 2020.
- [C5] Estimation of User-Specific Visual Attention Based on Gaze Information of Similar Users.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE Global Conf. Consumer Electronics (GCCE), 2019.
- [C6] Estimation of Emotion Labels via Tensor-based Spatiotemporal Visual Attention Analysis.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE International Conf. Image Processing (ICIP), 2019.
- [C7] User-Specific Visual Attention Estimation Based on Visual Similarity and Spatial Information in Images.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE International Conf. Consumer Electronics - Taiwan (ICCE-TW), 2019.
- [C8] Estimation of Visual Attention via Canonical Correlation between Visual and Gaze-based Features.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE Global Conf. Life Sciences and Technologies (LifeTech), 2019.
- [C9] User-centric Visual Attention Estimation Based on Relationship Between Image and Eye Gaze Data.
Yuya Moroto, Keisuke Maeda, Takahiro Ogawa and Miki Haseyama.
IEEE Global Conf. Consumer Electronics (GCCE), 2018.

Domestic conference: 7 papers (See my web page for details)

AWARDS	Student Encouragement Award, Institute of Electronics, Information and Communication Engineers, Hokkaido	2021
	IEEE LifeTech2021 Excellent Poster (On-site) Award Winners: Bronze Prize	2021
	Best Young Paper Presentation Award, Japanese Conf. Institutes of Electrical and Information Engineers, in Hokkaido Section	2020
	The 2019 IEEE Sapporo Section Student Paper Contest Encouraging Prize	2020
	2nd Prize IEEE LifeTech2019 Excellent Paper Award	2019
	IEEE GCCE2018 Outstanding Paper Award	2018
FELLOWSHIP AND GRANTS	JSPS Research Fellowships for Young Scientists Fellowship for DC1 (Acceptance rate: 20% 54/267)	Apr 2021 - Mar 2024
	NITORI International Scholarship Foundation Scholarship for Future IT Human Resources (1,920,000JPY)	Apr 2020 - Mar 2022

TEACHING EXPERIENCES **Teaching Fellow at Hokkaido University in Japan**
 Provided significant assistance to promote student understanding in the following lectures.

Media Network Laboratory IA	2021
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Teaching Assistant at Hokkaido University in Japan
 Assisted to promote student understanding in the following lectures.

Can robots have emotions?	2019-2021
Media network laboratory IA	2019-2020
Media network laboratory IIB	2019-2020
Exercise in media network I	2019-2021
Exercise in media network II	2019-2021
Collaborative liberal arts education classes at national universities in Hokkaido, Japan	2019-2021

RESEARCH EXPERIENCES **Haseyama Ogawa Lab., Hokkaido University, Japan** Nov 2017 - Present
 Adviser: Miki Haseyama
 Worked on machine learning techniques using multi-modal biological signals [J1-3, C1-9].

DEVELOPMENTS KANADE-III (Tourist spot recommendation system)
 URL: lmd-demo.org

TECHNICAL SKILLS **Languages:**
 Japanese(Native), English(TOEIC:680)

Programming
 Python, Matlab, C/C++, Java, JavaScript, HTML/CSS, Ruby, GAS, VBA

Libraries
 Tensorflow, PyTorch, Theano, Keras, Flask, MySQL, OpenCV

Measuring Instruments
 functional Near-Infrared Spectroscopy (fNIRS), functional Magnetic Resonance Image (fMRI), Eye Tracker (Glass and installation type), Motion capture

Others
 Git, Git Hub, Docker, Amazon Web Service, Adobe CC (Illustrator, Premiere Pro, Audition), Google Colaboratory