Joanna Hong

Ph.D. Candidate
Korea Advanced Institute of Science and Technology

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RESEARCH INTERESTS

Machine Learning

Deep Learning
Multi-modal Learning
Human Interactive Learning

Computer Vision

Facial Expression Analysis (Recognition and Synthesis)
Multi-modal Representation Learning (Visual, Audio, and Textual)

EDUCATION

Korea Advanced Institute of Science and Technology, *Daejeon, South Korea* Mar 2019 - *present*
Ph.D. in Electrical Engineering
・Advisor: Prof. Yong Man Ro

Korea Advanced Institute of Science and Technology, *Daejeon, South Korea* Sept 2014 - Feb 2019
B.S. in Electrical Engineering

JOURNAL PUBLICATIONS

Speech Reconstruction with Reminiscent Sound via Visual Voice Memory [link]
Joanna Hong, Minsu Kim, Se Jin Park, Yong Man Ro
IEEE Transactions on Audio, Speech, and Language Processing **(TASLP), 2021**

Cromm-vsr: Cross-modal memory augmented visual speech recognition [link]
Minsu Kim, **Joanna Hong**, Se Jin Park, Yong Man Ro
IEEE Transactions on Multimedia **(TMM), 2021**

CONFERENCE PUBLICATIONS

VisageSynTalk: Unseen Speaker Video-to-Speech Synthesis via Speech-Visage Feature Selection [link]
Joanna Hong, Minsu Kim, and Yong Man Ro
European Conference on Computer Vision **(ECCV), 2022 [*Acceptance rate 28%*]**

Visual Context-driven Audio Feature Enhancement for Robust End-to-End Audio-Visual Speech Recognition [link]
Joanna Hong*, Minsu Kim*****, Daehun Yoo, and Yong Man Ro **(* Co-First Authors)**
Interspeech, 2022 (Oral)

SyncTalkFace: Talking Face Generation with Precise Lip-syncing via Audio-Lip Memory [link]
Se Jin Park, Minsu Kim, **Joanna Hong**, Jeongsoo Choi, and Yong Man Ro
AAAI Conference on Artificial Intelligence **(AAAI), 2022 (Oral) [*Acceptance rate 15%*]**

Lip to Speech Synthesis with Visual Context Attentional GAN [link]
Minsu Kim, **Joanna Hong**, Yong Man Ro
Conference on Neural Information Processing Systems **(NeuIPS), 2021 [*Acceptance rate 26%*]**

Multi-Modality Associative Bridging Through Memory: Speech Sound Recollected From Face Video [link]
Minsu Kim*****, **Joanna Hong***, and Yong Man Ro **(* Co-First Authors)**
IEEE/CVF International Conference on Computer Vision **(ICCV), 2021 [*Acceptance rate 26%*]**

Unsupervised Disentangling of Viewpoint and Residues Variations by Substituting Representations for Robust Face Recognition [link]
Minsu Kim, **Joanna Hong**, Junho Kim, Hong Joo Lee, and Yong Man Ro
International Conference on Pattern Recognition **(ICPR), 2021**

Comprehensive Facial Expression Synthesis Using Human-Interpretable Language [link]
Joanna Hong, Jung Uk Kim, Sangmin Lee, Yong Man Ro
IEEE International Conference on Image Processing **(ICIP), 2020**

Learning Style Correlation For Elaborate Few-Shot Classification [link]
Junho Kim, Minsu Kim, Jung Uk Kim, Hong Joo Lee, Sangmin Lee, **Joanna Hong**, Yong Man Ro
IEEE International Conference on Image Processing **(ICIP), 2020**

Face Tells Detailed Expression: Generating Comprehensive Facial Expression Sentence Through Facial Action Units [link]
Joanna Hong, Hong Joo Lee, Yelin Kim, and Yong Man Ro
International Conference on Multimedia Modeling **(MMM), 2020**

AWARDS & HONORS

Outstanding Teaching Assistant Awards Sept 2021
EE474 Introduction to Multimedia, KAIST

National Government Fellowship Sept 2014 - *Present*
Government of South Korea

PROFESSIONAL SERVICES

Reviewer
International Conference on Machine Learning (ICML) 2021, 2022
Neural Information Processing Systems (NeuIPS) 2020, 2022

Organizing Committee
AI World Cup 2018, KAIST June 2018 - Aug 2018

RESEARCH EXPERIENCES

Korea Advanced Institute of Science and Technology, *Daejeon, South Korea* Sept 2020 - *Present*
Image and Video Systems Lab.
Graduate student research assistance

Koh Young Technology, Inc., *Seoul, South Korea* Sept 2017 - Feb 2018
AI Research Intern
Machine leaning based research adjusting control parameter of screen printer

TEACHING EXPERIENCES

EE837 Multimedia Processing and Learning, *KAIST* — Fall 2022
Teaching Assistant

EE474 Introduction to Multimedia, *KAIST* — Spring 2021, Spring 2022
Head Teaching Assistant & Programming Lecturer

EE534 Pattern Recognition, *KAIST* — Fall 2021
Teaching Assistant

EE474 Introduction to Multimedia, *KAIST* — Spring 2020
Teaching Assistant

PATENTS

Apparatus and Method of Generating Control Parameter of Screen Printer
United States Patent 16229421**, European Patent** 18215551.5**, Chinese Patent** 201811582073.0, **Korean Patent** 1020180154834
Inventors: Duk Young Lee, Chan Woo Park, Tae Min Choi, **Joanna Hong**

COMPUTER SKILLS

Programming Languages
Python and MATLAB

Deep Learning Libraries
PyTorch and TensorFlow

Last Updated on September 2022