Joseph Suh

Electrical Engineering and Computer Sciences, University of California at Berkeley, Berkeley, CA 94720
josephsuh@berkeley.edu

Last updated: Oct 20, 2024

RESEARCH INTERESTS

Current research interests: computational social science, large language models, interpretability in ML

Previous research interests: condensed matter theory, disordered wave systems

EDUCATION

University of California at Berkeley Aug. 2023 – *Present*

Ph. D. in Electrical Engineering and Computer Sciences

Cumulative GPA: 4.0/4.0

Seoul National University Mar. 2017 – Feb. 2023

B.S. in Electrical and Computer Engineering (2-year absence due to Korean military service)

GPA: Overall 4.25/4.30, Major 4.26/4.30

PUBLICATIONS AND PREPRINTS

"Rediscovering the Latent Dimensions of Personality with Large Language Models as Trait Descriptors," **Joseph Suh**[*], Suhong Moon[*], Minwoo Kang[*], and David M. Chan, *NeurIPS 2024 workshop on Behavioral Machine Learning*

"Virtual personas for language models via an anthology of backstories," Suhong Moon[*], Marwa Abdulhai[*], Minwoo Kang[*], **Joseph Suh**[*], Widyadewi Soedarmadji, Eran Kohen Behar, and David M. Chan, *appearing in EMNLP 2024 main*

"Long-range-interacting topological photonic lattices breaking channel-bandwidth limit," Gyunghun Kim, **Joseph Suh**, Dayeong Lee, Namkyoo Park[†], and Sunkyu Yu[*], Nature Light: Science & Applications 13:189 (2024).

"Photonic topological spin pump in synthetic frequency dimensions," **Joseph Suh**, Gyunghun Kim, Hyungchul Park, Shanhui Fan, Namkyoo Park[†], and Sunkyu Yu[*], Physical Review Letters 132, 033803 (2024).

RESEARCH EXPERIENCE

Graduate student researcher, UC Berkeley Aug. 2023 – *Present*

- **Large language models for computational social science**
  - Supervised by: Prof. John F. Canny, and Prof. Serina Chang
  - Binding language models to consistent and robust virtual personas for fine-grained pluralistic value alignment
  - Fine-tuning large language models with large-scale social data as a means of probing public opinion trends and social behaviors

HONORS and AWARDS

Overseas Ph.D. Scholarship, *Korea Foundation for Advanced Studies* Aug. 2023 – *Present*

- Full tuition, fees, and stipend of USD 20,000 (around 40 students selected nationally)

Presidential Science Scholarship, *Korea Student Aid Foundation* Mar. 2017 – Aug. 2022

- Full tuition and academic incentives of USD 4,000 annually, awarded by the president of South Korea

34th Korea Olympiad in Informatics, 10th place, *Korean Institute of Information Scientists and Engineers* 2016

33rd Korea Olympiad in Informatics, 10th place, *Korean Institute of Information Scientists and Engineers* 2015

1st Samsung Junior Software Cup, Gold Prize, *Samsung* 2015

SELECTED COURSEWORKS

Natural Language Processing, Computer Vision and Computational Photography (Fall 2024), Condensed Matter Physics, Quantum Field Theory (Spring 2022), Thermal and Statistical Physics (Fall 2021)

TEACHING EXPERIENCE

Graduate teaching assistant, EECS 16B, EECS, UC Berkeley Fall 2024
Undergraduate tutor, Basic Physics, Dept. of Physics, SNU Fall/Spring 2022, Fall/Spring 2021, Fall 2020, Fall 2018
Undergraduate tutor, Introduction to Data Structures, Dept. of ECE, SNU Fall 2020
Undergraduate teaching assistant, Programming Methodology, Dept. of ECE, SNU Fall 2018