HAO WU

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Research Interests: Deep Generative Models, Amortized Inference, Probabilistic Programming

EDUCATION

Ph.D., Computer Science *2017 - present*
Northeastern University *Boston, MA*
Supervisor: Jan-Willem van de Meent

M.Sc., Computer Science 2015 - 2016
University of Virginia *Charlottesville, VA*

M.Sc., Applied Mathematics *2014 - 2015*
University of Washington *Seattle, WA*

B.Sc., Mathematics *2010 - 2014*
Sichuan University *Chengdu, China*

PROFESSIONAL EXPERIENCE

Research Intern *Summer 2021*
IBM Research *Cambridge, MA*
Advisor: Soumya Ghosh

Research Intern *Summer 2020*
Oracle Labs *Burlington, MA*
Advisor: Jean-Baptiste Tristan

Associate Software Engineer *2017*
MicroStrategy *Tysons, VA*

PUBLICATIONS

Heiko Zimmermann, **Hao Wu**, Babak Esmaeili, Sam Stites, Jan-Willem van de Meent. Nested Variational Inference. *Conference on Neural Information Processing Systems (NeurIPS), 2021*

Sam Stites*, Heiko Zimmermann*, **Hao Wu**, Eli Sennesh, Jan-Willem van de Meent. Learning Proposals for Probabilistic Programs with Inference Combinators. *Uncertainty in Artificial Intelligence (AISTATS), 2021*.

Hao Wu*, Babak Esmaeili*, Michael Wick, Jean-Baptiste Tristan, Jan-Willem van de Meent. Conjugate Energy-Based Models. *International Conference on Machine Learning (ICML), 2021*.

Hao Wu, Heiko Zimmermann, Eli Sennesh, Tuan-Anh Le, Jan-Willem van de Meent. Amortized Population Gibbs Samplers with Neural Sufficient Statistics. *International Conference on Machine Learning (ICML), 2020*.

Babak Esmaeili, **Hao Wu**, Sarthak Jain, Alican Bozkurt, N. Siddharth, Brooks Paige, Dana H. Brooks, Jennifer Dy, Jan-Willem van de Meent. Structured Disentangled Representations. *International Conference on Artificial Intelligence and Statistics (AISTATS), 2019*.

Eli Sennesh, Adam Ścibior, **Hao Wu**, Jan-Willem van de Meent. Composing Modeling and Inference Operations with Probabilistic Program Combinators. *NeurIPS Bayesian Nonparametrics Workshop*, 2018.

INVITED TALKS

Conjugate Energy-Based Models
Contributed Talk, ICLR Energy-Based Models Workshop *2021*

Conjugate Energy-Based Models
Contributed Talk, Symposium on Advances in Approximate Bayesian Inference *2021*

PROFESSIONAL SERVICE

Reviewer
International Conference on Machine Learning (ICML) *2021*
International Conference on Probabilistic Programming (ProbProg) *2021*
International Conference on Artificial Intelligence and Statistics (AISTATS) *2022*

TEACHING EXPERIENCE

Teaching Assistant
Northeastern University *Boston, MA*
Unsupervised Machine Learning and Data Mining (Master Level Course) *2018, 2021*

SKILLS

Languages: Mandarin Chinese (Native Proficiency), English (Professional Working Proficiency)
Programming: Python, Java