



THE CHINESE UNIVERSITY OF HONG KONG
Department of Electronic Engineering

SEMINAR

AI for Musical Creativity

By

Prof. Anna Huang

Date: 31 May, 2024 (Friday)

Time: 11:00 a.m.

Venue: Room 418 Ho Sin Hang Engineering Building, CUHK

Zoom link: <https://meeting.tencent.com/dm/YStJifw6Mag7>

Abstract:

Advances in generative modeling have opened up exciting new possibilities for music making. How can we leverage these models to support human creative processes? First, I'll illustrate how we can design generative models to better support music composition and performance synthesis. Coconet, the ML model behind the Bach Doodle, supports a nonlinear compositional process through an iterative block-Gibbs like generative procedure, while MIDI-DDSP supports intuitive user control in performance synthesis through hierarchical modeling. Second, I'll propose a common framework, Expressive Communication, for evaluating how developments in generative models and steering interfaces are both important for empowering human-ai co-creation, where the goal is to create music that communicates an imagery or mood. Third, I'll introduce the AI Song Contest and discuss some of the technical, creative, and sociocultural challenges musicians face when adapting ML-powered tools into their creative workflows. Looking ahead, I'm excited to co-design with musicians to discover new modes of human-ai collaboration. I'm interested in designing visualizations and interactions that can help musicians understand and steer system behavior, and algorithms that can learn from their feedback in more organic ways. I aim to build systems that musicians can shape, negotiate, and jam with in their creative practice.

Biography

Anna Huang will join Massachusetts Institute of Technology this Fall as tenure-track faculty, with a shared interdisciplinary appointment in Music and Theater Arts and the Department of Electrical Engineering and Computer Science. She will help develop graduate programming focused on music technology. Previously, she spent eight years with Magenta at Google Brain and DeepMind, spearheading efforts in generative modeling, reinforcement learning and human-computer interaction to support human-AI partnerships in music-making. She is the creator of Music Transformer and Coconet (which powered the Bach Doodle). She was a judge and organizer for the AI Song Contest. Anna holds a Canada CIFAR AI Chair at Mila, a BM in music composition and BS in computer science from the University of Southern California, an MS from the MIT Media Lab, and a PhD from Harvard University.

ALL ARE WELCOME

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