



DEPARTMENT OF
COMPUTER SCIENCE

TEXAS TECH
Whitacre College of Engineering

Music Co-Creativity with Generative AI

Shlomo Dubanov, Ph.D.

University of California, San Diego

Tuesday, March 11, 2025

3:30 p.m.

Zoom: <https://texastech.zoom.us/my/stas.tiomkin>

Meeting ID: 554 589 4586

Passcode: 12345

Abstract: Co-creativity between human and AI requires communication of artistic intent, grounded in common understanding of the field of interaction. In the talk I will survey our lab's recent work on learning audio and midi representation and cross-modal pre-training with downstream applications for generative, editing, and analytical use. State of the art generative AI in midi and audio use language models and latent diffusion as a foundation model. These models are difficult to control and are often lacking originality and human-level sensibility. In the talk I will introduce guidance techniques and will present our work on contrastive language and audio pretraining CLAP, text to audio (AudioLDM and MusicLDM), and their use for improvised interaction. Then I'll discuss our ongoing research on information dynamics as a theoretical framework for modeling interaction between human and AI agents.

Bio: Shlomo Dubnov is a Professor in Music and CSE departments in the University of California, San Diego. He is a founding faculty of the Halıcıoğlu Data Science Institute and a Director of the Center for Research in Entertainment and Learning (CREL) at UC San Diego's Qualcomm Institute.

https://en.m.wikipedia.org/wiki/Shlomo_Dubnov

