UNIVERSITY OF CALIFORNIA, SANTA BARBARA

CHON: From physical simulation to musical gesture

by

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in

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The Masters Project of Rodney DuPlessis is approved.

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ABSTRACT

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Physical metaphor provides a visceral and universal logical framework for composing musical gestures. Physical simulations can aid the composer to create musical gestures based in complex physical metaphors. CHON (Coupled Harmonic Oscillator Network) is a cross-platform application for simulating mass-spring networks and sonifying the motion of individual particles. CHON is an interactive instrument that can provide complex, yet tangible and physically based, control data for synthesis, sound processing, and musical score generation. This system builds on the idea of the traditional LFO by coupling the movement of multiple control signals using physical principles.