

EMPAC

108 TROUBLES

ROB HAMILTON

AUG 22-SEP 02
10:00 AM-5:00 PM

108 Troubles

for piano, computer, and speaker-array

by Rob Hamilton

108 is an auspicious number in many schools of religious thought. It's the number of prayer beads on a Tibetan rosary, types of Sanskrit meditation, names of Hindu deities, number of times a bell is rung at New Year's in Japan. The list continues. But a situation not typically associated with 108 is trouble. While visiting the Tian Tan Buddha on Lantau Island in Hong Kong, composer Rob Hamilton's guidebook contained the following: "The large bell within the Buddha is controlled by computer and rings 108 times during the day to symbolize escape from what Buddhism terms the '108 troubles of mankind.'" There was something about the phrase "108 Troubles" that haunted Hamilton's mind as he was developing his work for Disklavier piano, computer, and speaker array.

In this context, one wonders what the 108 troubles are. Are they the complexities of writing for EMPAC's newly completed "wave field synthesis" speaker array? The 496 independently controlled speakers dominate the room (visually and sonically), poised to overwhelm and engulf. But Hamilton tackles these with restraint—writing a program in the software ChucK that triggers small elements in succession—never overwhelming the audience, always evolving the sound as it floats through the room, holding a tenuous relationship with the crushing silence.

Perhaps the troubles are in the Disklavier—a digitally controlled player piano—which is overloaded with data as to create a stuttering rumble, seemingly unable to produce a note. But suddenly an identifiable tone emerges from the speakers in the room, and we begin to realize that all of the sounds we hear have been generated by this instrument and are being processed and distorted around us in real-time.

Maybe the troubles reside within us, the listener. Unable to shelter ourselves from the cacophony of the outside world, we're too distracted by texts and news to really feel the world moving around us. To take a moment, to feel time pass, to set aside our own 108 troubles and contemplate the mystical, the divine, the transcendental—or to just sit and listen.

108 Troubles will be on view at EMPAC in Studio 1 from August 22 until September 2. The installation will culminate with a free performance at 7:30 PM on September 2, featuring pianist Chryssie Nanou.

Dr. Rob Hamilton, a composer, performer, researcher and software designer, explores the cognitive implications of the spaces between interactive game environments, network topographies, and procedurally-generated sound and music. Dr. Hamilton joined the Department of Arts at Rensselaer as an assistant professor of Music and Media in 2015.

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Completed in 2016, EMPAC's Wave Field Synthesis system is one of the largest in the world. The 496 independently controlled speakers work together to create artificial wave fronts (sound waves) that can physically recreate acoustic environments—including 3D positioning and room reverberation. EMPAC's system is unique in several regards including its modular nature, which allows for flexible orientations, and the size and quantity of the drivers.

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