

BY DAVID LUDWIG AND THE 2017-18 COMPOSITION STUDIO

Electronic Odyssey



Pioneering composer Tod Machover guides
Curtis students through new territory.

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Composers have been using electronics in their work for a century, and over time the incorporation of technology has become a part of the everyday vocabulary of new music. So I was excited that in the 2017–18 school year the Curtis composition department had the great privilege of welcoming, as visiting faculty, a pioneer in composing with technology: Tod Machover, professor of music and media at the MIT Media Lab.

Learning that Tod was writing a new work for the Kronos Quartet prompted an idea for a group project involving all six of our composition students: a Curtis 20/21 Ensemble program that would tie together the example of Tod's extraordinary work with technology and composition with the performance of Curtis's resident Zorá String Quartet. Composing using electronics would be a new experience for many of our students, adding an important additional perspective to their work over the course of the year—and there could be no better mentor for them than Tod.

In preparation for these premieres, we also had the opportunity to collaborate on logistical and technical issues with Drexel University professor Youngmoo Kim and his students. Their help was truly invaluable. Meanwhile members of the JACK Quartet coached the Zorás in realizing the new compositions and learning how to work with electronic elements in performance.

The culminating concert in Gould Rehearsal Hall featured six new pieces, the likes of which have never been heard in a full program at Curtis. Presenting their works was a great learning experience for the students, who share their reflections here. It was also an education for the school on many levels. The technical challenges stretched us and taught us to be resourceful (as when a misbehaving loop pedal was fixed in performance using the highly advanced technique of unplugging and plugging back in!).

I was so impressed by the work of our composers, and all of us involved in this project owe a debt of gratitude to Tod for his generous mentorship and willingness to share his expertise and experience.

—David Ludwig, chair of composition studies

Above: Tod Machover answered questions from the audience before the May 4 performance.

PHOTO: PETE CHECCHIA



Clockwise from above left:

Tod Machover, student Dai Wei, and David Ludwig try out the masks used in the performance of Wei's *Lo-re-lei*.

PHOTO: SIJIA HUANG

Aiyana Tedi Braun conducted the performance of her piece, which included a vocal line sung by fellow composer Chelsea Komschlies.

Wei performs her *Lo-re-lei* with the masked Zorá String Quartet.

Mr. Machover and Viet Cuong

Mr. Machover and Aiyana discuss the operation of live electronics for her *Meditation* with Curtis audio engineer Drew Schlegel.

Mr. Schlegel ran the live electronics from a control station at the rear of the hall.

At the May 4 concert, Dr. Ludwig interviewed Mr. Machover before a standing-room-only audience.

PHOTOS: PETE CHECCHIA





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— NICK DiBERARDINO

PUSHING THE BOUNDARIES

The world of electronics was particularly daunting to me before beginning this venture, as I was unfamiliar with the possibilities of the sound world, the capabilities of the relevant software, and the tools needed to bring these unique soundscapes to life. To be introduced to this new world by someone as knowledgeable and accomplished as Tod Machover was an incredible privilege, to say the least.

In addition to several mentoring sessions with Tod throughout the year, all six Curtis composers were fortunate to have the opportunity to travel to Boston to visit the MIT Media Lab. It was inspiring to see so many young people exploring the various applications of sound. I was especially impressed by one project that transforms the physical space a listener occupies in order to mimic and enhance one's auditory experience, and another that improves the cognitive functions of patients with various terminal illnesses through the use of sound frequencies.

Being exposed to individuals who are pushing the boundaries within their prospective fields, especially fields that directly relate to what we do as composers, is tremendously rewarding and inspiring. I am very grateful to Tod and those at MIT for sharing their work and enthusiasm with us.

—*Aiyana Tedi Braun*

THE CHALLENGE OF NOVELTY

The string quartet is a tricky ensemble to write for, in part because it is so heavily represented in the canon. It's difficult to say something new. I understood generally how technology might help a composer create something unique for this time-honored medium, and was especially interested in the expanded timbral possibilities. That said, electronics are not in my wheelhouse as a composer, so I knew this was going to be a challenge.

As I wrote my piece, *Dripstone*, I had in my mind images of stalagmites and stalactites (or “dripstones”) formed in caves and thought it would be an eerie but interesting place to encounter a string quartet. I saw myself walking towards them, and the character of the music changed as I got nearer. The only problem was that I had no sense of how I might achieve this sonically within the confines of Gould Rehearsal Hall.

Thankfully, Tod's guidance helped me not only in applying electronic elements to my piece, but also in improving my native writing for the quartet. With the help of our fabulous collaborators from Drexel, the devoted preparation of the wonderful Zorá Quartet, and the tireless efforts of audio engineer Drew Schlegel (especially during the concert!), the piece came together beautifully.

—*Viet Cuong*

LEARNING CURVE

I thoroughly enjoyed working with Tod throughout the year. He's such a kind and generous teacher, and very supportive of all of us, even outside of the context of our lessons with him. Writing for electronics had always been too daunting for me to try because of the learning curve. In most schools, if you want to write with electronics—great. But buying and learning the software, creating and running all the electronics and hardware, and finally having the piece rehearsed and performed on a recital is 100 percent up to you, without any outside help.

So the opportunity to have this curated concert of all electro-acoustic pieces and to have help in creating and running the electronics was an incredibly relieving way to go about my first piece in this medium. I'd like to give heartfelt thanks to Jeff Gregorio and Andy Wiggins, graduate students of Youngmoo Kim at Drexel University, who helped us learn the software and create our electronics, to Drew Schlegel and Loren Stata of the Curtis audio-visual team, who ran the electronics and even helped us refine them prior to the performance, and of course to Tod and David Ludwig for their guidance, putting together the collaborations, and overseeing this whole project. It's the sort of opportunity I would never have found outside of Curtis.

—*Chelsea Komschlies*

LABELS EFFACED

I have always wanted to write a piece in response to the issue of labeling. Gender, race, ethnicity, social hierarchy, sexuality—while these labels and identities can help us to better understand and respect one another, they can also create barriers between us. The legend of Lorelei, an aquatic creature with the head and upper body of a human and the tail of a fish, is meant to be a metaphor that delivers this message. All of the five performers wear black masks as a symbol of effacing the effect of labeling.

I was given the option to use either Linear Predictive Coding or Vocoder to execute my idea, but I had no prior experience with either of these tools. Dr. Ludwig and Dr. Machover encouraged me strongly to explore both options. With the use of Vocoder, the Zorá String Quartet and I (as the vocalist) are able to alter the acoustic material in real time in order to give *Lo-re-lei* as dynamic a personality as possible.

—Dai Wei

WHAT IF?

It was a pleasure working with Tod over the past year—and the Curtis composers' trip to Boston to see the Media Lab at MIT was illuminating. I'm thankful to Curtis for having provided space—resonant space for thought and performance—as well as time and the opportunity for experimentation, with respect to this project. My composition turned out to be a synthesis of components—principally, components that belong to the categories of hypotheses, questions, and “what would happen if?”

One axis of the work I composed, *theology after breakfast sticks to the eye or or did the saint survive?*, is the manipulation of recordings of interviews with four logical positivist philosophers (Willard Van Orman Quine, Bertrand Russell, A.J. Ayer, and John Searle). The sound of their voices is treated as an element separate from the listener's perception of their words; so the boundary between verbal recognition and pure sound—without verbal recognition, though abstracted from the verbal—is acknowledged as a variable in this piece.

Technically speaking, learning about acoustical balance with respect to the combination of electronics and classical string instruments was useful for me. This project helped me to consider, for example, what parameters I ought to manipulate so that a specific electronic sound could be heard over a specific live string sound, and vice versa.

—Andrew Moses

DISTANT IMPRESSIONS

I did not imagine I'd be hearing the May 4 concert—the culmination of so many months of effort by so many people—from a hotel room halfway across the world. Yet that's where I found myself, listening through earbuds to the live stream from a bed in Hong Kong, where I had traveled to participate in the Intimacy of Creativity festival. At the time, the “early returns” from our ambitious project to write new quartets with electronics were not all encouraging. A long list of logistical challenges faced us, and the first rehearsal for our concert—the only one I was able to attend—was cut short due to technical difficulties. The sheer volume of the growing pains we faced was enough to make me worry the challenges might get the best of us. As I tuned in from Hong Kong, I worried I'd hear the signs of a project plagued with problems.

Instead, I was amazed. The quality of the music on the program, the sensitivity of the Zorás' playing, and the inventiveness of my incredible colleagues all shone through, even through earbuds halfway around the world. As the evening wrapped up, I couldn't help but smile. The ambitiousness of this concert, with all its innovation, had created many challenges. But in the end, this music was worth it. ♦

—Nick DiBerardino

David Ludwig is chair of composition studies and the Gie and Lisa Liem Artistic Advisor to the President.



Opposite: Audio engineer Drew Schlegel ran the live electronics from a control station at the rear of the hall.

Above: Applause at the program's close

PHOTO: PETE CHECCHIA

MORE ONLINE

Hear and see the six premieres online.
Curtis.edu/Overtones