Conducting in Virtual Reality
The School of Music and UBC Emerging Media Lab launch a groundbreaking new project
THE SCHOOL OF MUSIC AND UBC EMERGING MEDIA LAB TEAM UP ON A GROUNDBREAKING NEW VR PROJECT: INTERACTIVE ORCHESTRA

By Tze Liew

You strap a bulky headset over your eyes and grip a controller in each hand. The world disappears. You find yourself onstage at the Chan Centre, raised on the pearly beige wood of the conductor’s podium, facing a music stand. Overhead in the ceiling is a sparkling wheel of lights, and around you, a sweeping 360° view of the concert hall. You gaze across the rows of wine-red seats stretching into the distance, imagining all three floors filled with audience members.

On the music stand, a baton lies waiting. You pick it up with disembodied white hands that mirror the flex of your fingers on the controllers. The conducting pattern for a 4/4 beat appears in mid-air, drawing itself in yellow ink like a looping, leaping tadpole.

Enticed, you wave your baton to trace the pattern, leaving behind a dotted green light trail—you feel like a wizard casting a spell. You flick and swish a few more times until you get the pattern right, and O Canada starts playing in your ears. Before you know it, you’re furiously whipping away, trying to keep in time with the music.

Welcome to the Interactive Orchestra project spearheaded by Dr. Jonathan Girard, Director of Orchestras at the School of Music. It’s a new VR project that simulates the experience of conducting an orchestra.

“No one in the world is doing this with this level of ambition, as far as we know,” says Girard, who started the project in partnership with the UBC Emerging Media Lab (EML) last fall. “I think it has a lot of amazing potential.”

Normally, learning how to conduct can be quite an abstract process. “You have to stand in front of many orchestras to get a sense of how they actually respond,” Girard says. “Young conductors don’t get much podium time. Like all musicians, they need to practice with their instrument—the orchestra. Working in a VR environment enables conducting students to see exactly what their gestures look like in a 3D space. Before this, the best you could do was to videotape yourself from multiple angles and watch.”

Over a year ago, Girard first had the idea to use Google Tilt Brush—a VR program designed for 3D painting—to develop a teaching tool for conducting. He wanted to be able to show his students what a conducting gesture looked like in three-dimensional space.

“The element of 3D curvature in conducting isn’t something that’s often addressed in textbooks,” he explains. “2D drawings on a page can only get you so close to what it’s really like.”

To demonstrate, he draws a 4/4 beat gesture in the Tilt Brush program, leaving behind a 3D impression in blazing neon orange paint. When you put on the VR headset you can take a closer look at what he means.

In a dark holographic space, Girard’s 4/4 pattern hangs in the air, an elegant glowing swirl that looks like it was drawn with a lightsaber. With the headset on, you can explore the pattern from every angle—there’s an extra dimension of curvature in his gesture that you wouldn’t be able to observe in real life.

“It isn’t mind-boggling?” Girard says with a grin. “Now try and trace that exactly, in a different colour. Good luck.”

Good luck indeed. Tracing Girard’s conducting pattern is no easy task, but as a teaching exercise, it’s a fantastic opportunity for students to grasp the nuances of curve in his movement, and build the muscle memory needed to replicate it.

Read the whole story on the High Notes blog.
The School of Music in the era of decolonization

New director T. Patrick Carrabré on embracing the Western tradition and pushing beyond it

When Dr. T. Patrick Carrabré arrived at the UBC School of Music earlier this year, he immediately felt the energy of the place.

“We’ve got brilliant large ensembles and student chamber groups, the opera company is fantastic, our academic programs are very, very good. It’s an incredibly exciting place to be,” the School of Music’s new director says.

But Carrabré was also struck by another fact: UBC sits on the unceded territory of the Musqueam First Nation, in a city that lies at the intersection of East and West—and yet, in terms of the courses and music programming on offer, the School sits squarely within the western conservatory tradition. Carrabré’s ambitions for the School go beyond this model. A multi-disciplinary composer and scholar, he envisions a School of Music that embraces the best the classical model has to offer and pushes beyond it, to include a wide array of musical styles and traditions, from Beethoven to Beijing Opera, jazz to Indigenous pop.

“We need to make the UBC School of Music a place where musicians from many different backgrounds and practices can flourish.”

In October, High Notes sat down with Prof. Carrabré for a wide-ranging conversation, the highlights of which follow, below.

Over the course of your career you’ve been many different things—composer, academic, administrator, radio host. How does your work as an artist influence your thinking as the newly minted director of the School of Music?

As an artist I have thought a lot about our relationship to where we live. I’m finishing work on a new album called 100,000 Lakes that I recorded in Manitoba and here at the School of Music. The title piece was a commission for Canada 150 [Canada’s 150th anniversary celebration, in 2017]. It’s a chamber piece for strings and piano that takes a very long view of the history of Manitoba and the Prairies, going all the way back to the glacial period. For thousands of years, Manitoba was covered by a glacier, and as it melted, places like Winnipeg were under a couple hundred feet of water. So the beautiful landscape that we know today was caused by the movement of the glaciers and these great waves of water that rolled over the plains.

I wanted to situate Canada 150 in a much bigger context geologically and historically. There are people who have lived there for 10,000 years, not just 150 years. I thought the anniversary was a good opportunity to put some of those ideas into a musical context—to give people some space to think about how they relate to the land and to other people.

When I look out my office window at the beautiful natural environment that UBC sits on, I can’t help thinking about the generations that came before. This is the unceded territory of the Musqueam people. We are fortunate to be situated in an environment where the UBC community and the Musqueam are very open to sharing with each other a dream for the future. I think it’s really important for the School to be part of that.

Read the whole interview on the High Notes blog.

Alumnus tunes out doubters on his way to conducting the Vancouver Symphony Orchestra

Jaelem Bhate is a rare rising star who wasn’t bred for classical music

By Joel Bentley

Jaelem Bhate is ascending.

In March he released his debut album, On the Edge with the Jaelem Bhate Jazz Orchestra; in May he graduated from the UBC School of Music with a Master of Music; that same month the Vancouver Symphony Orchestra performed one of his original compositions; in August he was named to CBC Music’s “30 Hot Classical Musicians Under 30 List”; and in November he’ll conduct the VSO’s Wall to Wall concert. But Jaelem is a rare rising star who wasn’t bred for classical music. He’s the first musician from his family. In high school, he was a drummer in a rock band and a jazz band. Music was considered a hobby, so when he began his undergrad at UBC, he followed his sister’s footsteps into science.

His move to classical music began in earnest by happenstance. A year into his studies, he was asked to chaperone his former high school’s band at their graduation ceremony in the Chan Centre. With the music teacher absent because of the BC teachers’ strike, and realizing the band had yet to rehearse, Jaelem picked up a baton and tried conducting for the first time.

Read the whole story on the High Notes blog.
Gamelan Bike Bike makes new music out of old parts

How two UBC grads turned their love of traditional Balinese music and experimental sound sculpture into something entirely new

By Tze Liew

As you enter the cozy rehearsal space of Vancouver’s Hadden Park Field House, gamelan music tinkles on your ears like rain on roof shingles. Musicians sit behind colourful sets of gangsa—metallophone instruments—nimbly striking the keys with mallets. Punctuating the music is the deep sound of a gong, which resonates in your chest. You feel a whoosh of calm.

There’s a leaping vibrance to the music, like something you might hear in a Balinese village temple. But take a closer look and you see that instead of traditional bronze, the instruments are made of old bicycle scraps: the bright blue tube of a Raleigh here, the emerald green of an Apollo there, held up by red bicycle forks.

Gamelan Bike Bike makes new music out of old parts. Founded by musicians Robyn Jacob (BMus’11) and George Rahi (BA’11), it’s a ten-person ensemble that takes its inspiration from the Balinese tradition of gamelan, but with a twist: its instruments are built from scrap rescued from bike shops throughout the city.

Jacob and Rahi met as members of Gita Asmara, the School of Music’s community gamelan ensemble, directed by Prof. Michael Tenzer and visiting Balinese artists I Wayan Sudirana and I Putu Gede Sukaryana (Balot). The duo bonded over their shared love of gamelan, fascination with public sound art, and affinity for experimentation.

“Coming out of an art practice of trying to re-imagine objects, I think it’s a de facto ecological approach to being conscious of where your materials come from.”

Rahi began collecting discarded bike frames to tinker with. From these emerged their first set of homemade gangsa, made with bike tubes cut to different lengths. They have a wonderful sound, even if it’s not exactly the same rich timbre as traditional gangsa. The colours of the tubes are not only eye-catching, but helpful for the musicians to differentiate the keys.

“We started building sound sculptures together and experimenting with different materials for percussion-based installations,” says Jacob. “One of our first projects was a musical object playground for the International Children’s Festival on Granville Island.”

They created a water bottle percussion sculpture—tuned using different levels of water in a series of bottles—out of a lost-and-found pile at Translink. Then they created a bicycle wheel system that played musical notes when pedaled. The success of these quirky musical automata gave them the idea to bring their unique approach to instrument-making to the ancient Indonesian art.

“I worked at a community bike shop where there was a superabundance of bike frames that were dented or broken, so we started experimenting with those,”

Read the whole story on the High Notes blog.