

Georgia Tech Students and Hackathons: We can hack that!



By Josh Smith

At Georgia Tech, the phrase “We can do that!” isn't just a catchphrase - it's a mindset. It captures the feeling students and researchers get when they create something new and incredible. Whether it's spoken out loud, or on a screen with a hashtag in front of it, it's become a mantra for the Institute as a whole.

But “We can hack that!” may as well be right behind it, at least in student attitudes. Georgia Tech students - especially School of Music students - love hackathons.

Georgia Tech won first place in Major League Hacking's 2017 Season, beating out such contemporaries as Rutgers University, NYU, and the University of Illinois-Champlain. By the league's metrics, out of 3,000 universities and high schools, Tech ranked Number 1 in participation – more students at Tech participate in hackathons than any other school in the world.

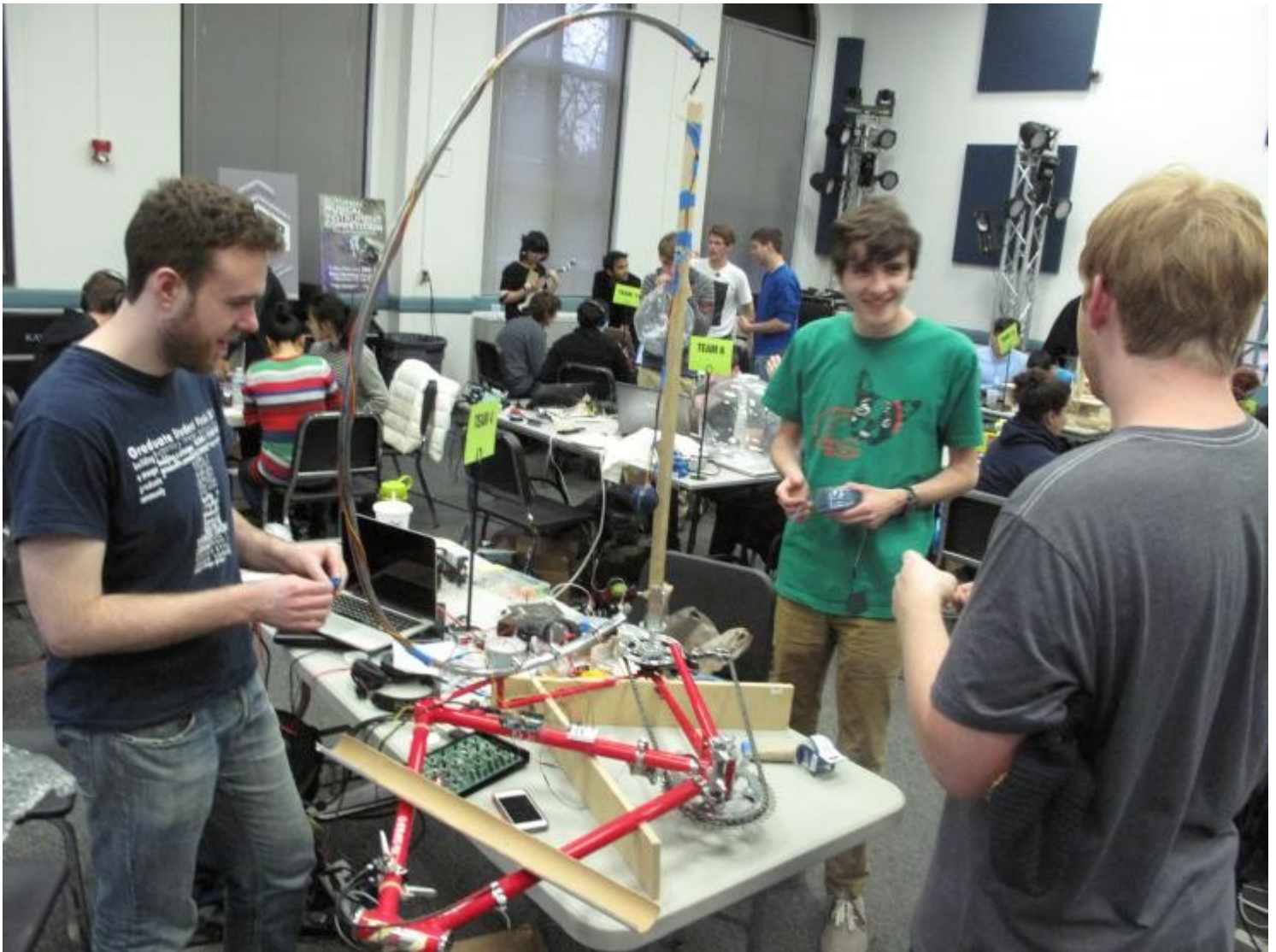
The Hack GT event is currently the most popular hackathon on campus, but the Moog Hackathon (run by the School of Music and Center for Music Technology) has grown steadily since its inception in 2015.

The Moog Hackathon has a very specialized goal that resonates strongly with our student body: build an instrument that is playable by the end of the weekend.

“Hackathons are a great break from the slow and steady pace that real life projects tend to have,” said Mitcham Tuell, a recent Tech graduate who majored in Electrical Engineering. Tuell has competed at all three previous Moog Hackathons, and plans on participating in it again this year.

“It's satisfying to have ideas come together – or sometimes not – so quickly instead of dealing with every little detail and taking it slow.”

His personal favorite Hackathon creation was the bike-synth he and a friend created at the very first Moog Hackathon – a synth controller built out of a bicycle frame meant to visualize the different elements of synthesis.

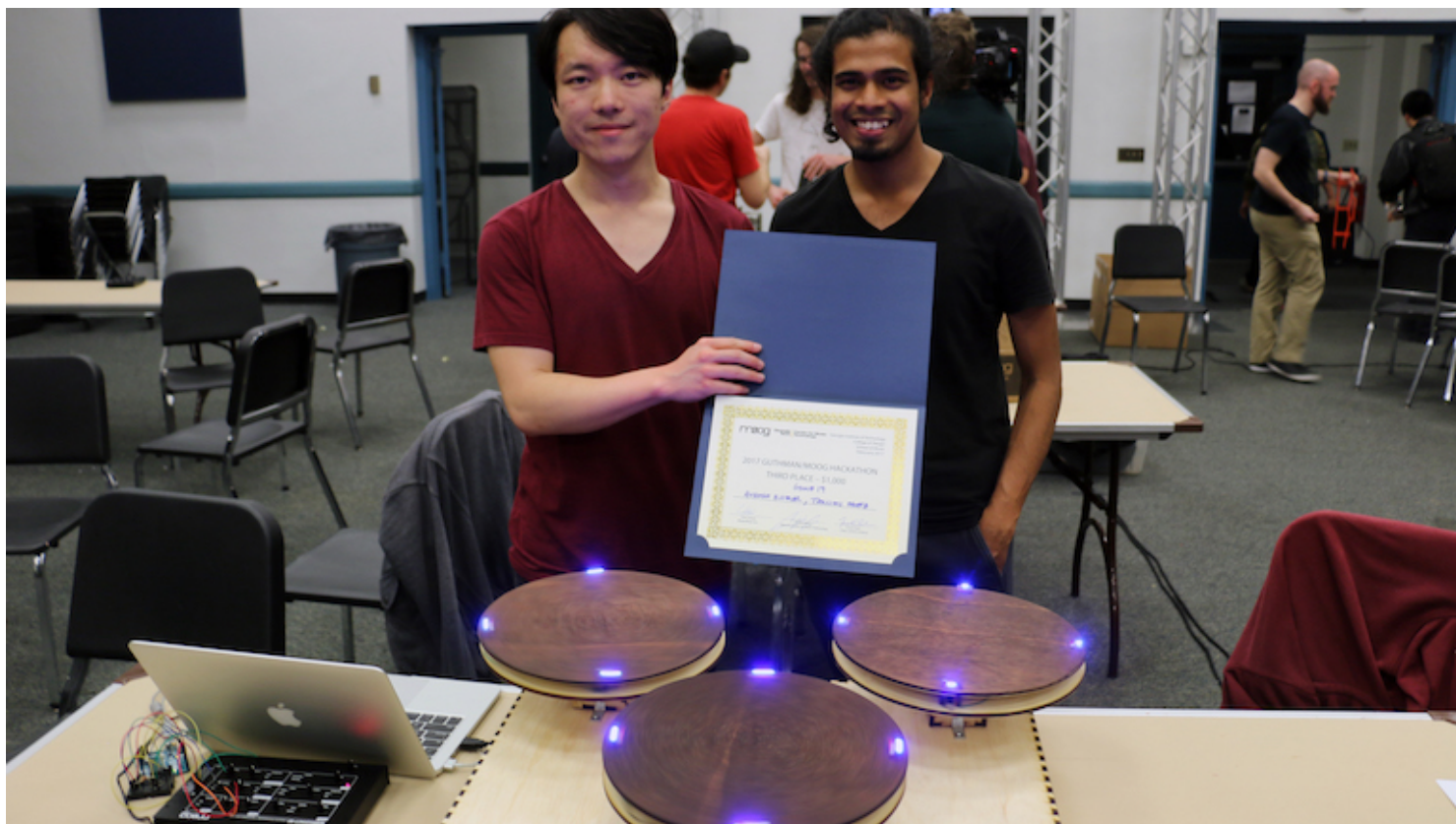


Tuell (center) and his teammates with the Bike Synth in the 2015 Moog Hackathon

"Hackathons can teach about prototyping, which is a useful skill to have for project-based courses," said Takumi Ogata, a graduate student in the Georgia Tech Center for Music Technology.

Ogata placed third in the 2017 Moog Hackathon for his project, "Spinning Plates of Sound." A week later, he finished second place in the Margaret Guthman New Instrument Competition for his Ribcage instrument, which he created as an undergraduate student.

His personal favorite creation is the "Sound Globe," an instrument that is played by spinning a sphere, which is mapped to the volume. The pitch is controlled by sliding your finger on a potentiometer strip. "Unlike most of my creations, it is portable and easy to set up before performing," Ogata said.



Ogata (left) with his partner Avrosh Kumar, posing with the Spinning Plates of Sound from the 2017 Moog Hackathon.

Hackathons are entertaining challenges for many of our students, but academically they teach real-world skills.

"I'm generally pretty good at performing under pressure, but hackathons are a great way to further refine that skill. For school, maybe it's an all-nighter before a test or project deadline," said Tuell, who in coordination with [CREATE-X at Georgia Tech](#) co-founded the company [Oddity Instruments](#) in his senior year at Georgia Tech.

"I'm just out of school, but I think it's clear how the high-pressure hackathon environment relates to real-world business deadlines and the skill of prioritizing and distributing work efficiently."

Despite the reputation Hackathons have for making student race against the clock and pull all-nighters to finish, students say they get a reasonable amount of time to sleep. "For the three Moog Hackathons I've done, we actually did sleep a decent amount. 3-5 hours, maybe?" said Tuell.

"I slept for four to six hours on day 1 and 1-2 hours on day 2. However, I was in a group that consisted of only two people including myself," Ogata said.

This year, the Moog Hackathon was held in the Invention Studio, with the Zen Garden winning first place. [Read and watch the results here.](#)



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