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Mixers Banned on Halls

Administration cites fire safety problems

BY PETER MCNEARY

Earlier this year, the school administration banned hall lounge mixers. The ban was a direct result of safety violations that occurred during the Fourth West mixer that took place at the beginning of the school year.

Attendance levels at the mixer exceeded the legal carrying capacity of the lounge. The lack of safety precautions became apparent when fog machines set off the fire alarm. Kevin Cromwell, Director of Student Services, explained that while the administration is in full support of the student body's right to organize student-run dances, the school does not want to be held liable in an obviously unsafe situation.

"Looking at and evaluating the enthusiasm and student

participation in the fourth west mixer at the start of the school year in the fourth west lounge made us realize that in the long run we want venues where more students can participate and at the same time have a safe environment if something were to occur," said Cromwell.

Evacuation during the fire drill took over five minutes. Had there actually been a fire, the results could have been catastrophic. Despite the blatant disappointment of the student body, students have been very accepting of the ban.

David Stoy, a Fourth West resident and DJ of the Fourth West mixer, understood the reasons behind the ban.

"It was a clear fire hazard. It makes sense. It's not like it was unjustified," said Stoy.

Although mixers are no longer permitted on residence

halls, all other forms of dance party have been deemed permissible provided that they are held in suitable spaces. The misconception that types of dance parties other than on-hall mixers have been banned has become widespread.

"Through SG and through other places, people have come to me to say, 'you've banned DYAO, you've banned dances,' but that's not the case," said Cromwell.

The school administration wishes to make it known that student are still encouraged to organize parties on campus, but that the regulations for parties will be more stringent in the future.

The administration has also made it clear to student government that spontaneity also factors into a dance party's eligibility. Because spontaneous parties are not advertised

beforehand, they are therefore expected to attract fewer guests

and help keep party size under control.



The Fourth West Lounge will no longer be home to the Fourth West Mixer at the beginning of future years. •Photo by David Stoy

Student Researchers Take Projects to Siemens

BY JEN ZHU AND ALEX LEW

Students and administrators alike are proud of NCSSM's strong record at the prestigious Siemens research competition, a record continued this year by five students who advanced to the regional competition and beyond. But not many students know exactly what research their peers are conducting, or what the Siemens experience is like.

On Nov. 7, seniors Judy Deng, Damien Jiang, Lanair Lett, Jinge Su, and Patrick Yang traveled to Atlanta, Georgia to represent the school at the Region Six Siemens competition. Lett, who took first place, traveled last week to the National Siemens Competition in Math, Science, and Technology, taking fourth place and a \$30,000 scholarship in the extremely competitive event.

"It was a great experience," gushed Lett. It was not all work: one of the days of Siemens

National Finals was dedicated to rewarding the competitors with some fun in New York City. The competition organizers arranged for the student researchers to see a Broadway production of Mary Poppins, go bowling, and visit Dave and Busters. "Everybody [the other Siemens competitors] was shockingly down to earth."

The other competitors, who won \$1000 scholarships at the regional competition, also enjoyed the experience.

"Presenting at Siemens was awesome," Deng said in an email interview. "It felt good to be knowledgeable about a subject not many people knew about, and to present this knowledge to others."

Some thought the event itself was anticlimactic. "The getting to it [Siemens Regional Finals] part was a great feeling of accomplishment. The actual experience was actually kind of bland," Su said.

Students enjoyed being surrounded by other young

researchers. "The other [Siemens Regional Finalists] were awesome. I found it funny that before the competition, everyone was all formal, and at the social afterwards, we all started acting like normal high school students," said Jiang. "I was impressed by most of the projects; lots were about energy or diseases. I guess Siemens likes those things? But I guess they're also the most 'useful'."

Jiang's project itself was perhaps less immediately practical. One of few high school students pursuing original research in mathematics, Jiang worked to prove a conjecture about the chip-firing game, an interesting and challenging problem in graph theory and combinatorics.

Student research spanned the gamut from mathematics to biology to chemistry and computer science. Lett's winning project investigated how the gene HDAC-1

contributes to insulin production, an important question related to diabetes. Su did a purely computational project in finding binding sites that allow the bacteria *Clostridium thermocellum* to produce ethanol from biomass. Deng and Yang,

who entered as a team, created a novel method for measuring bond strength using ferrofluids.

"I watched a YouTube video about ferrofluids, and decided I wanted to learn more about them," Yang explained. "So we Googled 'ferrofluids Duke' and emailed the first professor that came up."

Deng also realized the potential of the ferrofluids. "Patrick was interested in this thing called 'ferrofluid', [a] really cool magnetizable suspension," Deng said. "I agreed it was awesome, so we looked up any nearby professors that were working with ferrofluids. [Our idea was to] apply force [to the bonds] using a magnetic field. We create a system where there are many bonds within the ferrofluid solution, and because of some high-level physics, the magnetic field will cause the bonds to break apart."

Because Deng and Yang increased the magnetic field's intensity at a constant rate, they were then able to measure the exact force at which the bonds broke. The results were stunning: a method for measuring chemical bonds that could not only measure many bonds' strengths at once, but also could measure weaker bonds by accounting for "lower forces than previous methods [could]," Deng said.

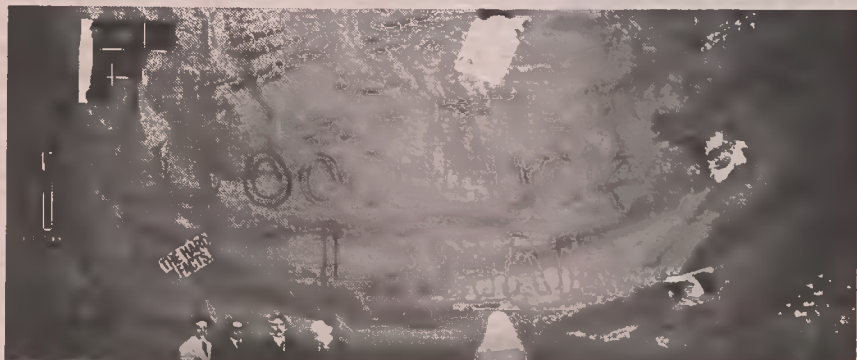
Three of the five students, Jiang, Lett, and Su, are not enrolled in any research classes

at NCSSM. Deng and Yang are Research in Physics students. They all conducted research over the summer.

Jiang and Lett conducted their research as part of summer research programs. While Jiang went to the Massachusetts Institute of Technology for the highly selective Research Science Institute (RSI), Lett stayed close to home, working with the Science Educational Experience for High School Students (Project SEED) Research Program. "Finding a good summer mentor can probably give you at least as good a chance [at doing well in the Siemens competition] as the R-science kids. Be prepared to put in a couple hundred hours at least, though. And to endure lots of pain when stuff goes wrong, and more pain when you write your paper," commented Jiang. Jiang later revealed that he spent more than 200 hours preparing for Siemens competition.

Lett agreed, noting that he constantly worked on his research project with eight-hour days and seven days a week over the course of seven weeks.

Five of the sixteen competitors at Siemens Regionals were from NCSSM. Senior Neil Shah, a former NCSSM student, and his partner took 1st place in the team division at Regionals. Shah and his partner won 2nd place at National Siemens Finals.



A good luck banner was created by Lett's hall, 4th West, before he left for the National Siemens Competition, which took place Dec. 3-7. They also lined the hall with good-luck balloons.

• Photo by Dustin Bureson