

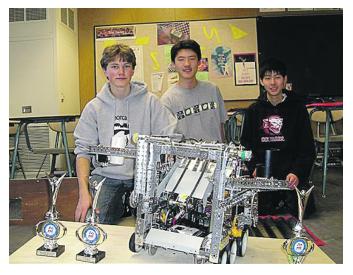
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Robotics Team puts Heart and Soul into Work

Cathy Dausman



Tsvetkov, Wang and Chiao behind "Sputnik" and trophies Photo Cathy Dausman

It's twice the size of a toaster oven, has eight wheels, more than 20 gears and weighs about 30 pounds. It can climb a ramp, balance on a see saw, pick up and sort plastic piping and turn on a dime. It's powered by a 12-volt Lego motor and laptop computer, but the real power behind this mechanical wonder is the team of Campolindo High School juniors Austin Chiao, Maks Tsvetkov and Sammie Wang. The trio comprises the upper class Robotics team they named Tsvetkov e Droozie (Russian for "Tsvetkov and friends"). They named the robot Sputnik.

The students, along with sponsor math and physics teacher Nita Madra, are members of the Campolindo High School Robotics club. They compete in FIRST Robotics competitions, a nationwide science and math program developed in 1989 by Segueway inventor Dean Kamen. According to its website http://www.usfirst.org/ more than 51,000 high school students on 2,070 teams across the U.S. are involved. The robots and their student-creators compete against other FIRST robots to complete timed tasks within a 12 by 12 foot arena.

Campolindo is currently the only school within the Acalanes Union High School District to have a Robotics club. Campolindo also has a

second team, comprised of sophomores Laura Gustafson, Ryan Morelli, and Matthew Stickle. Now in its fifth year, the club was formed when Madra attended a summer FIRST workshop hosted by the NASA Ames Research Center.

On a recent Friday afternoon, as the school empties for the weekend, Chiao, Tsvetkov and Wang gather in room D-9 to refine their robot's skills. Atop interlocking sponge rubber mats on the floor they place a ramp, a see-saw, a PVC pipe dispenser and receptacle. They boot up a laptop programmed in C++ language and grab a video game controller. Sputnik wheels, whirrs and comes to life.

After building their robot in the fall, the team attended area competitions. Paired with another robot, the robot alliance earned points for successfully completing tasks in the best two of three rounds. The club has earned several awards, including the Winning Alliance and the PTC Design Award. Most recently they won the Rockwell Collins Innovate Award (the club's second), the second most prestigious award. They strive to earn the top Inspire Award. On December 19th, they won the Northern California Championship Tournament, making them lottery-eligible for a slot at the FIRST Robotics Championship in St. Louis, MO in April.

Madra says these students are "the most organized and focused" group she's seen come out of the club. So focused, she says, that she sometimes has to remind them to eat.

"It's addicting. It's fun," says Wang, but just try to pin them down on their time investment. Cautions Tsvetkov: "don't ask." Biomedical Engineering or Biology seem likely college tracks.

Chiao, Tsvetkov and Wang hope to mentor a similar middle school program later this year. They've come so far, Tsvetkov stresses, only "because of the Parent's Club [which provides funding], Ms. Kitchens, Ms. Madra and Campolindo High School. Principal Carol Kitchens returns the compliment: "Max, Sammie and Austin possess three qualities that have made their team successful: intelligence, a strong work ethic and the ability to follow through." This robot team has plenty of heart.

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