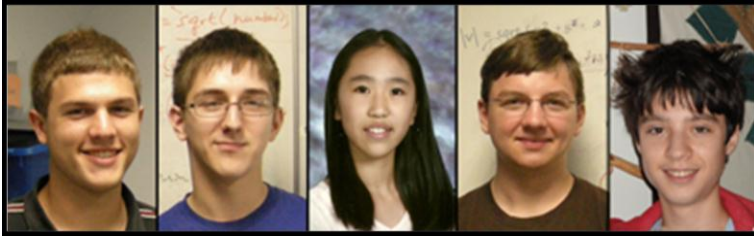


# STORMING ROBOTS Aims to compete at a MIT/NASA Project

Oct 6<sup>th</sup>, 2010 (Branchburg, NJ)— Storming Robots robotic team has been selected to compete at the MIT/NASA project, SPHERES-ZERO-Robotics program.

The review process was detailed and rigorous. It concentrated on finding those teams demonstrated the technical competence to work with the MIT/NASA SPHERE team through this first major expansion of Zero Robotics. From a pool of 48 applicants, NASA and the Massachusetts Institute of Technology accepted the two dozen schools to participate in a new science, technology, engineering, and math education program where the teams will design software to program small satellites aboard the International Space Station.

Alex Franchuk (17), Avery Katko (16), Catherine Dai (15), Matthew Goldman (16), Oliver Katz (15)



Storming Robots team is the sole team from NJ in 2010 ZeroRobotics competition. The students are currently working hard to write algorithms for the SPHERES satellites to accomplish tasks relevant to future space missions. SPHERES stands for the Synchronized Position Hold, Engage, Reorient, Experimental Satellites.

The team with the best design will be selected to have the final competition at MIT/ISS Lab to operate the SPHERES satellites on board the ISS.

The competition starts with substantial simulation work. The environment is under continuous development. This competition is indeed very unique from others. Competitors are selected to perform two major roles. One is to design and develop algorithms to navigate the SPHERE at the competition. The second role is to work as a partner who will help the SPHERE project to improve their interface development environment.

Students' algorithms will be tested to fly a volley ball-sized spherical satellite inside the space station's cabin. Each satellite contains its own power, propulsion, computing and navigation equipment. The goal of this competition is more than just an exercise in automation of the satellite and advanced maneuvers for the spacecraft, like formation flying and docking. There will be graduate students following the teams' work and could potentially adopt their solutions into a thesis.

Storming Robots director, Elizabeth Mabrey, is one of the founders for the hands-on robotics program that teaches students science, technology, engineering and math via robotics. She said the students were ecstatic about the opportunity. "There is a 'coolness' factor in this particular competition as they get to automate a satellite up in the space station at the final competition," Elizabeth Mabrey said. "The students are looking forward to flexing their brain muscle."

The five-member high school team includes Matthew Goldman, 16, of Bedminster, Avery Katko, 16, of Long Valley, Alex Franchuk, 17, of Branchburg, Oliver Katz, 15, of Ringoes and Catherine Dai, 15, of Belle Mead.

All these students are currently taking multiple Advanced Placement classes in their schools. They demonstrate impressive level of self-initiative, motivation, and energy in order to take part of this competition. Much time and software development skill is required to learn this new system from scratch and write algorithms to prepare for the Ground Test in November. Mabrey said, "Disregarding the outcome of the competition, these students are truly the role models for our youngsters."

To learn about programs from Storming Robots, you may visit [www.stormingrobots.com](http://www.stormingrobots.com), or [teams.stormingrobots.com](http://teams.stormingrobots.com) about the history in competitions.

To learn about the Zerorobotics program, visit [zerorobotics.mit.edu](http://zerorobotics.mit.edu).