

## Jesuit High's robotics team gets job(s) done



John Menard, 18, left, and fellow Jesuit senior and Thundercats teammate Matthew Mikulaschek, 17, drill one of the brackets that will secure the bumper to the robot the students made for next month's regional competition in Orlando.

By GEORGE WILKENS | The Tampa Tribune  
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**SOUTH TAMPA** - As Cole Schnitzer pondered transferring from a Tacoma, Wash., high school to one in Tampa, the self-proclaimed nerd's thoughts included a unique concern: Does it have a robotics team?

Wanting to continue at a Catholic high school like the one he left, the teen selected Tampa's Jesuit High, despite it lacking such a team.

"I'll make a team," he vowed.

His initial challenge was clear even before his August 2009 arrival: convince Jesuit administrators of the value of this non-athletic team. "Every school has a group of people who don't have a sport, and are passionate about this," Schnitzer said. "We're the nerds. But it's more like competition to us."

After clearing that hurdle, he was equally successful convincing a faculty member to serve as club moderator.

In time, recruiting swelled the team's ranks. "Our team was much smaller last year because not many people knew what it was," said Schnitzer, 17, now a senior. That was before arranging two demonstrations of the team's first-year robot for captive audiences dining in the school lunchroom. "After that," he said, "a whole lot of people came up saying, 'Hey, can we join?'"

After an impressive rookie season, the group - Robotics Team 3164, the Thundercats - is poised for this month's regional challenge by a national nonprofit best known by its acronym, FIRST (For Inspiration and Recognition of Science and Technology). It was founded by Dean Kamen, whose best-known invention is the Segway.

FIRST Robotics contestants have six weeks to design, build, test and deliver a robot capable of performing a specific engineering challenge. This year's challenge is to build a robot to retrieve inner tubes of different shapes and place each over elevated pegs.

The club's 2011 robot debuted in a Feb. 19th demonstration at the mall entrance to the JCPenney store at Westfield Citrus Park Town Center.

Denise Morel of Westchase is among the troupe of parents who attend the out-of-town competitions, sometimes as a chaperone. "They're just such an interesting group of kids that love what they're doing," she said.

Morel, whose 16-year-old son, Patrick, is on the team, likens robotic challenges to a sporting event. She laughs as she describes herself "cheering and jumping up and down for a robot" after the ThunderCats' invention scored in a soccer-like contest at the 2010 regional in Orlando.

The athletic similarities don't end there, said Morel, "They scout, just like in sports," she said, describing how representatives of competing teams observe regional competitions from the stands, evaluating the effectiveness of other robots. A team with a robot successful at a unique task may be recruited to form an alliance, permissible as a lesson in the power of collaboration.

Launching a robotics team "was the best thing that could have happened to Jesuit and us," she said. "If you're not in athletics, this is exactly what's needed," an extracurricular activity incorporating math, science, technology and more.

Early on, the team decided to invite students from the all-girl Academy of the Holy Names to join. Junior Melanie Huamani, 17, is among nine ThunderCats from that Catholic school, recruited by one of the 34 Jesuit students on the team.

"I was skeptical at first; but once I joined it was fun," she said as she watched the team's remote-controlled 3-foot-long robot with extendable 5-foot arm scurry across the mall floor on omni-directional metal wheels. "I didn't know you could make all that stuff happen by controlling it with a computer," she said.

Jesuit senior Matthew Mikulaschek said the team is a good fit for him. "I'd been into engineering because of my dad," a computer engineer, the 17-year-old said. "Cole mentioned robotics and I decided to join up, and I'm glad I did."

Classmate John Menard, 18, has been fascinated by robotics since he was a child, modifying toys by mixing Legos and remote-controlled cars. Before his senior year he was devoting his extra time to the school's drama club, "This year I committed to robotics," he said.

FIRST teams – including Team Hydra from Hillsborough High, the only other Hillsborough County school among the 60 registered for next week's three-day regional competition at Central Florida

University - receive assistance, financial and otherwise, from sponsors such as JCPenney and NASA, and from mentors, but only students operate robots at competitions.

"I didn't know exactly what I was getting into," concedes John Lacy, the Jesuit geometry and computer science instructor who agreed to coach the robotics team. The tight six-week period to develop a robot finds dozens of students in Lacy's classroom on Saturdays and for at least two hours at the end of each school day.

"Before you know it, we're in the build season and it's off to the races," said Lacy. As Jesuit's assistant varsity soccer coach, Lacy is grateful his classroom borders the athletic field. "I would be running between here and the field during our practice," he recalled with a laugh.

Schnitzer is pleased with the team's early success. "Last year was our rookie year," and the team came away from the regional competition in Orlando with the Rookie All-Stars award, "basically, the best award a rookie could get," Schnitzer said. That earned an invite to the national challenge in Atlanta last April, a competition among 350 teams.

Considering college in Washington state or Arizona, with an eye toward engineering in the bio-medical or computer fields, Schnitzer said his robotics club affiliation offers benefits beyond technology. Before founding the club, he said, he never could have stood before 60 fellow students and delivered a recruitment pitch.

"It takes quiet kids and allows them to open up and interact with others," he said.