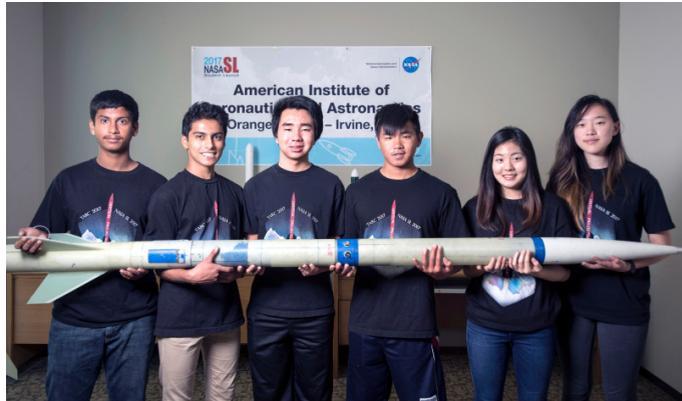


## NEWS &gt; EDUCATION

# Irvine, Newport Beach teen rocketeers ready for launch

By **GREG MELLEN** | gmellen@scng.com | Orange County Register

PUBLISHED: April 23, 2017 at 7:32 pm | UPDATED: April 24, 2017 at 5:41 pm



It takes a minute or two for the teenage recalcitrance to wear off. But once it falls away, like the booster on a missile, these young rocketeers launch into their own language. Soon they're talking about linear actuators, drone deployments at apogee and adjusting for descent variables the way other 16 and 17-year-olds may talk about PlayStation4 and Snapchat.

Of course, these are no ordinary high school juniors. They are the members of the Vertical Projectile rocket team, one of the top high school rocketry clubs in Orange County and the country. On May 13, the team — seven from Irvine high schools and one from Newport Beach — will compete in Virginia against the top 100 middle and high school rocket clubs nationally in the 15th annual Team America Rocketry Challenge, or TARC.

Fittingly, these rocket enthusiasts are aiming high, hoping to improve on their fifth-place finish a year ago.

Albert Wen, 17, of Irvine High, who hand-picked the squad, said his team plans to win it.

Among the fine-tuning the team has undertaken is the addition of the aforementioned linear actuator, a device that allows the team to adjust the trim on the rocket's parachute during its descent.

The Team America program is intended to encourage students to pursue study and careers in science, technology, engineering and math. Middle and high school students, with the help of engineering mentors, design, build and fly rockets that must carry a raw egg 775 feet in 41 to 43 seconds and land with the egg uncracked.

Wen became involved in model rocketry in the eighth grade and became enamored. However, after graduation he and his friends went off to different high schools. To be eligible to compete in Team America, clubs must either represent a single school or a nonprofit. As luck would have it, Wen had earlier formed a youth nonprofit focused on another of his interests – voting rights.

So the rocket club moved under the umbrella of the Voting Involvement Association.

Vertical Projectile is one of three from Orange County, along with Fairmont Preparatory Academy of Anaheim and Mendez Fundamental Intermediate School of Santa Ana, to qualify for the competition in Virginia.

"These kids are the cream of the crop," said Jan Koepke, who with her husband, Bob, helps to mentor the team. "They are dedicated and they're not afraid to work."

The Koepkes know what it takes to be a top-tier rocket team. They help mentor 20 rocket teams through the Orange County branch of the Aerospace Industries Association.

Bob Koepke, a manager of software development for Honeywell, said Wen quickly emerged as a leader.

"He keeps them going," Koepke said, but added the team is notable because of its overall commitment.

"Virtually every team member is at every event," he said. "They have a passion for what they do. They really, truthfully love it."

The team consists of eight team members, five boys and three girls, who attend six different high schools – Beckman, Irvine, Northwood, Woodbridge and John Crean Lutheran highs in Irvine and Corona del Mar High.

Since Francis Scott Key saw the "rockets' red glare" and the Soviet Union and United States launched men into space, rockets have held a special place in the collective consciousness of Americans. And so it is for Vertical Projectile.

For Wen and Sahil Patne, his Irvine High classmate, rocketry has a special appeal.

Wen said he likes to see the abstract math he learns in school in action.

“You see everything come together,” Patne said. “You learn the math in school and then you apply it when the rocket’s in the air.”

And then there is just the inherent coolness of watching a rocket blast off.

“That makes getting up in the morning on launch day worth it,” team member Kushagra Pandey, 16, of Northwood High, said of lift off.

At this year’s TARC competition, the teams will compete for \$100,000 in scholarships and prizes. The winner advances to the International Rocketry Challenge at the Paris Air Show in June.

Vertical Projectile’s finish last year qualified it to participate in the NASA Student Launch, a competition geared mostly to colleges. Of the 60 teams at the event in Huntsville, Ala., 18 were from middle and high schools. Vertical Projectile won for best web design for its project.

For the team, it was a little like winning Miss Congeniality. After eight months of research, experiments and planning, the team’s rocket had launch problems. Designed to fly to an altitude of 5,280 feet with a payload, deploy an automated parachute system and safely land, the rocket had a malfunction and failed to reach its desired altitude.

“We were afraid it would explode on launch,” Patne said.

Adding to the embarrassment, the rocket landed in a swamp and the team members had to wade out through the bugs and brambles to recover the wayward rocket.

Undeterred by the setback, the team is already contemplating next year and is contemplating how the rocket can deploy a drone in mid-flight to guide its landing.

#### **The Vertical Projectile team**

Claire Chang, Crean Lutheran High

David Chang, Northwood High

Allison Chen, Corona del Mar High

Brenda Chen, Woodbridge High

Norman Chu, Beckman High

Kushagra Pandey, Northwood High

Sahil Tande, Irvine High

Albert Wen, Irvine High

---

Tags: [Education](#), [local news](#), [Newport Beach](#), [schools](#), [Science](#)

#### **Mellen.Greg Greg Mellen**

Greg Mellen is a veteran award-winning reporter with more than 30 years experience at papers in California and Missouri. He joined the Register newspapers with the Long Beach Register and now primarily covers Huntington Beach and Fountain Valley. He received his master’s degree from the University of Missouri School of Journalism and was a faculty member and sports editor at the Columbia Missourian. In his free time he likes to read and dabble in fiction writing, which he tries to keep out of the newspaper.

[Follow Greg Mellen @gregmellen](#)

[VIEW COMMENTS](#)

### **Join the Conversation**

We invite you to use our commenting platform to engage in insightful conversations about issues in our community. Although we do not pre-screen comments, we reserve the right at all times to remove any information or materials that are unlawful, threatening, abusive, libelous, defamatory, obscene, vulgar, pornographic, profane, indecent or otherwise objectionable to us, and to disclose any information necessary to satisfy the law, regulation, or government request. We might permanently block any user who abuses these conditions.

If you see comments that you find offensive, please use the “Flag as Inappropriate” feature by hovering over the right side of the post, and pulling down on the arrow that appears. Or, contact our editors by emailing [moderator@scng.com](mailto:moderator@scng.com).