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NEWS ARTICLE

Math team multiplies successes

For the third year in a row, a team of local students coached by Lehigh math professor Don Davis has placed in the national math competition.

While most kids spend their Sunday afternoons watching television or playing tag, the students on the Fire, Ice, Lightening, and Thunder math teams are attempting to determine the number of three-digit positive integers such that if the integer is divided by the sum of its digits, the result is 19.

The dedication and discipline shown by these math prodigies has led the Lehigh Valley Fire team to a second-place finish in the American Regions Math League (ARML) competition held June 1-2 at Penn State University.



The Fire team accepts its second-place national award at Penn State.

The national contest, which is held simultaneously at Penn State, the University of Iowa, and the University of Las Vegas, pits the nation's finest mathematical talents head-to-head in a heated competition.

The national second-place finish is the latest in a series of top finishes for local teams coached by Don Davis, professor of math at Lehigh. Davis founded the Lehigh Valley ARML team in 1993 and has led the regional math team to a national championship in 2005, a third-place finish in 2006, and second-place in 2007.

The Lehigh Valley team has progressed quickly with four separate teams—Fire, Ice, Lightening, and Thunder—participating in the national competition.

The four teams, including 15 students per team, practiced on Sundays in the spring with students traveling from New Jersey, Philadelphia and even as far as Pittsburgh in preparation for the contest, which combines challenging rounds of deriving formulas and writing proofs, including a power question, a team round, an individual round, two relay rounds, and a super relay round.

"We foster a really good atmosphere among the kids," Davis says, "which makes the kids want to come to practice and want to do well."

Davis also attributes the team's success to assistant coach Ken Monks, a former Lehigh Ph.D. student under Davis, who is currently a professor at the University of Scranton. Monks became the assistant coach in 2003, after his daughter, Maria, joined the team as a freshman.

Despite the 80-minute drive from their home in Hazleton, the math team has become a family affair for the Monks clan. His son, Keenan, joined the team in 2005 as a sixth grader and his wife, Gina, started attending practices in 2006 to help with logistics and to fortify the students with her fresh-from-the-oven goodies.

At this point, however, Monks says he would continue coaching even if he had no children on the team. "In a mall-obsessed culture, these students are a breath of fresh air and hope," he says.

A magnet for brainpower

Monks says that mainstream American culture is not highly supportive of academics in general, and achievements in mathematics, in particular. The ARML team addresses these issues by providing a

magnet location for the best "mathletes" in a geographic area to get together and interact with other students who share a similar interest and passion for mathematics.

"Highly talented students with an aptitude for mathematics do not receive the accolades and support that, say, a rock star or athlete might in a similar situation," Monks says. "In addition, the middle and high school mathematics curriculum is not sufficiently challenging for the best mathematics students because it is designed for the needs of the typical student."

Although the ARML team is a contest for high school students, Davis has recognized the mathematical gifts of many middle school students and encouraged them to join his team.

Ben Kraft, an eighth-grade member of the Fire Team, has enjoyed being on the team for the past two years for a simple reason: "We have the most fun!"

"We are there because we are crazy enough to find doing math fun," Kraft says. "In addition, we meet new people and become friends with the people there. By the time we are on the busses to the competition, we all know each other and have fun playing many different games."

The students aren't the only ones who devote themselves to the team, Davis says.

"The parents who are driving these kids, they love it," Davis says. "They really enjoy bringing their kids and meeting other parents from all over the place."

Brita Kilgore, an Allentown resident, says the ARML team has inspired her son, Matt, who is physically disabled and uses a power wheelchair, to work harder and improve his math skills.

Kilgore credits Davis and Monks with setting the Lehigh Valley team apart.

"They are always positive and upbeat with kids. They patiently answer questions and gently encourage the team members to do better," Kilgore says. "Don and Ken give so freely of their time and knowledge. I believe their attitude of commitment and caring carries over to the team members. The kids are really devoted to the team."

A gift from the past

The team is able to attend the annual contest at Penn State thanks to the generous sponsorship of Paul Martino '95.

Martino met Davis in 1989 as an eighth grader during a Fractal Geometry display at Lehigh University. The two stayed in touch and Martino came to Lehigh in 1992 on a Trustee Scholarship, compressing his academic coursework so that he could graduate in three years.

Martino went on to graduate school at Princeton University, and later started three Silicon Valley companies. Martino stayed in contact with Davis and, after hearing of the success of the Lehigh Valley ARML team, decided to become the team's main sponsor.

"Dr. Davis has been one of the key influencers in my life and I don't think I would have been as successful as I have been had I not met him," Martino says. "He is a fantastic mathematician and tireless supporter of student development. His math contest, ARML, and teaching the entry-level math course at Lehigh has exposed two generations of students to his love of mathematics. Dr. Davis goes far beyond the call of his day job and I look forward to being of assistance to him whenever I can."

Davis says he has high hopes for next year's team bringing the championship back to the Lehigh Valley.

"I think we have a very good chance to win it because we only had one senior and four eighth graders," Davis says. "In past years, we've lost up to five people so we ought to have a very good chance."

--*Madelyn King*

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