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UCF NEWS | STORIES OF IMPACT + INNOVATION | ORLANDO, FL

UCF Programming Team Places in Top 20 at World Finals in Moscow

By Heather Smith Lovett | October 7, 2021

UCF's Programming Team again showed they are among the best on the planet, finishing 17th overall and among the top four teams from North America in the 2020 World Finals of the International Collegiate Programming Contest (ICPC).

The competition, held in Moscow on Oct. 5, was originally scheduled to take place in June 2020 but was delayed due to the pandemic. A field of 117 teams competed in the World Finals, the final and most intensive level of ICPC, which originally began with more than 60,000 students representing 3,000 universities and over 100 countries. Teams earn a berth in the World Finals after advancing through a series of regional and divisional competitions.

The team included computer science graduates and Burnett Honors Scholars **Joshua Fair '21**, **David Harmeyer '20** and **Andy Phan '21**.

Fair and Harmeyer were part of the original team that competed in early 2020 and won a bronze in the North American Championship to secure their spot in the World Finals. The third member of that team, Ahmad Barhamje, was unable to make the trip to Moscow. Phan, now a graduate student studying computer science, was offered an opportunity to compete in Barhamje's place.

Fair, Harmeyer and Phan went above and beyond to train for the World Finals, says Arup Guha, one of the team's seven coaches and a senior instructor of computer science. Guha, along with coach Tom Phan —who is also Andy's father— travelled with the team to the competition.

"Team members were living in different cities and spent most of their preparation practicing remotely," says Guha. "Two of the three team members have already graduated, and despite taking on jobs and new responsibilities, their commitment to competing never wavered. This group worked extremely well together, and we are very proud of their performance."

The ICPC competitions are billed as the "Olympic Games" of algorithmic programming and teams must work together to solve real-world problems. For example, team members could be tasked with developing a schedule for landing airplanes, tracking robotic movements, simulating airport luggage collection or estimating oil reserves.

Teams work to solve the most problems in the fewest attempts and in the least cumulative time. Incorrect solutions result in a time penalty.

The competition and training fosters creativity, teamwork and innovation and helps to prepare students for the global technology workforce. Harmeyer now works at Facebook in Seattle, and Fair will soon start work at Facebook in California. Barhamje is a computer programmer for an AI company in Boston. Phan is completing graduate studies at UCF and plans to apply to doctoral programs in computer science.

“The contest helps hone algorithmic problem-solving skills and these are precisely the types of skills all of the top companies are looking for when they hire,” says Guha. “It’s not unusual for team members to be sought for employment by major tech companies such as Google, Amazon, Microsoft and more.”

The winner of the World Finals was Nizhny Novgorod State University in Russia. The other top finishers from North America included the Massachusetts Institute of Technology (No. 9), the University of Illinois at Urbana-Champaign (No. 11), and Harvard (No. 16).

In August, another UCF Programming Team ousted dozens of universities from the United States and Canada to finish 19th at the North America championship round of the 2021 International Collegiate Programming Contest. That team now advances to the 2021 ICPC World Finals, which is expected to take place next year.

A UCF team has qualified for the World Finals every year during the past decade.