UC SANTA BARBARA

THE Current

January 3, 2022
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For the Love of Physics

Tengiz Bibilashvili, a senior lecturer in physics in both the College of Letters & Science and the College of Creative Studies, has been named academic director of the United States team in the International Physics Olympiad, a position equivalent to head coach. The American Association of Physics Teachers announced the news as the coaches prepare their search for the five students who will represent the country in 2022.

“I feel a big honor and responsibility for maintaining the U.S. team's reputation,” Bibilashvili said. “I also want to extend Olympic involvement to the U.S. schools and regions with lower or no participation.”

Each year the association recruits and trains students to compete in the International Physics Olympiad (IPhO). Unlike in athletic sports, IPhO participants do not compete against each other directly. They solve theoretical and experimental problems during two rounds of competition to score points, Bibilashvili explained. Medals and honorable mentions are awarded based on these scores, not on victories. “It makes the competition friendly and motivates students to study physics, rather than compete,” he said.

As a high school student, Bibilashvili attended the Vekua School of Physics-Mathematics in the Republic of Georgia while it was part of the Soviet Union. There he took advanced courses and participated in math and physics Olympiads.

Bibilashvili continued his involvement with academic competitions after his university studies, helping to establish the Georgian National Olympiads. And soon after Georgia became an independent country, it started sending teams to the International Physics Olympiads. He served as the team's lead coach at the 1998 IPhO in Reykjavik, Iceland, and continued coaching teams until he immigrated to the U.S. in 2002.

"In 2002, when all five students received medals, The President of Georgia, Eduard Shevardnadze, met with us," Bibilashvili recalled. "He provided all the students with presidential scholarships and awarded me with the Republic of Georgia Order of Honor." The Order of Honor is presented to citizens who took part in the building process of an independent government.

Bibilashvili carried on his work in his new country, helping to found the United States Association for Young Physicists Tournaments. "We host an annual U.S. Invitational Young Physicists Tournament," he said. "But I always wanted to be back in the main international competition — the IPhO."

In 2021, the American Association of Physics Teachers was searching for a new academic director for the U.S. physics team, and they offered Bibilashvili the position. "IPhO is the top high school physics event," he said.

The coaches are currently working on a nationwide test called "F=ma." Just like athletic tryouts, this challenging, multiple-choice test narrows the number of applicants from many thousands to 400 top students. The next round involves an extended free-response test that decides which 25 students will compose the U.S. physics team and participate in the physics team camp. At the end of the camp, the coaches select five students to form the U.S. national team.

Bibilashvili loves his job fostering the next generation of physicists. His first position at the Andronikashvili Institute of Physics involved only research — the institute did not have students. "My passion for teaching brought me back to the Vekua School of Physics-Mathematics," he said.

As a teaching professor at UC Santa Barbara, Bibilashvili does not participate in research. Instead, he devotes his time and expertise to teaching. "I enjoy teaching CCS classes, and I love working with students who struggle on start, but are focused enough to make progress," he said.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.