
USACO: THE USA COMPUTING OLYMPIAD

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You probably know that USENIX is a major sponsor of the USA Computing Olympiad, a 13-year-old organization that serves pre-college computer enthusiasts around the world. The Computing Olympiad has these goals:

- Provide pre-college students with opportunities to sharpen their computer programming skills to enable them to compete successfully at the international level.
- Enhance the quality of pre-college computer education by providing students and teachers with challenging problems, training materials, and competitions that emphasize algorithm development and problem-solving skills.
- Recognize excellent students with outstanding skills in computer science and encourage them to pursue the profession.

- Provide educational, motivational, and competitive materials in the form of programming competitions and Web-based training.

The 2004–05 season has been extraordinarily successful in achieving these goals. The Training Pages are approaching 30,000 logins per month by students in the 90 different countries that utilize the USACO training facilities. The mailing list has over 18,000 members; participation in our monthly contests (held during the academic year) will soon top 1,000 elite programmers per contest.

The most recent achievement was the USA Invitational Computer Olympiad held June 1–9 at Colorado College in Colorado Springs, Colorado. The 15 best U.S. competitors matched skills against the best from Bulgaria, Canada, China, and Poland. Veteran senior Alex Schwendner emerged victorious, edging out silver medalists Eric Price, Filippek Wolski from Poland, and Chuen-guag Zhu from China.

Among the innovations this year was the second of six rounds: the speed competition. Unlike most programming contests, where the action cannot be compared favorably to watching paint dry, the speed competition was suspenseful. Competitors were given a problem requiring 5–10 minutes to solve. The first solution earned the most points, with declining points until half the competitors had completed it. At that point, the sub-round closed. Because contestants incur a small penalty for wrong answers, later correct answers may score more points. With almost a dozen tasks and two dozen programmers, and nonstop action, several competitors kept neck-and-neck for the lead!

The Olympiad was also used to choose the four U.S. students who will represent our country at the International Olympiad, to be held in Nowy Sacz, Poland, August

18–25. Veterans Eric Price and Alex Schwendner will be joined by John Pardon and Matt McCutcheon in vying for the gold against 300 students from over 75 other countries.

The USACO continues to strive to accomplish its mission with expanding programs and qualifying events. If you'd like to assist or if your organization would like to support the USACO, please contact Rob Kolstad at kolstad@usenix.org.