icpc International Collegiate Programming Contest

ICPC FACT SHEET – 15 Dec. 2018

The 43rd Annual World Finals of the
International Collegiate Programming Contest (ICPC)

Hosted by the University of Porto & the City of Porto
Porto, Portugal, 31 March – 5 April, 2018

About the Contest – icpc.global

The International Collegiate Programming Contest (ICPC) is the premiere global programming competition conducted by and for the world's universities. The ICPC is affiliated with the ICPC Foundation, enjoys the auspices of the ICPC Foundation, and is headquartered at Baylor University. For over four decades, the ICPC has grown to be a game-changing global competitive educational program that has raised aspirations and performance of generations of the world's problem solvers in the computing sciences and engineering.

In ICPC competitions, teams of three students represent their university in multiple levels of regional competition. Volunteer coaches prepare their teams with intense training and instruction in algorithms, programming, and teamwork strategy. Several ICPC universities and ICPC volunteers provide online judging systems to all free of charge. Top teams from regional competition advance to the final round. This year's regional competitions will advance teams to the World Championship round - the 2019 ICPC World Finals hosted by the University of Porto and the City of Porto– which will be conducted on 4 April 2019 in Porto, Portugal.

The ICPC traces its roots to a competition held at Texas A&M in 1970 hosted by the Alpha Chapter of the UPE Computer Science Honor Society. The idea quickly gained popularity within the United States and Canada as an innovative initiative to raise the aspirations, performance, and opportunity of the top students in the emerging field of computer science.

The contest evolved into a multi-tier competition with the first Finals held at the ACM Computer Science Conference in 1977. Operating under the auspices of the ICPC Foundation and headquartered at Baylor University since 1989, the contest has expanded into a global network of universities hosting regional competitions that advance teams to the ICPC World Finals.

In the past 20 years alone, ICPC participation has increased by more than 2000%. Last year, ICPC Regional participation included 49,935 of the finest students and faculty in computing disciplines from 3,098 universities in 111 countries on six continents. A record 53,446 students and 5,411 coaches competed in ICPC and ICPC-assisted competitions last year, setting new records in participation.

The contest fosters creativity, teamwork, and innovation in building new software programs, and enables students to test their ability to perform under pressure. Quite simply, it is the oldest, largest, and most prestigious programming contest in the world.

The annual event is comprised of several levels of competition:

- Local Contests – Universities choose teams or hold local contests to select one or more teams to represent them at the next level of competition. Selection takes place from a field of over 300,000 students in computing disciplines worldwide.
- Regional Contests – In last year's regionals, 49,935 contestants from 3,098 universities in 111 countries on six continents competed at over 530 sites to advance to the World Finals.
- World Finals 31 March – 5 April, 2019 in Porto, Portugal – Hosted by the University of Porto and the City of Porto, the World Finalist teams will compete for awards, prizes, and bragging rights. These teams represent the best of great universities on six continents - the cream of the crop.

Battle of the Brains

The contest pits teams of three university students against eight or more complex, real-world problems, with a grueling five-hour deadline. Huddled around a single computer, competitors race against the clock in a battle of logic, strategy, and mental endurance.

Teammates collaborate to rank the difficulty of the problems, deduce the requirements, design test beds, and build software systems that solve the problems under the intense scrutiny of expert judges. For a well-versed computer science student, some of the problems require precision only. Others require a knowledge and understanding of advanced algorithms. Still others are simply too hard to solve – except, of course, for the world's brightest problem-solvers.

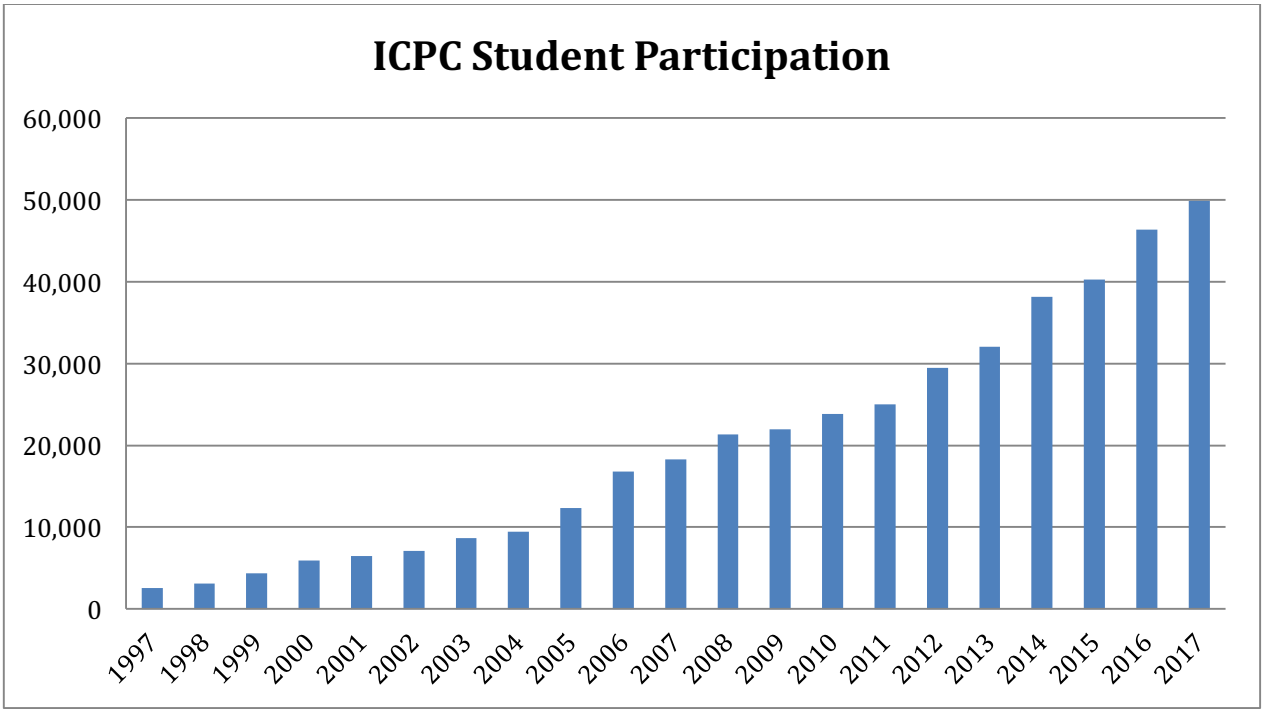
Judging is relentlessly strict. The students are given a problem statement – not a requirements document. They are given an example of test data, but they do not have access to the judges' test data and acceptance criteria. Each incorrect solution submitted is assessed a time penalty. You don't want to waste your customer's time when you are dealing with the supreme court of computing. The team that solves the most problems in the fewest attempts in the least cumulative time is declared the winner.

To learn more about the ICPC, please visit icpc.global

For full coverage of the World Finals including social media, photos, video, live coverage, and live scoreboard go to ICPCNews, icpcnews.com.

Contest Growth

The ICPC Foundation, UPE, and Baylor University are thrilled that the contest continues to attract the best and brightest students from around the world. This year 49,935 contestants from 3,098 universities in 111 countries competed in regional competitions at over 530 sites worldwide. The ICPC student participation has increased by 20X in 20 years. For more information on previous contests, and last year's final standings and problem sets, please see icpc.global.



World Finals 2019 hosted in Porto, Portugal – the final round following the 2018 Regionals

Teams from regional contests servicing universities worldwide will advance to the World Finals to be held in Porto, Portugal, 31 March - 5 April, 2019. The 2019 World Finals is hosted by the University of Porto and the City of Porto.

Recent medal winners in order of finish are:

- 2018 Gold — Moscow State University
Moscow Institute of Physics & Technology
Peking University
The University of Tokyo

  Silver — Seoul National University
University of New South Wales
Tsinghua University
Shanghai Jiao Tong University

  Bronze — St. Petersburg ITMO University
University of Central Florida
Massachusetts Institute of Technology
Vilnius University
Ural Federal University

- 2017 Gold — St. Petersburg ITMO University
University of Warsaw
Seoul National University
St. Petersburg State University

  Silver — Moscow Institute of Physics & Technology
Tsinghua University
Peking University
Fudan University

  Bronze — KAIST
Ural Federal University
KTH - Royal Institute of Technology
The University of Tokyo

- 2016 Gold — St. Petersburg State University
Shanghai Jiao Tong University
Harvard University
Moscow Institute of Physics & Technology

- 2015 Gold — St. Petersburg National Research University ITMO
Moscow State University
The University of Tokyo
Tsinghua University

- 2014 Gold — St. Petersburg State University
Moscow State University
Peking University
National Taiwan University

- 2013 Gold — St. Petersburg National Research University ITMO
Shanghai Jiao Tong University
The University of Tokyo
National Taiwan University

About the ICPC Foundation

The ICPC Foundation is a 501(c)(3) organization founded to advance the art and sport of competitive programming for the benefit of society. The foundation is responsible for ICPC sponsorship, fundraising, outreach, and operational matters. The ICPC Foundation strives to provide ample opportunity for the underserved, to create a tier of regional championships to recognize far more star performers and showcase emerging talent, and to bring ICPC alumni together, assuring future generations paths of excellence to being great problem solvers. The ICPC Foundation is actively engaged in creating equal opportunities for women or other underrepresented groups to pursue excellence within a culture of global inclusion and authenticity. For more information about the ICPC and the ICPC Foundation visit icpc.foundation.

About The University of Porto

The University of Porto is the most sought-after university in Portugal and one of the top 200 universities of Europe. Close to 32,000 students and 2,000 teaching and research staff attend its 15 schools and nearly 50 research units, covering the whole fields of knowledge and all levels of higher education.

Representing itself as a leading research university, the University of Porto is responsible for almost 25% of all Portuguese scientific production and for some of its greatest innovations. The Science and Technology Park of the University of Porto, with its 180 startups, is the center of Porto's innovation ecosystem, considered one of the strongest in Europe.

Embedded in a city classified as a UNESCO World Heritage Site and elected as Best European Destination for the third time in five years, the University of Porto offers a vibrant and multicultural environment, to which more than 4000 international students, comprising 167 nationalities, contributes each year.

Learn more at www.up.pt.

About the City of Porto

Porto is one of the oldest cities in Europe. Unique, hospitable and cosmopolitan, the city of Porto is situated in the north of Portugal. It is the second largest city in the country, with approximately 237,000 inhabitants and, in total, the district of Porto has 1,300,000 inhabitants. It lies in a very special geographical setting, between the river and the sea, and can easily be described as the amphitheatre overlooking the Douro River, beside which it was born and presides.

It is impossible to consider Porto's history without referring back to prehistoric times. Paleolithic Age engravings over twenty thousand years old found on the rock faces in the city of Foz Côa, a city bathed by the Douro River and located in the highland winemaking region of Alto Douro, attest to human settlement in this area. These findings led to the creation of the largest open-air rock face engraving museum in this city, the Museu do Côa, at the site of the crossing point between the Douro River and Côa. However, historical reports allege that the city of Porto dates back to Roman times, more specifically to the 8th Century B.C., at a time when it was named Cale or Portus Cale, the origin of the name of Portugal. Celtic ruins have also been found in Porto, proving that the city attracted a variety of settlers, each different group contributing to the city's development on the granite hillsides, along the river banks. Thanks to its fierce resistance during two battles and sieges in history, it has earned the epithet of 'Cidade Invicta' (Invincible City).

Baylor University's Commitment

Baylor University has been the home of the ICPC since the late 1980s, where it has been managed under the direction of Executive Director and Professor, Dr. William Poucher, with global enterprise technology development headed by Dr. Jeff Donahoo, Deputy Executive Director. The ICPC contributes to Baylor's global mission to encourage the next generation to develop and apply their problem-solving talents to the challenges that face the world today and the world to come. Chartered by the Republic of Texas, Baylor is the oldest institution of higher learning in the State of Texas. You may find more about Baylor at baylor.edu.

Upsilon Pi Epsilon's Commitment

The Upsilon Pi Epsilon International Computer Science Honor Society recognizes the best students of computer science and engineering in the world. Since its earliest participation, the UPE has provided support and scholarships to the World Finals teams. The UPE boasts the longest continuous relationship to the ICPC, dating back to 1970 with the first event held at Texas A&M by members of the Alpha Chapter of the UPE. For more information about other UPE activities, its chapters, and its membership click on upe.acm.org.