The 42nd Annual World Finals of the
ACM International Collegiate Programming Contest (ICPC)

Hosted by Peking University
in Beijing, China, 15-20 April, 2018

About the Contest – icpc.baylor.edu

The ACM 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 ACM, 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 2018 ACM-ICPC World Finals hosted by Peking University – which will be conducted on 19 April, 2017 in Beijing, China.

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 ACM 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 ACM-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 (15-20 April, 2018, Beijing, China) – Hosted by Peking University, 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.
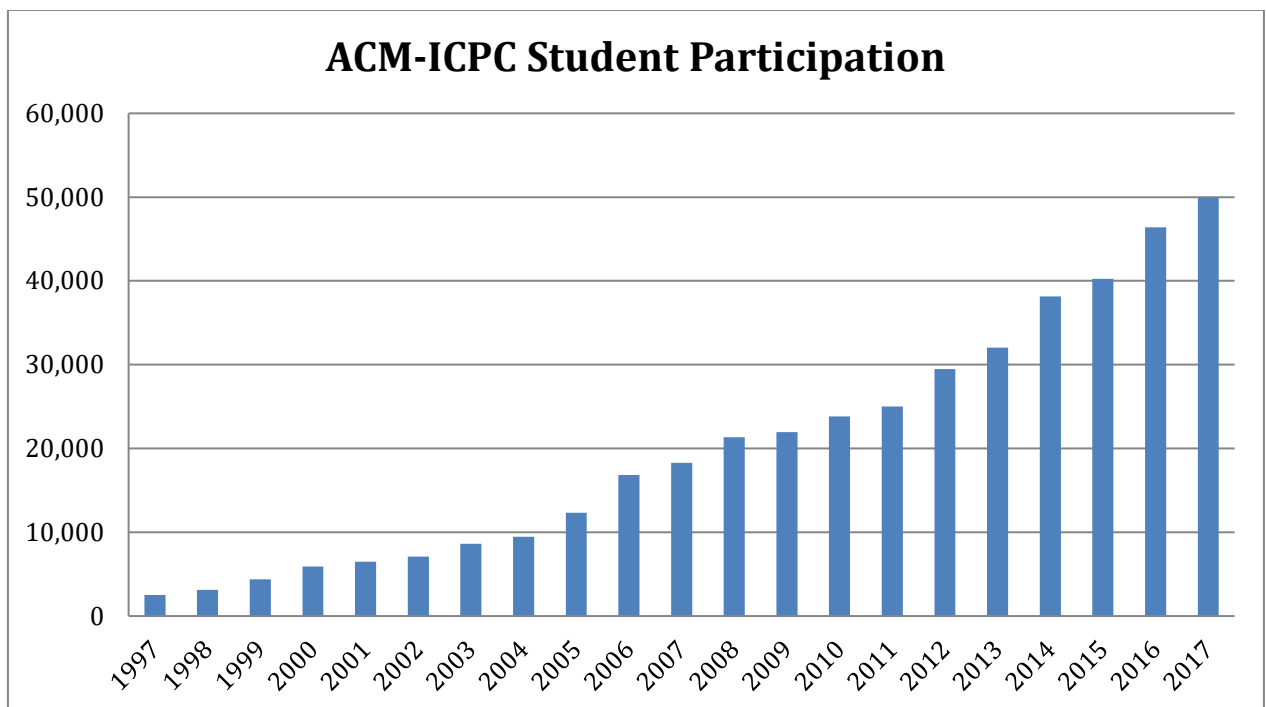
Judging is relentlessly strict. The students are given a problem statement – not a requirements document. They are given an example of test data, but they do not have access to the judges' test data and acceptance criteria. Each incorrect solution submitted is assessed a time penalty. You don't want 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.baylor.edu.

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

Contest Growth

ACM, 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.baylor.edu.

ACM-ICPC Student Participation

World Finals 2018 hosted in Beijing, China – the final round following the 2017 Regionals

Teams from regional contests servicing universities worldwide will advance to the World Finals to be held in Beijing, China, 15-20 April, 2018. The 2018 World Finals is hosted by Peking University.

Recent medal winners in order of finish are:

- 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 Executive Director is an officer of the ICPC Foundation. For more information about the ICPC and the ICPC Foundation visit icpc.foundation.

About Peking University
Peking University is a comprehensive and national key university. The campus, known as "Yan Yuan"(the garden of Yan), is situated at Haidian District in the western suburb of Beijing, with a total area of 2,743,532 square metres (or 274 hectares). It stands near to the Yuanmingyuan Garden and the Summer Palace. Peking University is proud of its outstanding faculty, including 53 members of the Chinese Academy of Sciences (CAS), 7 members of the Chinese Academy of Engineering (CAE), and 14 members of the Third World Academy of Sciences (TWAS). The university has effectively combined research on important scientific subjects with the training of personnel with a high level of specialized knowledge and professional skill as demanded by the country's socialist modernization. It strives not only for improvements in teaching and research work, but also for the promotion of interaction and mutual promotion among various disciplines. Thus Peking University has become a center for teaching and research and a university of a new type, embracing diverse branches of learning such as basic and applied sciences, social sciences and the humanities, and sciences of medicine, management, and education. Its aim is to rank among the world's best universities in the future. Learn more at english.pku.edu.cn.

About CYSC
Children & Youth Science Center (CYSC), a non-profit organization affiliated with the China Association for Science and Technology (CAST), was founded in 1978. CYSC is committed to engaging the public with science and technology and inspiring innovation in young generation through science education programs and public events. CYSC, together with provincial branches, science museums and STE centers have made up a nationwide network for informal science education and science popularization events in China. See www.cyscc.org.cn for more information.

ACM's Commitment
ACM, the Association for Computing Machinery, with more than 100,000 members, is the world's largest educational and scientific computing society, uniting computing educators, researchers, professionals, and students to inspire dialogue, share resources, and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking. For more information, see acm.org.

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 B. 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.