2017 World Finals
acm ICPC International Collegiate Programming Contest
hosted by Excellence in Computer Programming

IBM event sponsor

Rapid City ICPC 2017

ICPC FACT SHEET – 12 Oct 2016

The 41st Annual World Finals of the ACM International Collegiate Programming Contest (ICPC) Sponsored by IBM

Hosted by Excellence in Computer Programming in Rapid City, South Dakota, USA, 20-25 May 2017

About the Contest **–** acmicpc.org**,** ***also*** 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 competition operates under the auspices of ACM, is sponsored by IBM, and is headquartered at Baylor University. For nearly 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.

Teams of three students represent their universities 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 up to 132 teams to the World Championship round - the 2017 ACM-ICPC World Finals sponsored by IBM and hosted by Excellence in Computer Programming – which will be conducted on 24 May, 2017 in Rapid City, South Dakota, USA.

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.

Since IBM became sponsor in 1997, ICPC participation has increased by more than 1600%. This past year, ICPC participation included 40,266 of the finest students and faculty in computing disciplines from 2,736 universities from 102 countries on six continents.

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 (September to December 2016) – This past year 40,266 contestants from 2,736 universities in 102 countries on six continents competed at over 481 sites to advance to the 2016 World Finals. A record 43,967 students and 4,637 coaches competed in ICPC and ICPC-assisted competitions this past year, setting new records in participation.
- World Finals (20-25 May, 2017, Rapid City, South Dakota, USA) – Hosted by Excellence in Computer Programming, up to one hundred and thirty-two 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.

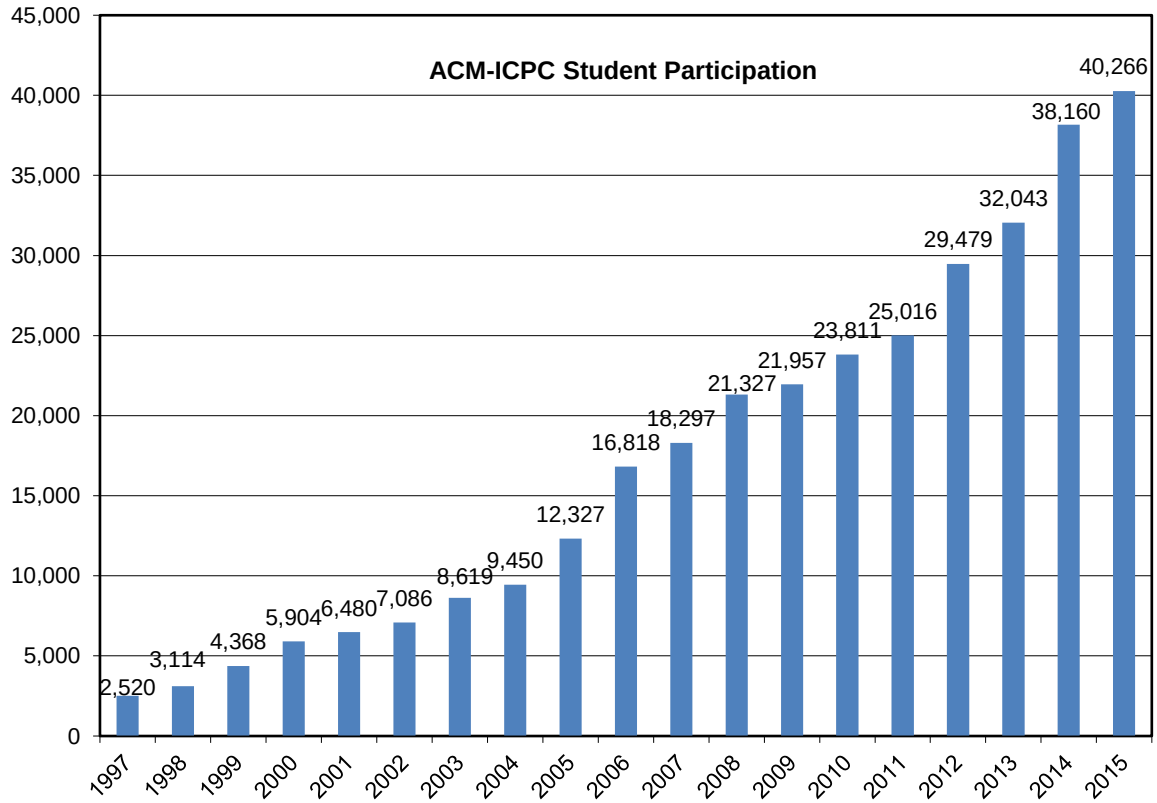
To learn more about the ICPC, please visit icpc.baylor.edu or acmicpc.org.

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

Visit the ICPC podcast series at battleofthebrains.podbean.com for insights from past contestants and current IBM executives.

Contest Growth

ACM, IBM, UPE, and Baylor University are thrilled that the contest continues to attract the best and brightest students from around the world. This past year 40,266 contestants from 2,736 universities in 102 countries competed in regional competitions at over 481 sites worldwide. Since the beginning of IBM's sponsorship in 1997, participation has increased more than 1600%. For more information on previous contests, and last year's final standings and problem sets, please see icpc.baylor.edu. Growth continues.



World Finals 2017 hosted in Rapid City – the final round following the 2016 Regionals

Up to one hundred and thirty-two teams from regional contests servicing universities worldwide will advance to the World Finals to be held in Rapid City, South Dakota, USA, 20-25 May, 2017. The 2017 World Finals is hosted by Excellence in Computer Programming.

Recent medal winners in order of finish are:

- 2016 Gold — St. Petersburg State University (Russia)
  Shanghai Jiao Tong University (China)
  Harvard University (USA)
  Moscow Institute of Physics & Technology (Russia)
  Silver — University of Warsaw (Poland)
  Massachusetts Institute of Technology (USA)
  St. Petersburg National Research University ITMO (Russia)
  Ural Federal University (Russia)
  Bronze — University of Wroclaw (Poland)
  Nizhny Novgorod State University (Russia)
  Lviv National University (Ukraine)
  Fudan University (China)
  University of Waterloo (Canada)
- 2015 Gold — St. Petersburg National Research University ITMO (Russia)
  Moscow State University (Russia)
  The University of Tokyo (Japan)
  Tsinghua University (China)
- 2014 Gold — St. Petersburg State University (Russia)
  Moscow State University (Russia)
  Peking University (China)
  National Taiwan University (Taiwan)
- 2013 Gold — St. Petersburg National Research University ITMO (Russia)
  Shanghai Jiao Tong University (China)
  The University of Tokyo (Japan)
  National Taiwan University (Taiwan)
- 2012 Gold — St. Petersburg National Research University ITMO (Russia)
  University of Warsaw (Poland)
  Moscow Institute of Physics & Technology (Russia)
  Shanghai Jiao Tong University (China)
- 2011 Gold — Zhejiang University (China)
  University of Michigan at Ann Arbor (USA)
  Tsinghua University (China)
  St. Petersburg State University (Russia)

About ACM

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.

About IBM

IBM is a globally integrated technology and consulting company. With operations in more than 170 countries, IBM attracts and retains some of the world's most talented people to help solve problems and provide an edge for businesses, governments, and non-profits. Innovation is at the core of IBM's strategy. The company develops and sells software and systems hardware and a broad range of infrastructure, focusing on growth initiatives such as cognitive computing, cloud computing, big data and analytics, mobile, social business, and security. For more information, visit ibm.com.

About Excellence in Computer Programming (ECP)
The ECP champions a culture of excellence by integrating the capabilities of the host partners of South Dakota. Host partners who are the leaders of industry and government are providing the personnel and financial resources for the 2017 World Finals. Rapid City is the home of the South Dakota School of Mines and Technology (SDSMT), the engineering and science research university of South Dakota. SDSMT is a research partner of the 8000-foot-deep Sanford Underground Research Facility (SURF), the world's newest laboratory for the study of neutrinos and dark matter which is located in Lead, South Dakota. ECP is a non-profit corporation dedicated to providing an environment in which people of all ages and ability levels can develop their coding expertise through individualized study, extracurricular activities, and participation in competitive programming.

IBM's Commitment
IBM's sponsorship commitment to the ACM International Collegiate Programming Contest is part of a company-wide effort to advance the next generation of technology leaders and problem solvers who have combined skills of computing science and business management. For more information, visit ibm.com/university.

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.