

# The ACM INTERNATIONAL COLLEGIATE PROGRAMMING CONTEST

sponsored by IBM

## FACT SHEET – March 21, 2004

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### *About the Contest*

The ACM (Association for Computing Machinery) International Collegiate Programming Contest (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 assist in the development of 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. Headquartered at Baylor University since the 1980s, the contest has expanded into a global network of universities hosting regional competitions that advance teams to the World Finals.

Since IBM became sponsor in 1997, the contest has nearly quadrupled. Participation has grown to involve tens of thousands of the finest students and faculty in computing disciplines at over 1,411 universities from 75 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 100,000 students in computing disciplines worldwide.
- *Preliminary Contests* – Some teams compete in multi-university preliminary contests that advance teams to Regional Contests.
- *Regional Contests* (September to December 2003) – Participation in preliminary and regional contests increased by 10% from 2,873 teams to 3,150 teams from 75 countries on six continents. Even with the number of regional sites increased from 106 to 126, hundreds of teams competed in preliminaries or were turned away due to lack of space.
- *World Finals hosted by Czech Technical University* (March 28-April 1, 2004 – Prague, The Czech Republic) – Seventy-three World Finalist teams will compete for awards, prizes and bragging rights at Prague Municipal House (Obecni Dum) as the guests of the City of Prague, host Czech Technical University, and co-host Charles University. These teams represent 73 universities on six continents.

### *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.

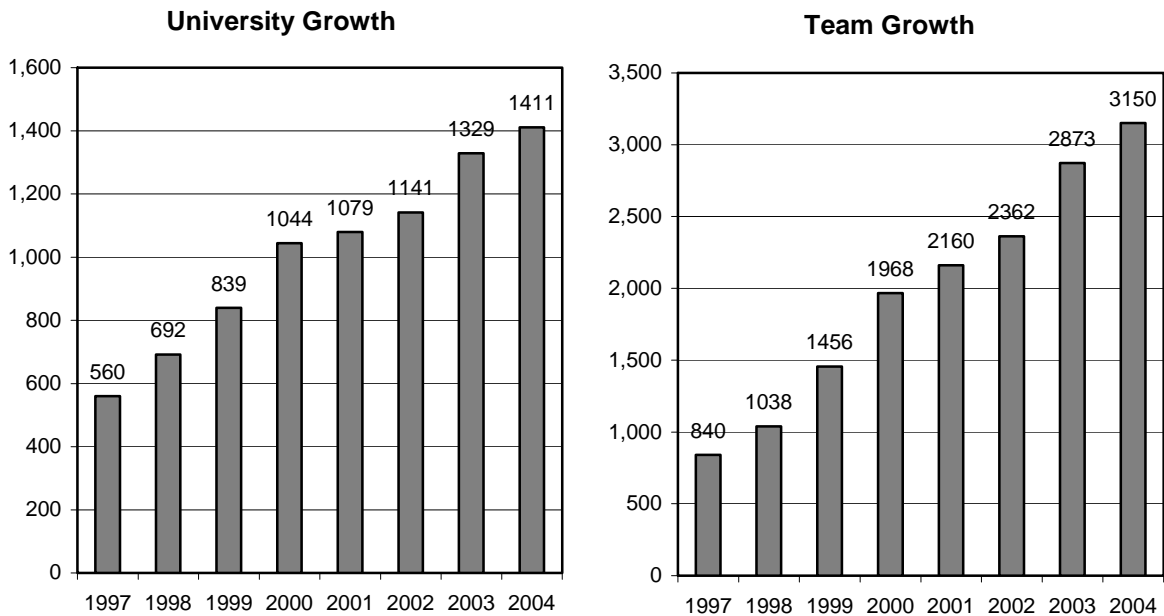
Teammates collaborate to rank the difficulty of the problems, deduce the requirements, design test beds, and build software systems that solve the problems under the intense scrutiny of expert judges. For a well-versed computer science student, some of the problems require precision only. Others require 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 <http://acmicpc.org> or <http://icpc.baylor.edu/>.

### Contest Growth

ACM and IBM are thrilled that the contest continues to attract the best and brightest students from around the world, with over 20,000 participants from 1,412 universities at 127 sites in 75 countries. Since the beginning of IBM’s sponsorship in 1997, contest participation has more than tripled, university participation has increased 2½ times and team participation has nearly quadrupled. For more information on previous contests, and last year’s final standings and problem sets, please see <http://icpc.baylor.edu/past/> or <http://www.software.ibm.com/acm>.



\* For 1997-98 university count was estimated as 2/3 of the team count based on the practices of the time.

## ***World Finals 2004***

Seventy-three winning teams from regional contests have qualified for the World Finals, which will be held at the beautiful Obecni Dum (Municipal House) in Prague from March 28-April 1, 2004. Recent gold medal winners in order of finish are:

- 2003: Warsaw University (Warsaw, Poland)  
Moscow State University (Moscow, Russia)  
St. Petersburg Institute of Fine Mechanics and Optics (St. Petersburg, Russia)  
Comenius University (Bratislava, Slovak Republic)
- 2002: Shanghai JiaoTong University (Shanghai, China)  
Massachusetts Institute of Technology (Cambridge, MA, U.S.A.)  
University of Waterloo (Waterloo, Ontario, Canada)
- 2001: St. Petersburg State University (St. Petersburg, Russia)  
Virginia Tech (Blacksburg, VA, U.S.A.)  
St. Petersburg Institute of Fine Mechanics & Optics (St. Petersburg, Russia)  
University of Waterloo (Waterloo, Canada)
- 2000: St. Petersburg State University (St. Petersburg, Russia)  
The University of Melbourne (Melbourne, Australia)  
The University of Waterloo (Waterloo, Ontario, Canada)
- 1999: The University of Waterloo (Waterloo, Ontario, Canada)  
Albert-Ludwigs-Universitat Freiburg (Freiburg, Germany)  
St. Petersburg Institute of Fine Mechanics & Optics (St. Petersburg, Russia)  
Bucharest University (Bucharest, Romania)  
Duke University (Durham, North Carolina, U.S.A.)

## ***About ACM***

The Association for Computing Machinery (ACM) is a major force in advancing the skills of information technology professionals and students. ACM serves its global membership of 75,000 by delivering cutting edge technical information and transferring ideas from theory to practice. ACM hosts the computing industry's leading Portal to Computing Literature. With its journals and magazines, special interest groups, conferences, workshops, electronic forums, Career Resource Centre and Professional Development Centre, ACM is a primary resource to the information technology field. For more information, see <http://www.acm.org>.

## ***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 computer scientists. For more information about other IBM college initiatives, please visit the IBM/ACM contest Web site and click on the Student Portal button - <http://www.software.ibm.com/acm>.

## ***About IBM***

IBM is the world's largest information technology company, with 80 years of leadership in helping businesses innovate. IBM software offers the widest range of e-business infrastructure software for all types of computing platforms, allowing customers to take full advantage of the new era of e-business. The fastest way to get more information about IBM software is through the IBM home page at <http://www.software.ibm.com>.

### ***Baylor University's Commitment***

Baylor University has been the home of the ICPC since the 1980s, where it has been managed under the direction of Executive Director and Professor, Dr. William B. Poucher. 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 <http://www.baylor.edu/>.

### ***Upsilon Pi Epsilon's Commitment***

The Upsilon Pi Epsilon International Computer Science Honor Society recognizes the best and brightest student in computer science and engineering in the world. Since its earliest, 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: <http://www.acm.org/upe/>.

### ***Czech Technical University in Prague's Commitment***

Founded in the 18<sup>th</sup> Century, Czech Technical University in Prague educates future experts in technical fields. The University supports scientific work, educates new scientists and is the center for scientific and educational activities in technical fields. The University develops scientific and educational research, creative and technical activities in accordance with society's needs, worldwide trends, and the principles of freedom of intellectual activities. Consistent with its commitment to a continuous and wide-ranging development of international cooperation, Czech Technical University in Prague is pleased to host the 2004 World Finals at the Prague Municipal House (Obecni Dum) under the direction and efforts of Professors Bozena Mannova and Martin Kacer and a host of CTU volunteers. More about CTU can be found at <http://www.cvut.cz>.

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The Twenty-eighth Annual

# ACM-ICPC World Finals

Hosted by:

Czech Technical University in Prague  
Charles University  
The City of Prague

Location and Date:

Obecní Dum - The Municipal House  
Prague, The Czech Republic  
March 31, 2004



**acm** International Collegiate  
Programming Contest



event  
sponsor

1. Albert Einstein University Ujm
2. Amirkabir University of Technology
3. Belarusian State University
4. Bangladesh University of Engineering & Technology
5. Brigham Young University
6. Bucharest University
7. Cairo University
8. California Institute of Technology
9. Charles University Prague
10. Cornell University
11. Donghua University
12. Duke University
13. Fudan University
14. Georgia Institute of Technology
15. Indian Institute of Technology - Bombay
16. Harvard University
17. Institute of Technology and Management
18. Illinois Institute of Technology
19. ITESM - Campus Monterrey
20. Izhevsk State Technical University
21. Korea Advanced Institute of Science and Technology
22. Jagiellonian University - Krakow
23. LeTourneau University
24. KTH - Royal Institute of Technology
25. Massachusetts Institute of Technology
26. Kyrgyz-Russian Slavic University
27. Michigan Technological University
28. Moscow State University
29. Nanyang Technological University
30. Nizhny Novgorod State University
31. National Taiwan University
32. Norwegian University of Science and Technology
33. Queen's University
34. Seoul National University
35. Novosibirsk State University
36. Shanghai Jiaotong University
37. Penn State University
38. Sharif University of Technology
39. Petrozavodsk State University
40. Shippensburg University
41. Sofia University "St. Kliment Ohridski"
42. South Dakota School of Mines and Technology
43. St. Petersburg Institute of Fine Mechanics & Optics
44. Stanford University
45. St. Petersburg State University
46. The Johns Hopkins University
47. The University of Hong Kong
48. Universidad de las Américas - Puebla
49. Tokyo Institute of Technology
50. Universidad de Palermo
51. Tsinghua University
52. Universidad Simón Bolívar
53. Universitat Politècnica de Catalunya
54. Universidade Estadual de Campinas
55. University of British Columbia
56. Universidade Federal de Pernambuco
57. University of Calgary
58. University of Cape Town
59. University of Central Florida
60. University of New South Wales
61. University of Illinois
62. University of Otago
63. University of Michigan - Ann Arbor
64. University of Taru
65. University of Minnesota - Twin Cities
66. Warsaw University
67. University of Texas at Austin
68. Yonsei University
69. University of Waterloo
70. Zhejiang University
71. University of Wisconsin - Madison
72. ZhongShan (Sun Yat-sen) University
73. Virginia Tech

