







ICPC FACT SHEET - 9 May 2017

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 133 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 2000%. This year ICPC Regional participation included 46,381 of the finest students and faculty in computing disciplines from 2,948 universities in 103 countries on six continents. A record 50,145 students and 5,073 coaches competed in ICPC and ICPC-assisted competitions this 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 (January to December 2016) This year 46,381 contestants from 2,948 universities in 103 countries on six continents competed at over 530 sites to advance to the 2017 World Finals.
- World Finals (20-25 May, 2017, Rapid City, South Dakota, USA) Hosted by Excellence in Computer Programming, one hundred and thirty-three 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.

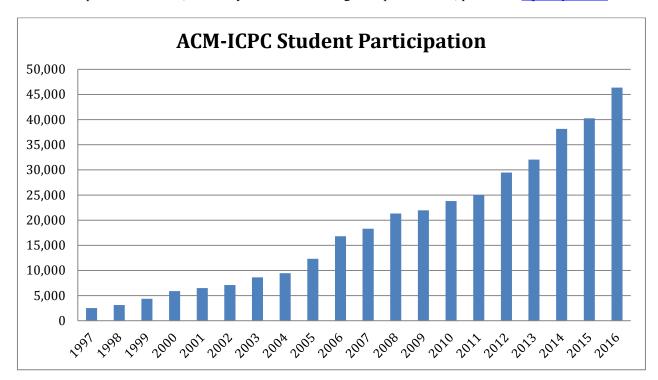
To learn more about the ICPC, please visit icpc.baylor.edu or acmicpc.org.

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

Visit the ICPC podcast series at <u>battleofthebrains.podbean.com</u> for insights from ICPC alumni and 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 year 46,381 contestants from 2,948 universities in 103 countries competed in regional competitions at over 530 sites worldwide. The ICPC student participation has increase by 20X in 20 years. For more information on previous contests, and last year's final standings and problem sets, please see <u>icpc.baylor.edu</u>.



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

One hundred and thirty-three 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 <u>ibm.com/university</u>.

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 <u>baylor.edu</u>.

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: <u>upe.acm.org</u>.

2017 World Finalists – 133 teams

Africa and the Middle East

Affica and the Mildule Last	
Al-Baath University	Arab Academy for Science and Technology (Alexandria)
http://www.albaath-univ.edu.sy	http://www.aast.edu
Team name: NoNameFoundException	Team name: DebugMyHair
Cairo University - Faculty of Computers and Information	Damascus University
http://www.fci.cu.edu.eg	http://www.damascusuniversity.edu.sy
Team name: s2++; Returns	Team name: Y!
Faculty of Computer and Information Sciences, Ain Shams University http://cis.shams.edu.eg Team name: TsukeenamiElRashidy	Faculty of Engineering (at Shoubra), Benha University http://www.febu.edu.eg Team name: The Unlooked-for
German University in Cairo	The American University in Cairo
http://met.guc.edu.eg	http://www.cs.aucegypt.edu
Feam name: balabizoo	Team name: BitsPlease
Fishreen University	University of Cape Town
http://www.tishreen.edu.sy	http://www.uct.ac.za
Feam name: NCD#1	Team name: If Cats Programmed Computers
Asia	
Bangladesh University of Engineering and Technology	Beihang University
http://www.buet.ac.bd	http://ev.buaa.edu.en
Team name: BUET Rayo	Team name: TDL
Beijing Institute of Technology	Beijing Normal University
http://www.bit.edu.cn	http://www.bnu.edu.cn
Feam name: BIT_Crocodile	Team name: SaltyFish
Beijing University of Posts and Telecommunications	Bina Nusantara University
http://www.bupt.edu.cn	http://www.binus.ac.id
Feam name: BUPT_Caicai_Musketeers	Team name: gungnir
Chennai Mathematical Institute	Chulalongkorn University
http://www.cmi.ac.in	http://www.chula.ac.th
Feam name: thirdfloor	Team name: CPCU Debuggers
Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar http://www.daiict.ac.in Feam name: FruitSalad	Fudan University http://www.fudan.edu.cn Team name: Wood Cube
Fuzhou University	Hangzhou Dianzi University
nttp://www.fzu.edu.cn	http://www.hdu.edu.cn
Team name:	Team name: HDU-SupportOrNot
ndian Institute of Technology - Bombay	Indian Institute of Technology - Indore
http://www.iitb.ac.in	http://www.iiti.ac.in
Feam name: Rocket	Team name: Survivor
ndian Institute of Technology - Kanpur	International Institute of Information Technology - Bangalore
http://www.iitk.ac.in	http://www.iiitb.ac.in
Feam name: FacelessMen	Team name: How you doing
International Institute of Information Technology - Hyderabad	Jahangirnagar University
http://www.iiit.ac.in	http://www.juniv.edu
Feam name: mobius_treap	Team name: JU_Circavex
KAIST	Keio University
http://www.kaist.ac.kr	http://www.keio.ac.jp
Feam name: hYEAHyea	Team name: Running
National Institute of Technology, Karnataka	National Taiwan University
http://www.nitk.ac.in	http://www.ntu.edu.tw
Feam name: code_phoenix	Team name: AcThPaUNpPuAmCmBkCfEsFmMdNoLr
National University of Singapore	Northeastern University (China)

http://www.nus.edu.sg	http://www.neu.edu.cn
Team name: TeamTam	Team name: Three Retired Doge
Peking University	Seoul National University
http://www.pku.edu.cn	http://www.snu.ac.kr
Team name: Red Queen	Team name: ACGTeam
Shahid Beheshti University	Shanghai Jiao Tong University
http://en.sbu.ac.ir	http://www.sjtu.edu.cn
Team name: Dog Nine	Team name: New Meta
Shanghai University	Sharif University of Technology
http://www.shu.edu.cn	http://www.sharif.edu
Team name: Wand Maker	Team name: CrockPot
South China University of Technology	The Chinese University of Hong Kong
http://www.scut.edu.cn	http://www.cse.cuhk.edu.hk
Team name: doubility	Team name: The Descendant of Siuwah
The University of Tokyo	Tokyo Institute of Technology
http://www.u-tokyo.ac.jp	http://www.titech.ac.jp
Team name: Cxiv-Dxiv	Team name: po
Tsinghua University	Universitas Indonesia
http://www.tsinghua.edu.cn	http://www.ui.ac.id
Team name: Deep Dark Fantasy	Team name: Awrakin
University of Aizu	University of Dhaka
http://www.u-aizu.ac.jp	http://www.du.ac.bd
Team name: 575.cpp	Team name: DU_Censored
University of Electronic Science and Technology of China	University of Engineering and Technology - VNU
http://www.uestc.edu.cn	http://e.uet.vnu.edu.vn
Team name: UESTC_Life_and_Lemons	Team name: LINUX
University of Management and Technology	University of Tehran
http://umt.edu.pk	http://www.fos.ut.ac.ir
Team name: The Stars	Team name: NeshesTeam
University of the Philippines - Diliman	Wuhan University
http://upd.edu.ph	http://www.whu.edu.cn
Team name: Quiwarriors	Team name: pied piper
Zhejiang University http://www.zju.edu.cn Team name: Siunaus	
Europe	
Belarusian State University of Informatics and Radioelectronics http://www.bsuir.by Team name: Belarusian SUIR #2	École Normale Supérieure de Paris http://www.ens.fr Team name: ENS Ulm
ETH Zürich	Jagiellonian University in Krakow
http://www.ethz.ch	http://www.uj.edu.pl
Team name: rETHink again	Team name: Jagiellonian
KTH - Royal Institute of Technology	Lviv National University
http://www.kth.se	http://franko.lviv.ua
Team name: Omogen Heap	Team name: LNU AlgoTesters
Moscow Institute of Physics & Technology	Moscow State University
http://www.mipt.ru	http://msu.ru
Team name: Moscow IPT: Jinotega	Team name: Moscow SU: Last Hope
National Research University Higher School of Economics	Novosibirsk State University
http://www.hse.ru	http://www.nsu.ru
Team name: NRU HSE: Random Shuffle	Team name: Novosibirsk SU
Perm State University	Petrozavodsk State University
http://www.psu.ru	http://www.petrsu.ru
Team name: Perm SU: Indigenous	Team name: Petrozavodsk SU 1

POLITEHNICA University of Bucharest	Samara National Research University
http://www.pub.ro	http://en.ssau.ru
Team name: TeamName	Team name: Haters
Saratov State University	St. Petersburg Academic University
http://sgu.ru	http://www.spbau.ru
Team name: Saratov State University 2	Team name: SPb AU 3: Bandity
St. Petersburg ITMO University	St. Petersburg State University
http://en.ifmo.ru	http://eng.spbu.ru
Team name: SPb ITMO University 1	Team name: SPb SU Base
Taras Shevchenko National University of Kyiv	TOBB University of Economics and Technology
http://www.univ.kiev.ua	http://www.etu.edu.tr
Team name: The Alphas	Team name: LogicError
Tomsk Polytechnic University	University of Bucharest
http://www.tpu.ru	http://www.unibuc.ro
Team name: Tomsk PU 1	Team name: Echipa Lacheta
University of Helsinki	University of Latvia
http://www.helsinki.fi	http://www.lu.lv
Team name: Game of Nolife	Team name: LU 1
University of Oxford	University of Warsaw
http://www.ox.ac.uk	http://www.uw.edu.pl
Team name: Catz CS Society	Team name: Warsaw Eagles
University of Wroclaw	University of Zagreb
http://www.uni.wroc.pl	http://www.unizg.hr
Team name: UWr1	Team name: Zagreb
Ural Federal University	Uzhgorod National University
http://www.ustu.ru	http://www.uzhnu.edu.ua
Team name: Ural FU: Charmander	Team name: UzhNU_MagicalPony
Vilnius University	Yerevan State University
http://www.vu.lt	http://www.ysu.am
Team name: VU #1	Team name: Yerevan SU 1

Latin America

Facultad de Ciencias-Universidad Nacional Autónoma de México http://www.fciencias.unam.mx Team name: PU++	Instituto Tecnológico Autónomo de México http://www.itam.mx Team name: Los Románticos
Pontificia Universidad Católica del Perú - FCI	Universidad Autónoma de Nuevo Leon
http://www.pucp.edu.pe	http://www.uanl.mx
Team name: O(1) O(n) O(u(n))	Team name: Los A'S
Universidad de Buenos Aires - FCEN	Universidad de Chile
http://exactas.uba.ar	http://www.dcc.uchile.cl
Team name: PUMMAS	Team name: El equipo de Paulsen
Universidad de La Habana	Universidad de Pinar del Río
http://www.uh.cu	http://www.upr.edu.cu
Team name: UH++	Team name: sUrPRise
Universidade Estadual de Campinas	Universidade Federal da Bahia
http://www.ic.unicamp.br	http://www.ufba.br
Team name: Veni Vidi Codi	Team name: Robério e Seu Teclado
Universidade Federal de Campina Grande	Universidade Federal de Itajubá - Campus Itajubá
http://www.ufcg.edu.br	http://www.unifei.edu.br
Team name: !xor&!	Team name: Epic Sax Guys
Universidade Federal de Pernambuco	Universidade Federal do Rio Grande do Norte
http://www.cin.ufpe.br	http://www.ufrn.br
Team name: 0xE	Team name: Ginga com Tapioca

Universidad Mayor de San Simon - Sistemas	Universidad Nacional de Colombia - Bogotá
http://www.umss.edu.bo	http://www.unal.edu.co
Team name: team.getAnotherName()	Team name: UNBounded
Universidad Nacional de Córdoba - FaMAF	Universidad Nacional de Rosario
http://www.famaf.unc.edu.ar	http://www.unr.edu.ar
Team name: Gracias Demetrio	Team name: You've gone incognito :\$
Universidad Simón Bolívar http://www.usb.ve	

Team name: O(-1)

North America

Cedarville University	Cornell University
http://www.cedarville.edu	http://www.cornell.edu
Team name: Cedarville Blue	Team name: Cornell 1
Iowa State University	Massachusetts Institute of Technology
http://www.iastate.edu	http://web.mit.edu
Team name: Team.getName()	Team name: MIT ONE
Mount Allison University	Northwestern University
http://www.mta.ca	http://northwestern.edu
Team name: MTA Team Alpha	Team name: WildWildCats
Princeton University	South Dakota School of Mines and Technology
http://www.princeton.edu	http://www.sdsmt.edu
Team name: Princeton	Team name: SDSMT Hardrockers
The University of South Dakota	The University of Texas at Austin
http://www.usd.edu	http://www.utexas.edu
Team name: Roadrunners	Team name: UT White
University of Alberta	University of British Columbia
http://www.ualberta.ca	http://www.ubc.ca
Team name: Alberta Gold	Team name: UBC*
University of California at Berkeley	University of California Irvine
http://www.berkeley.edu	http://www.uci.edu
Team name: Berkeley Blue	Team name: filter
University of California Los Angeles	University of Central Florida
http://www.ucla.edu	http://www.ucf.edu
Team name: Bruins	Team name: UCF Knights
University of Illinois at Urbana-Champaign	University of Maryland
http://illinois.edu	http://www.cs.umd.edu
Team name: Time Limit Exceeded	Team name: UMDblack
University of Michigan at Ann Arbor	University of Pennsylvania
http://www.umich.edu	http://www.upenn.edu
Team name: Victors	Team name: UPENN RED
University of Rochester	University of Waterloo
http://www.rochester.edu	http://www.uwaterloo.ca
Team name: YellowJackets	Team name: Waterloo Royal Blue
University of Wisconsin - Madison	Virginia Tech
http://www.wisc.edu	http://www.cs.vt.edu
Team name: Chang	Team name: PriorityQueues for President
Washington University in St. Louis http://www.wustl.edu Team name: Indigo	

South Pacific

Monash University	University of New South Wales
http://www.monash.edu.au	http://www.cse.unsw.edu.au
Team name: BuildAFirewall	Team name: AbishforesT