The 35th ACM-ICPC World Finals

Orlando, FL

2011

27 - 31 May
ICPC Checklist

For your team:
Unmarked paper dictionary, if you want to use one
A few personal items (tissues, protractor, totems, etc.)
*Photocopy of your passport’s picture page
*Photocopy of your proof of enrollment
*A copy of your team’s Team Reference Document, if you choose to have one.
Labeled CD of the Team Reference Document, if you choose to have one.
*Needed for each team member. Check the onsite registration instructions at
http://icpc.baylor.edu > World Finals Rules > On-site Registration Instructions

Documents:
Passport (with a US visa if needed)
Copy of your hotel confirmation (print from your dashboard)

For your stay in Orlando:
Clothing appropriate for a nice resort for during the day (jeans and shorts are fine)
A jacket and long pants for the cooler evenings
A swimsuit
Sun gear (hat, sunglasses)
Sunblock (at least SPF 15)
Insect repellent
Any medications you would ordinarily take while traveling
A camera
Comfortable shoes - the excursion will involve a lot of walking
ATM card for spending money (let your bank know you will use it in the US)
This year’s world finalists will compete in the beautiful central Florida city of Orlando. Orlando, located in the heart of the state’s citrus belt, is sometimes nicknamed the fun capitol of the world, drawing visitors from around the globe. Several epic amusement parks dot the landscape including the inspiring Sea World, the famed Walt Disney World Resort and the action-packed Universal Studios Florida.

This year’s world finalists will enjoy some of the best that Orlando has to offer. The weather in May is terrific, with quite warm daytime temperatures approaching 90 degrees F (32 degrees C) and moderate evenings. Fun and sun are two of the great features that Orlando offers as well as world-class shopping, golfing, and the chance to enjoy water sports and outdoor activities.

Welcome to Orlando!
The Peabody Orlando

The Peabody Orlando is a unique, luxury hotel in the heart of sunny Orlando, Florida. The Peabody caters to some of the world’s largest conventions and has been chosen for the 2011 ACM ICPC due to its longstanding reputation for excellence in hospitality. This world-class hotel is conveniently located on International Drive, just minutes away from many world famous attractions, exciting entertainment venues, fine restaurants, and fabulous shopping opportunities. The hotel is famous for the twice daily, red carpet march of the Peabody Ducks between the elevator and their day home, a beautiful marble fountain.

This longstanding tradition has been carried out in Peabody hotels across the nation since 1933, and will be sure to delight and entertain you. The Peabody boasts more than three acres of beautifully landscaped grounds including several sparkling, blue swimming pools. The Grotto Pool area includes a zero-entry, free-form pool, several private cabanas, a spiral water slide, a miniature beach area complete with sand, and a tranquil, cascading waterfall. The Terrace Pool area contains an Olympic-sized pool, a relaxing whirlpool, the official Peabody Duck residence, and more private cabanas. The hotel has one lighted tennis court, an award winning spa, and an enormous, state-of-the art business and convention center. All guest rooms are lavishly equipped with features to inspire relaxation such as nightlights for traveling around the room in the dark, generous bathtubs with a television hidden in the lighted bathroom mirror, comfortable chairs, rich, wooden desks, and modern, well-appointed entertainment centers. We know you will enjoy your upcoming experience at The Peabody Orlando, as it contains the perfect mix of uncompromising quality and welcoming charm in an exciting, vibrant location.
Welcome to the 35th Annual World Finals of the ACM International Collegiate Programming Contest sponsored by IBM and hosted by IBM and ICPC Headquarters at Baylor University!

The ACM-ICPC World Finals culminates the efforts of faculty and students from 2,070 universities in 88 countries competing at over 250 regional sites worldwide. The top 105 teams have advanced to the 2011 World Finals. Congratulations to the Finalists and to all who have made this possible!

These teams are here in Orlando for a simple reason. They bested nearly 25,000 of the finest university students on six continents in global competition. There are so many stars visible in the ICPC Community. UPE has served for 41 years, ACM has served for 35 years, and Baylor University has served for 28 years. Thanks to UPE for their steadfast support and for funding the “first-to-solve” awards this year. Thanks to ACM for their steadfast support and for their offer of free student membership to the 24,915 contestants and the many thousands of student volunteers that make the ICPC possible.

IBM, Baylor University, and ACM have extended support of the ICPC through 2017. In 14 years of IBM sponsorship, the ICPC participation has increased 1000%, extending opportunity to all universities on six continents. To celebrate IBM’s 20-year commitment (1997-2017), IBM has joined with ICPC Headquarters to host the 2011 World Finals in Orlando.

Consider the IBM Software Group, winners of the 2011 UPE Outstanding International Contribution Award for investing in your education. Sponsoring the ICPC for 20 years, establishing the IBM Academic Initiative, establishing IBM Centers for Advanced Studies, and for the many IBM educational programs that open doors for others worldwide, we salute IBM and the people of IBM for their commitment and community spirit.

Consider Measures Award winner Pat Hynan, Director of Operations, who volunteers his efforts year round to make the World Finals work smoothly. Consider the DeBlasi Award winning Baylor Competitive Infrastructure Initiative Lab under Dr. Jeff Donahoo’s leadership. For a decade they have provided global enterprise tools and services to the ICPC community while conducting and supporting research and development with ICPC volunteers at KTH Royal Institute of Technology, Czech Technical University in Prague, the Universidad de Valladolid, and California State Sacramento.

Consider your regional leadership, the organizers, the judges, the systems teams, the media teams, your coaches, your universities, industry leaders, and community leaders who join together to make certain that the efforts of the ICPC community make a lasting difference.

Here at the gorgeous Peabody Orlando in Orlando, Florida, where technology and family fun draw visitors from around the globe, let us draw strength from the city’s hospitality, from ICPC volunteers both local and global, as we celebrate the commitment of these ACM-ICPC World Finalists who have raised the bar of performance for this generation’s problem solvers. They will make a difference. We need only open the door for them to create opportunity for others.

The ICPC is a team sport and so is putting on a World Finals! Whether from research labs, corporate headquarters, or universities far and near, whether from friends and patrons, government and industry near and far, we are delighted to bring you, the 2011 World Finalists, the stars of the Information Age to come, here to Orlando. May the Florida sunshine light paths that lead to success for all 2011 World Finalists.

Work Hard! Have Fun! Best Wishes!

William B. Poucher, Ph.D., ACM Fellow
ICPC Executive Director
Welcome from IBM sponsoring executive Doug Heintzman...

Welcome to the 35th Annual ACM International Collegiate Programming Contest World Finals! The ICPC is the world’s largest and most prestigious programming competition featuring you -- the best and brightest university students in the world and their supporters! IBM is proud to serve as both sponsor and host of this year’s event, here in beautiful Orlando, Florida.

All of you have worked very hard to prepare for this World Finals competition. Whether you’re a contestant, coach, regional contest or site director, participant, or volunteer, I commend you for your dedication and hard work. I also want to thank the ICPC leadership and volunteers, the Peabody Orlando hotel, and the IBM teams for their outstanding commitment and tireless efforts to make this week a memorable one for all.

I hope that you will take full advantage of meeting and networking with the other participants here from all over the world. Many long-lasting friendships began at an ICPC World Finals and we hope you will continue this tradition.

The ACM-ICPC World Finals is a gathering of the world’s brightest young programmers, and you should be very proud to be a part of this elite group. We look forward to spending time with you throughout the week; during TechTrek at SeaWorld on Saturday and in the IBM Chill Zone each evening where you’ll have an opportunity to see some of the cool and innovative technologies IBM is working on. Of course the highlight of the week for me, and for all of my IBM colleagues, will be the main event and watching you compete on the international stage on Monday.

After months of preparation, the 2011 ACM-ICPC World Finals is finally here! Be proud of what you have already accomplished. Try to get as much as you can out of this extraordinary life experience. Try to relax and have lots of fun this week. The memories that you will make during this exciting and momentous time will remain with you forever!

Doug Heintzman
ACM-ICPC Sponsoring Executive
Director of Strategy, IBM Collaboration Solutions
IBM Software Group
Greetings from ACM!

Welcome to the 35th Annual ACM International Collegiate Programming Contest World Finals. ACM is extremely proud to participate in the life of the ICPC community. I am personally excited to be here in Orlando with you and to experience the vitality of the final round of this global event.

We also welcome you to ACM. We are pleased to continue free student memberships to all student participants in the ICPC, with the highest privileges given to you, the 2011 World Finalists.

I would like to express ACM’s gratitude to the Baylor University team for providing ICPC Headquarters. Also, UPE, the international honor society for the computing and information disciplines, deserves thanks for being an ICPC partner since the beginning.

A special thanks to IBM for its long-term commitment to the ICPC and the global community. The growth of the ICPC has been fueled by IBM’s commitment to global opportunity for students.

I wish you all good fortune in the days ahead, both here at the World Finals and as your career unfolds. Join the computer scientists, engineers, innovators, and inventors who have made ACM part of their career since industry first emerged. You will be glad you did.

Best wishes!

Alain Chesnais, ACM President
Welcome to beautiful Orlando, Florida!

On behalf of Baylor University, welcome to the 35th Annual ACM International Collegiate Programming Contest (ICPC) World Finals! Here in this famous vacation destination, we are thrilled to celebrate your accomplishment of being one of the top teams advancing to the World Finals from more than 2,000 universities in 88 countries. We are thankful for your participation in World Finals Week and are watching with great anticipation to see which will be the best computer programming team in the world.

Baylor University has proudly hosted the ICPC Headquarters for more than two decades. Partnering with IBM, ACM, and UPE, we are pleased to do our part to help you — the students, coaches, and mentors — bring the next generation of computer scientists and engineers to global prominence.

Best wishes to each of you throughout the competition. You are competing with the best and brightest, and our prospects for a bright future will be stronger for it.

Sincerely yours,

Kenneth Winston Starr
President, Baylor University
Home of the ICPC World Headquarters
On behalf of Upsilon Pi Epsilon (UPE), I welcome the students, coaches, volunteers and friends of the ICPC World Finals. I wish to thank Dr. Bill Poucher for re-scheduling the 2011 contest here in Orlando, Florida, a wonderful and fun American city. It is interesting to note that just last year, we experienced an unusually cold winter in Harbin, China, where ICPC participants had to bundle up in heavy winter jackets in order to go outdoors. Today, we are able to bask in the warm spring sunshine in a city that draws visitors from literally around the world.

This week, our attention will be centered on the international teams declared champions of their respective regions. They will vie for the championship trophy and several other ICPC awards. Let us not forget to recognize the significant roles played by the various volunteers, the team coaches, the ACM, the ICPC staff, and, especially, the sponsorship, support and ongoing friendship of the IBM corporation. Team members should also appreciate and send a special Thank You to your college or university, whose support allowed you to travel to Orlando.

We wish everyone a great time here at the 2011 ICPC. Make the effort to become friends with as many people as you can possibly meet in the days you are here. You might even take the time to learn and say a phrase or two in some languages different from your own. Consider this event a very special opportunity for you to socialize with people from all parts of the globe.

Sincerely yours,

Orlando Madrigal, Ph.D.
Executive Director of UPE
Africa and the Middle East

Ain Shams University
Team Name: Null Terminated#4Qn*&&$$$
Ahmed Gawish, Coach
Ahmad El-Ruby, Contestant
Islam Farid, Contestant
Mohamad Abdel-Monem, Contestant

American University of Sharjah (AUS)
Team Name: AUS Leopards
Ghassan Qadah, Coach
Nour Nour, Contestant
Omar AlReyami, Contestant
Omar Al Muhairi, Contestant

Faculty of Computers and Information, Cairo University
Team Name: MMMAW + s2++; Salwa El Gamal, Coach
Ahmed Aly, Contestant
Mostafa Saad, Contestant
Yasser Yahia, Contestant

Faculty of Engineering - Alexandria University
Team Name: Alex CSD
Mahmoud Bassiouny, Coach
AbdelRahman Elsergani, Contestant
Ahmed Abdelkader, Contestant
Mohammad Kotb, Contestant

German University in Cairo
Team Name: Dirichlet’s Principle
Slim Abdennadher, Coach
Abdallah El Guindy, Contestant
Islam Al-Aarag, Contestant
Mohamed Abou Hamra, Contestant

King Abdullah University of Science and Technology
Team Name: Unique
Guoda Chen, Coach
Jinling Jiang, Contestant
Ruogu Ding, Contestant
Suhib Alsisan, Contestant

University of Stellenbosch
Team Name: Maties Team 2
Steve Kroon, Coach
Dirk-B Coetzee, Contestant
Jacobs Francois Conradie, Contestant
Ralf Kistner, Contestant

Asia

Amirkabir University of Technology
Team Name: Last War of PMP
Mohammad Fatemipour, Coach
Mohammadjavad Rezayee Seraji, Contestant
Pooya Zafar Asadollahpoor, Contestant
Pouria Alimirzaei, Contestant

Bangladesh University of Engineering and Technology
Team Name: B.U.I.T. Annihilator
Mohammad Kaykobad, Coach
Anindyas Das, Contestant
Muntasir Mashuq, Contestant
Tasnim Imran Sunny, Contestant

Beijing Jiaotong University
Team Name: BJTU-ACMagic
Hua Huang, Coach
Jinrui Sun, Contestant
Lu Wang, Contestant
Tong Wu, Contestant

DJ Sanghvi College of Engineering
Team Name: phoenix
Neepa Shah, Coach
Krunal Manik, Contestant
Pratik Tandel, Contestant
Purv Shah, Contestant

East China Normal University
Team Name: ecnu_puzzle
Chunyun Xiao, Coach
Qian Chen, Contestant
Weichao Luo, Contestant
Zhihao Wang, Contestant

Fudan University
Team Name: HexHeaven
Yonghui Wu, Coach
Jiaye Zhu, Contestant
Luyu Xie, Contestant
Yingtao Tian, Contestant

Fuzhou University
Team Name: OpenGL
Yingjie Wu, Coach
Lei Chen, Contestant
Wenbin Tang, Contestant
Xilin Zhang, Contestant

Hangzhou Dianzi University
Team Name: HDU-Knuth
Chunying Liu, Coach
Hao Hu, Contestant
Lihua Zhong, Contestant
Xiaoli Wang, Contestant

Harbin Engineering University
Team Name: Blue Sky
Jingshan Yu, Coach
Guang Hu, Contestant
Junfeng Liu, Contestant
Zhe Yuan, Contestant

Harbin Institute of Technology
Team Name: DPS
Dalie Sun, Coach
Sheng Wang, Contestant
Tao Guo, Contestant
Zilong Lu, Contestant

Ho Chi Minh City University of Science
Team Name: Equanimity
Vi Minh Luong, Coach
Dang Khoa Trinh Tran, Contestant
Hung Phan Duy, Contestant
Tuan Vu Pham, Contestant

Hong Kong University of Science and Technology
Team Name: Optimus Prime
Ke Yi, Coach
Danqi Chen, Contestant
Lu Wang, Contestant
Yuliang Li, Contestant

Huazhong University of Science & Technology
Team Name: ErBao
Shi Yin, Coach
Han Xu, Contestant
Jian He, Contestant
Shunmin Li, Contestant
Indian Institute of Technology - Delhi
Team Name: Proof
Naveen Garg, Coach
Nikhil Garg, Contestant
Pradeep George Mathias, Contestant
Rudradev Basak, Contestant

Indian Institute of Technology - Kanpur
Team Name: Deep Thought
Phalguni Gupta, Coach
Raziman Thottungal Valapu, Contestant
Shiti Kanth, Contestant
Utkarsh Lath, Contestant

International Institute of Information Technology - Hyderabad
Team Name: ANY Dream
Vikram Pudi, Coach
Anish Shankar, Contestant
Nadeem Moidu, Contestant
Yash Kumar, Contestant

Korea Advanced Institute of Science and Technology
Team Name: RoyalRoader
Kyomin Jung, Coach
Jae Hong Kim, Contestant
Junhee Cho, Contestant
Sun Il Kwon, Contestant

Kyoto University
Team Name: d3xsp
Yuichi Yoshida, Coach
Norihiro Kamae, Contestant
Shohei Nishida, Contestant
Yasuhiro Hirasawa, Contestant

Nanyang Technological University
Team Name: NTU Pigeons
Kevin Jones, Coach
Anh Tuan Khuc, Contestant
Quang Vu Pham, Contestant
Tuan Anh Doan, Contestant

National Taiwan University
Team Name: +1 ironwood branch
Pu-Jen Cheng, Coach
Che Yang Wu, Contestant
Han-Jay Yang, Contestant
Pi-Hsun Shih, Contestant

Peking University
Team Name: PKU_Ftd
Wei Guo, Coach
Luhang Lai, Contestant
Yuxi Chen, Contestant
Ziqian Xiao, Contestant

Seoul National University
Team Name: reverse_iterator
Heon Young Yeom, Coach
Chan Min Kim, Contestant
In Seob Kim, Contestant
Sangwoo Kim, Contestant

Shandong University
Team Name: Code_Geass
Meng He, Coach
Jie Mao, Contestant
Rui Wang, Contestant
Wei Guo, Contestant

Shanghai Jiaotong University
Team Name: Luminar
Yong Yu, Coach
Jingbo Shang, Contestant
Shanggu Peng, Contestant
Xuezhi Cao, Contestant

Sharif University of Technology
Team Name: 3gespenek
Kamran Bavar, Coach
Ali Babaie Cheshme Ahmad Rezaei, Contestant
Sepideh Mahabadi, Contestant
Soheil Ehsani, Contestant

Sichuan University
Team Name: APTX4869
Jie Zuo, Coach
Guo Li, Contestant
Yuhao Fang, Contestant
Zilong Feng, Contestant

The Chinese University of Hong Kong
Team Name: ManiAC
Lap Chi Lau, Coach
Cheuk Ting Li, Contestant
Chun Ho Hung, Contestant
Yue Hei Ng, Contestant

Tsinghua University
Team Name: Dubhe
Xiaojun Wu, Coach
Dong Zhou, Contestant
Yi Yang, Contestant
Zichao Qi, Contestant

University of Electronic Science and Technology of China
Team Name: UESTC-Melody
Shengping Gou, Coach
Chen Cheng, Contestant
He Xuan, Contestant
Li Chunqi, Contestant

University of Tokyo
Team Name: USAGI_Code
Tomoyuki Kaneko, Coach
Eiichi Matsumoto, Contestant
Kazuhiro Hosaka, Contestant
Yoko Oya, Contestant

Wuhan University
Team Name: OpenLegend
Wenyong Dong, Coach
Shuai Han, Contestant
Yan Li, Contestant
Yaxiong Liang, Contestant

Zhejiang Normal University
Team Name: PpG_LongPo
Jianmin Han, Coach
Chao Zhang, Contestant
Fangwei Luo, Contestant
Xiaoyang Hu, Contestant

Zhejiang University
Team Name: ArcOfDream
Can Wang, Coach
Jialin Ouyang, Contestant
Luyi Mo, Contestant
Zejun Wu, Contestant

Zhongshan (Sun Yat-sen) University
Team Name: SYSU_Calvados
SongShan Guo, Coach
Haoquan Zhao, Contestant
Siyu Wang, Contestant
Ziheng Deng, Contestant
<table>
<thead>
<tr>
<th>Country</th>
<th>University</th>
<th>Team Name</th>
<th>Coach Name</th>
<th>Contestants</th>
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<tbody>
<tr>
<td>Europe</td>
<td>Belarusian State University</td>
<td>Team Name: BelarusianSU 1</td>
<td>Vladimir Kotov, Coach</td>
<td>Vladimir Udavichenka, Contestant, Yury Udavichenka, Contestant</td>
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<td>Yury Pisarchyk, Contestant</td>
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<td>Donetsk National University</td>
<td>Team Name: DonNU United</td>
<td>Anton Paramonov, Coach</td>
<td>Anton Lomonos, Contestant, Anton Lunov, Contestant</td>
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<td>Ivan Kuskov, Contestant</td>
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<td>Friedrich-Alexander-University Erlangen-Nuremberg</td>
<td>Team Name: deFAUlt</td>
<td>Tobias Werth, Coach</td>
<td>Alexander Rass, Contestant, Julian Fischer, Contestant, Thomas Fersch, Contestant</td>
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<td>Jagiellonian University in Krakow</td>
<td>Team Name: Jagiellonian</td>
<td>Pawel Idziak, Coach</td>
<td>Adam Polak, Contestant, Maciej Wawro, Contestant, Robert Obryk, Contestant</td>
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<td></td>
<td>Kazakh-British Technical University</td>
<td>Team Name: Kazakh-British TU 1</td>
<td>Damir Yeliussizov, Coach</td>
<td>Arman Yessenamanov, Contestant, Bakytzhan Baizhikenov, Contestant, Yessenzhjar Kanapin, Contestant</td>
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<td>Leiden University</td>
<td>Team Name: Johan’s Angels</td>
<td>Johan de Ruiter, Coach</td>
<td>Alexey Gritsenko, Contestant, Eric Stansifer, Contestant, Thomas Beuman, Contestant</td>
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<td>Lviv National University</td>
<td>Team Name: LNU United</td>
<td>Igor Yevchynets, Coach</td>
<td>Oleksandr Voietsa, Contestant, Pavlo Kushnir, Contestant</td>
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<td>Moscow Institute of Physics &amp; Technology</td>
<td>Team Name: MIPT Waterogers</td>
<td>Evgeny Barskiy, Coach</td>
<td>Iakov Dlugach, Contestant, Pavel Shishkin, Contestant, Renat Gimadeev, Contestant</td>
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<td>Moscow State University</td>
<td>Team Name: MSU Unpredictable</td>
<td>Anton Pankratiev, Coach</td>
<td>Akim Kumok, Contestant, Ilya Kornakov, Contestant, Vasily Astakhov, Contestant</td>
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<td>Nizhny Novgorod State University</td>
<td>Team Name: NNSU</td>
<td>Vladimir Lelyukh, Coach</td>
<td>Alexey Shmelev, Contestant, Vasily Vadimov, Contestant, Vladislav Epiyanov, Contestant</td>
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<td>Novosibirsk State University</td>
<td>Team Name: Novosibirsk SU</td>
<td>Tatyana Churina, Coach</td>
<td>Nikolay Kuratov, Contestant, Svyatoslav Scherbina, Contestant, Vadim Zaytsev, Contestant</td>
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<td>Orel State Technical University</td>
<td>Team Name: Orel STU</td>
<td>Oleg Sokov, Coach</td>
<td>Alexander Kourprin, Contestant, Maria Valukhova, Contestant, Roman Vetrov, Contestant</td>
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<td>Perm State University</td>
<td>Team Name: Perm SU 1</td>
<td>Yuriy Aydarov, Coach</td>
<td>Andrey Serovikov, Contestant, Dmitry Sergeev, Contestant, Pavel Ponomarev, Contestant</td>
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<td>Saratov State University</td>
<td>Team Name: Saratov SU 2</td>
<td>Michael Mirzayanov, Coach</td>
<td>Artem Rakhov, Contestant, Maxim Ivanov, Contestant, Nikolay Kuznetsov, Contestant</td>
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<td>South Ural State University</td>
<td>Team Name: SUrsu Inception</td>
<td>Andrey Demidov, Coach</td>
<td>Alexander Bich, Contestant, Ilya Bogatirev, Contestant, Oleg Vasilenkov, Contestant</td>
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<td>St. Petersburg State University</td>
<td>Team Name: SPb SU 1: DrinkLess</td>
<td>Andrey Lopatin, Coach</td>
<td>Aliaksei Levin, Contestant, Arseny Smirnov, Contestant, Valentin Fondaratzov, Contestant</td>
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<td>St. Petersburg State University of IT, Mechanics and Optics</td>
<td>Team Name: SPbSU ITMO 2</td>
<td>Andrey Stankevich, Coach</td>
<td>Anton Akhi, Contestant, Anton Bannykh, Contestant, Sergey Poromov, Contestant</td>
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<td>Swiss Federal Institute of Technology Zurich - VIS</td>
<td>Team Name: Dirt collector</td>
<td>Fedor Tsarev, Coach</td>
<td>Rajko Nenadov, Contestant, Stephan Kollmann, Contestant, Volodymyr Serbinenko, Contestant</td>
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<td>Taras Shevchenko Kiev National University</td>
<td>Team Name: Exploilless</td>
<td>Vitalii Bondarenko, Coach</td>
<td>Andrii Korotkov, Contestant, Daniil Neiter, Contestant, Oleksandr Bacherikov, Contestant</td>
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<td>Taurida V.I. Vernadsky National University</td>
<td>Team Name: TTL300</td>
<td>Oleksandr Kozlov, Coach</td>
<td>Oleksandr Barykin, Contestant, Viktor Barinov, Contestant, Volodymyr Krestianov, Contestant</td>
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<td>University of Helsinki</td>
<td>Team Name: Bubble Sorters</td>
<td>Jaakko Kurhila, Coach</td>
<td>Alessi Hartikainen, Contestant, Mika Laitinen, Contestant, Mikko Sysikaski, Contestant</td>
</tr>
</tbody>
</table>
University of Warsaw  
Team Name: Warsaw Eagles  
Jan Madey, Coach  
Jakub Pachocki, Contestant  
Tomasz Kulczyński, Contestant  
Wojciech Smietanka, Contestant

University of Wrocław  
Team Name: Riders of Approximation  
Pawel Gawrychowski, Coach  
Damian Rusak, Contestant  
Krzysztof Pieżuch, Contestant  
Łukasz Zatorski, Contestant

Ural State University  
Team Name: Ural SU Lynx  
Alexey Samsonov, Coach  
Denis Dublennyk, Contestant  
Evgeny Kupriyanovskiy, Contestant  
Mikhail Rubinchik, Contestant

Latin America  

EAFIT University  
Team Name: Loperamida Clorhidrato 2mg  
Juan Guillermo Lalinde, Coach  
Alejandro Peláez Roldán, Contestant  
Nicolas Hock Isaza, Contestant  
Sebastian Arcila Valenzuela, Contestant

Escola Politécnica da Universidade de São Paulo  
Team Name: RGA  
Marcio Oshiro, Coach  
Andre Hahn Pereira, Contestant  
Gustavo Pacianotto Gouveia, Contestant  
Ricardo Hahn Pereira, Contestant

Facultad de Matemática, Astronomía y Física (UNC)  
Team Name: aWARush  
Pablo Dal Lago, Coach  
Eric Alejandro Destefanis, Contestant  
Gastón Ingaramo, Contestant  
Matías Tealdi, Contestant

Instituto de Matemática e Estatística da Universidade de São Paulo  
Team Name: Isso é tudo pessoal  
Wanderley Guimarães da Silva, Coach  
Atol Fortin de Oliveira, Contestant  
Natan Costa Lima, Contestant  
Tiago Madeira, Contestant

Instituto Tecnológico de Aeronáutica  
Team Name: ITA - Carteado  
Armando Gouveia, Coach  
Cesar Kawakami, Contestant  
Daniel Moreira, Contestant  
Guilherme Souza, Contestant

Pontificia Universidad Católica del Perú  
Team Name: HaCkErMaTh  
Víctor Laguna Gutiérrez, Coach  
Daniel Soncco, Contestant  
Jesús Peña, Contestant  
Walter Erquínigo, Contestant

Universidad Católica Boliviana - La Paz  
Team Name: ACM-1PT  
Orlando Rivera, Coach  
Edwin Marcelo Guzman Buezo, Contestant  
Nicolas Gumiel Conzelmann, Contestant  
Victor Hugo Paredes Mora, Contestant

Universidad de Buenos Aires - FCEN  
Team Name: AJI  
Alejandro Deymonnaz, Coach  
Agustín Santiago Gutierrez, Contestant  
Ignacio Rossi, Contestant  
Juan Dodyk, Contestant

Universidad de Guanajuato - CIMAT  
Team Name: Manowar  
Miguel Ángel Covarrubias Sánchez, Coach  
Alberto Jose Ramirez Valadez, Contestant  
Alejandro Jimenez Martinez, Contestant  
Marcel Stockli Contreras, Contestant

Universidad de La Habana  
Team Name: UH++  
Alfredo Somoza Moreno, Coach  
Alfonso Alfonso Peterssen, Contestant  
Camilo Bravo Valdés, Contestant  
Otto Alberto León Negrín, Contestant

Universidad de las Ciencias Informáticas  
Team Name: Olimpo  
Yonny Mondelo Hernández, Coach  
Luis Ángel Giró Valdés, Contestant  
Mario Iván Cid Vázquez, Contestant  
Vladimir Antonio Charchabal Escalona, Contestant

Universidad del Valle  
Team Name: UniValleException  
Ivan Cabezas, Coach  
Carlos Alberto Guzmán Murillo, Contestant  
Carlos Alberto Ramírez Restrepo, Contestant  
Víctor Hugo Padilla Ramirez, Contestant

Universidad Nacional de Colombia - Bogotá  
Team Name: UN-03  
David Becerra, Coach  
Erick Enrique Sanchez Diaz, Contestant  
Raúl Alberto Niquefa Velásquez, Contestant  
Santiago Vargas Baldrich, Contestant

Universidade Federal de Minas Gerais  
Team Name: SUDO  
Itamar Viana, Coach  
Felipe Machado, Contestant  
Leonardo Martinez, Contestant  
Thiago Goulart, Contestant

Universidade Federal de Pernambuco  
Team Name: Razão Cruzada  
Pedro Bello, Coach  
Filipe Melo, Contestant  
Luiz Silva, Contestant  
Pablo Carvalho Pinheiro, Contestant

Universidade Federal do Paraná  
Team Name: Grito da Trypanosoma  
Bruno Ribas, Coach  
Eduardo Augusto Ribas, Contestant  
Ricardo Oliveira, Contestant  
Vinicius Kwiecien Ruoso, Contestant

North America  

California State University - Chico  
Team Name: WildCat 1  
Abdel-Moaty Fayek, Coach  
Abhishek Iyer, Contestant  
David Stolp, Contestant  
Katherine Gabales, Contestant
Carnegie Mellon University
Team Name: Dragons
Danny Sleator, Coach
Nathaniel Barshay, Contestant
Si Young Oh, Contestant
Tom Conoley, Contestant

University of Alberta
Team Name: Alberta 1
Martin Mueller, Coach
Amir Malekzadeh, Contestant
Navid Zolghadr, Contestant
Saber Khakpour, Contestant

University of Oklahoma
Team Name: OU A
Rex Page, Coach
Allen Smith, Contestant
Caleb Eggensperger, Contestant
Peter Reid, Contestant

Duke University
Team Name: Duke Wakalu
Owen Astrachan, Coach
Bo Waggner, Contestant
Joshua Lund, Contestant
Kevin Kauffman, Contestant

University of California - San Diego
Team Name: UCSD Papyrus
Michael Taylor, Coach
David Michon, Contestant
Elliott Slaughter, Contestant
Haoxi Fang, Contestant

University of Virginia
Team Name: Time Limit Exceeded
Aaron Bloomfield, Coach
Adelin Miloslavov, Contestant
Daniel Epstein, Contestant
Kristine Collins, Contestant

Harvey Mudd College
Team Name: HMC 42
Zachary Dodds, Coach
Anak Yodpinyane, Contestant
Daniel Fielder, Contestant
Stuart Pernsteiner, Contestant

University of Chicago
Team Name: Works in Theory
Borja Sotomayor, Coach
Denis Pankratov, Contestant
Korei Klein, Contestant
Matthew Steffen, Contestant

University of Waterloo
Team Name: Waterloo Black
Ondrej Lhotak, Coach
Brian Bi, Contestant
Hanson Wang, Contestant
Tyson Andre, Contestant

Illinois State University
Team Name: Onward and Upward
Marc Goodwin, Coach
Clint Riley, Contestant
Ryan Newman, Contestant
Sarah Steffen, Contestant

University of Wisconsin - Madison
Team Name: Wrong Answer
Dieter van Melkebeek, Coach
Aaron Brown, Contestant
Ang Li, Contestant
Zef RosnBrick, Contestant

Massachusetts Institute of Technology
Team Name: MIT Engineers
Aleksandar Zlateski, Coach
Cedric Yen-Yu Lin, Contestant
Cosmin Gheorghe, Contestant
Rostislav Rumenov, Contestant

University of Maryland
Team Name: UMCP Terps 1
Amol Deshpande, Coach
Anirudh Bandi, Contestant
Holman Gao, Contestant
Scott Zimmermann, Contestant

University of Canterbury
Team Name: Chimera
Richard Lobb, Coach
Janina Voigt, Contestant
Michael McGee, Contestant
Stephen Fitchett, Contestant

Princeton University
Team Name: Princeton
Arman Suleimenov, Coach
Eddy Ferreira, Contestant
Bohua Zhan, Contestant
Edward Zhang, Contestant

University of Miami
Team Name: UM Hard Boiled
Stephen Murrell, Coach
Andy Mok, Contestant
Frank Rodriguez, Contestant
Juan Busto, Contestant

University of New South Wales
Team Name: Macrohard
Tim Lambert, Coach
Jarrah Lacko, Contestant
Kitten Tofu, Contestant
Xi Chen, Contestant

Simon Fraser University
Team Name: SFU Cardinal
Brad Bart, Coach
Andrew Henrey, Contestant
Hua Huang, Contestant
Wesley May, Contestant

University of Michigan at Ann Arbor
Team Name: Victors
Kevin Compton, Coach
Jonathan Plotzke, Contestant
Mark Gordon, Contestant
Qifeng Chen, Contestant

South Pacific

South Dakota School of Mines and Technology
Team Name: Hardrockers
Edward Corwin, Coach
Ethan Robish, Contestant
Matthew DesEnfants, Contestant
Randy Foudray, Contestant

University of Minnesota Twin Cities
Team Name: Blue
Carl Sturdivant, Coach
Matt Coudron, Contestant
Michael Ludwig, Contestant
Peter Lojef, Contestant
The 35th Annual World Finals of the
ACM International Collegiate Programming Contest (ICPC)
sponsored by IBM

About the Contest
The ACM 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 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, the ICPC has increased by 1000 percent. Participation in the ICPC and ICPC-supported contests has grown even faster involving more than 25,000 of the finest students and faculty in computing disciplines from over 2,000 universities from 88 countries on six continents.

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

The annual event comprises 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 more than 300,000 students in computing disciplines worldwide. Regional Contests (September to December 2010) – This year 24,915 contestants competed on 8,305 teams from 2,070 universities from 88 countries on six continents at 250 sites.

World Finals (May 27-31, Orlando, Florida, USA) One hundred and five (105) world finalist teams will compete for awards, prizes and bragging rights at the Peabody Orlando hotel. These teams represent the best of the 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 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 best problem-solvers.

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 80,000 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 Center and Professional Development Center, ACM is a primary resource for the information technology field.
About IBM
With the Smarter Planet initiative, IBM believes intelligence allows for the growth and innovation of human life, including the way people live, work, and govern themselves; the way services are ordered and delivered; and the way the environment is protected.

The world is already connected economically, technologically and socially. However, being connected alone is not sufficient. The world needs new generations of talent, leaders and problem solvers to infuse intelligence into our daily lives.

IBM is the world’s largest information technology and service provider. Over the last decade, IBM has driven a significant transformation of its business model as the company shifts to higher value areas and improve efficiency of the business. IBM has been building these capabilities to round out the portfolio to address the needs of clients and the society.

IBM has 35,000 software engineers in more than 90 research and development laboratories around the globe, who focus on solving real-world business issues for clients in more than 170 countries. IBM invests in strategic markets and high business values such as Enterprise Operations; Business Analytics and Optimization; Cloud Computing; Smarter Commerce; Business Services; Risk Management; Mobile Computing; and Collaboration. IBM’s Watson computer is an example of data analytics. IBM provides industry solutions in areas such as smarter cities, energy, financial markets, chemicals, petroleum, retail, electronics, transportation, public service, manufacturing, health care, telecommunications, media and entertainment. For more information, visit http://www.ibm.com/software.

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 problems solvers who have combined skills of computing science and business management. For more information, visit http://www.ibm.com/university/acmcontest/

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.

Upsilon Pi Epsilon’s Commitment
The Upsilon Pi Epsilon International Computer Science Honor Society recognizes the world’s best students of computer science and engineering. Since first participation, UPE has provided scholarships and support to World Finals teams. UPE boasts the longest continuous relationship to the ICPC, dating to the first in 1970 at Texas A&M, held by members of UPE’s Alpha Chapter.

ACM International Collegiate Programming Contest

<table>
<thead>
<tr>
<th>Year</th>
<th>Teams</th>
<th>Univ.</th>
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<th>Finalists</th>
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The Making of a Better World

The ACM International Collegiate Programming Contest (ICPC) is an important global stage for young talented and innovative engineers. The students who participate in this competition are amongst the best and the brightest from many of the finest universities in the world. They represent the future of the information industry; many of them will be future technology leaders who change the world and how we live.

The ICPC, often referred to as the Battle of the Brains, is a demanding intellectual challenge undertaken while racing against the clock. The problems these students attempt to solve in this competition mimic real-life situations that will help prepare students to tackle a variety of global challenges in the future -- pressing issues that relate to transportation, energy, water, safety, climate and health, inevitably making our planet smarter and more efficient.

IBM is proud to sponsor this event, and proud to be a leader in fostering global academic programs like the IBM Academic Initiative. This global program is designed to facilitate the collaboration between IBM and educators to teach students the information technology and industry skills they need to be competitive and keep pace with changes in the workplace.

More than 30,000 faculty members from nearly 6,000 colleges and universities worldwide are members of the IBM Academic Initiative. This free membership provides no charge access to IBM in-classroom lecturers as well as more than 40,000 courseware modules offered around IBM middleware and tools. These include IBM Systems server platforms and open source technologies, Services Sciences and Management Engineering (SSME), database technology, Web technology and team based software development. Altogether, the Academic Initiative has reached more than 2.5 million students. Some of the programs and awards include the Smarter Planet University Jam, developerWorks, the Extreme Blue Intern Program, Shared University Research, IBM Faculty Awards, IBM Open Collaborative Research Awards and IBM PhD Fellowship Awards.

In making our products, tools and resources available at no charge to academia, we hope students will be encouraged to apply software engineering to real-life scenarios. This experience, together with their creativity and pure talent will be needed by the next generation of technology leaders as they hit the ground running to come up with innovative solutions to help us tackle the tough issues that lay ahead.

For example, despite all the excitement about man vs. machine, IBM’s Watson for Jeopardy! signals a new era in computing, where computers will increasingly be built and optimized for specific tasks and have the ability to learn and adapt. In a world that is driven by tremendous amounts of data and interconnectedness, these types of systems open a world of possibilities, including healthcare systems that can sort through medical records and make recommendations for physicians to consider.

We live in an era in which data is stored in many formats and places - from traditional databases to social media sites; from text to audio, photos, and video - where data is both static such as historical records, and changing constantly (data sent from sensors, for example). And with all this data comes nuance in how it is communicated, turns of phrases, short-hand, abbreviations, all of which needs to be understood, in context, in order to be analyzed and to make recommendations across a range of industries. This data is valuable, and can be mined to improve decisions and provide better outcomes for businesses, institutions and individuals.

In order to help people and businesses take advantage of this exploding data, systems need to be designed and built with learning capabilities. Traditional computing systems are typically built to analyze stored information, or to manage many small transactions, but future business demands will require the same extremely deep analytical capabilities and real-time response capabilities.

IBM’s Watson represents a big step in shifting the way we look at computers from today’s “calculators” to “machines that learn.” Watson is a powerful demonstration that the era of learning systems is upon us. With the unveiling of Watson, for the first time, a computing system analyzes natural language and other language complexities in which humans excel at understanding and computers do not. Additionally, Watson is a breakthrough computing system, in that it learns as it goes in order to improve its ability to accurately answer questions. IBM Research scientists did not build Watson just to play the game of Jeopardy! The scientists built Watson as a research effort to pursue the future of computing.
Over the past decade, at IBM we have driven a significant transformation of our business model as we shift to higher value areas, improve efficiency and invest in best long term opportunities. We have been developing a portfolio of products and solutions to address the needs of our clients and society.

Today, IBM is the world’s second largest software company generating $22.5 billion in software revenue and contributing to more than 44 percent of IBM’s profits. This profit has enabled IBM to invest in high business values and strategic markets such as Business Analytics, Optimization, Information Insight; Cloud Computing; Smarter Commerce; Mobile Computing; Business Services; Enterprise Operations; Risk Management; Connect and Collaboration.

With more than 65,000 employees dedicated to our software business including software developers, sales and technical support staff, IBM continues to innovate, lead the industry direction and growth, and outpace competitors. IBM helps clients with their business needs in more than 170 countries. These clients are from a wide variety of industries including finance, health care, public services, energy, utility, communication, aerospace, chemical, petroleum, electronics, consumer products, retail, travel, transportation, entertainment, automotive, etc.

Today, IBM has more than 90 research and development labs around the globe and 38 Innovation Centers which help partners design, build, market and deliver innovative technologies and solutions for our customers; ultimately helping to build a smarter planet.

In 2010, with a new single-year record of 5,896 patents, IBM became the first company to be issued more than 5,000 U.S. patents in a single year. This achievement marks the 18th consecutive year IBM has topped the list of the world’s most inventive companies.

IBM’s innovation in software and focus on customer economics have been driving IBM’s revenue growth as well as the world’s adoption of information science - from the early form of e-mail IBM demonstrated at the 1939 New York World Fair, to the FORTRAN language developed by IBM’s lab in 1957; from SABRE, the first real time reservation system designed by IBM’s lab for American Airlines in 1962, to BigSheets, an emerging analytics technology made by the IBM JStart Lab in 2010; from the relational database in 1970, to the deep analytics power of the Watson super computer today.

On June 16, 2011, IBM will mark its 100 year anniversary – one unmatched in the technology industry. Our Centennial is grounded in a core set of ideas, exploring three important dimensions of what IBM has always been about -- reinventing the modern corporation, pioneering the science of information and making the world work better.

The year 2011 will not simply be a history lesson for IBM, rather, it is a powerful way to to remind us of IBM's rich history of discovery and innovation that has earned international recognition. In addition to five Nobel prizes, IBM researchers have been recognized with seven U.S. National Medals of Technology, five National Medals of Science and memberships in the National Academy of Sciences. IBM Research has more than 59 members of the National Academy of Engineering and well over 300 industry organization fellows. IBM’s own Frances Allen became the first woman to receive an ACM Turing Award. The company has seen 6 ACM Turing Award recipients in total, as well as 11 inductees in the National Inventors Hall of Fame.

Over the past century, IBM has built and enabled business and societal systems of many kinds – from social welfare programs and efficient supply chains to air travel, finance and retail.

We believe that technology alone cannot bring systemic changes and progress in a complex and interconnected world; we need to look at how systems work together. This model of thinking includes seeing, mapping, understanding, believing and acting.

As we look forward, we reflect on what we have learned over the past 100 years and we will continue to manage for the long term; looking for opportunities to make investments in people, technology innovation, and the research and development of creative and innovative solutions to help ourselves and our customers create a smarter planet.

And of course, we will continue to focus on nurturing talent for the betterment of computing and for the betterment of our world.

I’d like to offer my Congratulations and Best Wishes to all the ACM-ICPC 2011 World Finals Participants, and look forward to spending time with you this week!

Michael Karasick
Vice President of Architecture and Technology
IBM Software Group, Strategy

IBM Software Group, Strategy

IBM Software Group, Strategy

IBM Software Group, Strategy
The History of IBM

1911 Formed as the Computing Tabulating and Recording Company, or C-T-R; incorporated in New York on June 16, 1911, specialized in punch cards, commercial scales and clocks.

1916 IBM’s efforts to develop future leaders and skilled workforce included the Employee Education program; over decades that expanded to management education and to today’s widespread use of online and experiential learning.

1924 C-T-R, a fast-growing tech company with outsized ambitions of going global, changed its name to International Business Machines. Today, IBM does business in 170 countries and is a model for the globally integrated enterprise.

1927 Became one of the first organizations to communicate over the world’s first trans-Atlantic telephone line. In decades to come, IBM remained an early adopter of new communications technologies such as radio, phonograph recordings, motion pictures, air mail, television and social media.

1929 By this time, 90% of IBM’s products were a result of Watson’s aggressive investments in R&D. IBM’s commitment to R&D continues to this day with annual investment of $6 billion, 3,000 researchers working in eight labs across six countries, and 26,000 programmers working in 90 R&D labs. Today, IBM holds more patents than any other U.S. company.

1934 IBM’s 801 Bank Proof machine automated the check-clearing process – the first in long line of IBM innovations that make today’s online banking possible.

1936 IBM worked with the U.S. Government to make Social Security possible, organizing files of 26 million Americans – the largest accounting project of its time -- and one of many massive governmental data processing projects, including U.S. Census.

1939 IBM demonstrates the Radiotype, whose instantaneous communications between distant locations could be seen as an early form of e-mail at 1939 World’s Fair in New York. Also, IBM granted the first electronic computer patent – for a method to calculate using vacuum tubes.

1943 Ruth Leach Amonette named IBM’s first female vice president. Today, about 75% of IBM’s female executives are working mothers.

1952 Company introduced the IBM 701, which paved the way for computers built for specific business and industrial purposes.

Thomas Watson Jr. became president; his father remained chairman until 1956.

1956 IBM created the data storage industry with RAMAC (Random Access Method of Accounting and Control), containing the world’s first magnetic hard disk drive. The size of two kitchen refrigerators side-by-side, the drives were about 10 megabits of capacity and 10 tons in weight; the average laptop today would weigh about 250,000 tons based on that technology.

1957 FORTRAN, invented by John Backus, became world’s most widely used computer language and first programming language standard.

1960 Bob Bemer started work on ASCII, the alphabet for computers still used today, and also added the ESCape key to computer keyboards.

1962 IBM and American Airlines launched world’s first computer-driven airline reservation system; called SABRE, it paved the way for real-time online commerce and ATM machines. Also, visitors to Seattle World’s Fair were amazed by IBM “Shoebox” speech recognition computer, which could understand exactly 16 words.
1963 IBM worked with New York Police Department to speed up fingerprint identification, laying groundwork for today's use of predictive analytics to cut crime in cities from Chicago, Ill. to Memphis, Tenn.

1964 Watson Jr. made the biggest bet of his career with the System/360 family of computers, which ushered in era of computer compatibility.

1968 IBM introduced Customer Information Control System, or CICS, which became one of IBM's most valuable software products and still drives most teller-bank and ATM transactions and is used by 90% of Fortune 500 companies.

1969 Magnetic strip technology for credit cards invented by IBM engineer Forrest Parry – the catalyst that gave rise to the global credit card industry and still ubiquitous on ID cards, drivers' licenses and ATM cards. Also that year, IBM technology guided the Apollo mission to the moon; IBM has been part of every U.S. manned space effort since the beginning of the national space program in the 1950s.

1970 Relational databases, invented by Edgar Codd, revolutionized how data was stored and processed for financial records and manufacturing.

1971 Invention of the floppy disk -- the world's first flexible, magnetic media that made storage powerful and affordable and spurred the PC revolution. Also, IBM speech recognition technology enabled people to “talk” to and receive “spoken” answers from a computer.

1972 First automated teller machine launched the rise of the self-service kiosks, which today are used everywhere from airports to post offices to karaoke bars.

1973 Supermarkets started scanning UPC barcodes, which were invented in IBM labs the decade before. Today, the ubiquitous zebra-striped barcodes track everything from clothing to rental cars to dairy cows – creating better customer service, precise inventory control and rich stores of marketing data.

1976 IBM introduced the world's first laser printer.

1980 IBM scientists discovered process that made LASIK and PRK surgery possible. Also, IBM's John Cocke developed first computer to use RISC (Reduced Instruction Set Computer) CPU design, which remains the bedrock of microprocessors today and core of the $22 billion UNIX market.

1981 IBM Personal Computer launched the PC revolution.

1985 Token Ring technology brought new level of control to local area networks and became industry standard for sharing office computers, printers, files and devices -- setting the stage for today's corporate intranets and virtual collaboration.

1986 Gerd Bennig and Heinrich Rohrer won Nobel Prize for scanning tunnel microscope, which provided first-ever look at atom-by-atom surface topography. Also, Georg Bednorz and Alex Mueller developed high-temperature superconductors, today used to make MRI machines cheaper and faster and to enable high-speed trains in Shanghai to reach 300 mph; they won Nobel Prize the following year.

1989 Researchers at IBM and Helsinki University of Technology in Finland developed tool to improve diagnosis of brain malfunctions such as epilepsy, stroke and deafness.
1992 IBM introduced the ThinkPad, which became an instant design icon.

1993 Lou Gerstner named CEO and chairman.

1996 Introduction of DB2 Universal Database, industry’s first web-ready database management system.

1997 IBM’S “eBusiness” turned the Internet into a tool for business and marked a turning point in the Internet Age. Also that year, Deep Blue chess-playing supercomputer defeated the best player in the world, in six games.

1998 Silicon germanium chip-making technology went mainstream, paving the way for the mobile computing era. Also, IBM delivered world’s first copper-based microprocessors.

1999 IBM began support for Linux, spurring open source innovation around software and hardware.

2000 Sam Palmisano became President and Chief Operating Officer. He has led the transformation of IBM as a globally integrated enterprise, setting the course for modern corporations.

2001 IBM’s new “self-healing” technology could predict, identify and intercept problems on computer network in real-time – dubbed “autonomic computing” after human biology and setting the stage for advanced systems management technology.

2002 In tradition of corporate reinvention and its shift to high value software and services, IBM acquired PricewaterhouseCoopers Consulting.

2003 IBM introduced Blue Gene high-performance computer, which has since been used to map the human genome, predict weather patterns, and simulate oil exploration the spread of infectious diseases. Worked with universities to develop “services science,” a joint technology/business program now in 450 universities in 54 countries; today, IBM works with 6,000 colleges/universities and 30,000 faculty around grants and collaborative partnerships. Also, established IBM On Demand Community, the first corporate-wide system for volunteers; over past five years, IBM employees have volunteered more than 10 million hours.

2008 IBM launched Smarter Planet initiative to find ways to improve the way world works –using intelligent transportation systems, smart grids, cleaner waterways, safer cities and more.

2009 IBM labs developed new ways to improve world health through nanotechnology, including the DNA Transistor and the Nano MRI (can achieve volume resolution 100 million times finer than conventional MRI). IBM built the first nationwide smart water and power grid system in Malta, and SmartBay waterway system for Ireland’s Galway Bay detects pollution and flooding and protects fish stock.

2010 Watson supercomputer, named after IBM’s founder, uses advanced question-answering technology to understand natural language and detect nuances of words, irony and riddles. Watson holds untold potential in the fields of Q&A programming, search queries and artificial intelligence. Also, IBM begins massive project to manage Bharti Tele-Venture’s mobile telecom network, spanning 16 African countries. And IBM digitized health records in China to blend traditional Chinese medicine with Western medical practices.

2011 IBM marks 100 years of innovation - what’s next? Holograms jumping out of your cell phone. “Racetrack” memory that will hold thousands of movies in a handheld device. Concentrated photovoltaics to convert the sun’s rays into high-density electrical power. Cell phone batteries that self-charge by breathing air. Machine vision to help computers understand what they see, such as a crime being committed. Cloud computing used to connect thousands of health care records.
World Finals Activities

Team Registration
All teams and coaches must present themselves for registration at the time assigned by appointment. Registration is provided by UPE. Representatives certify that team paperwork and notebooks comply with ICPC rules.

IBM Welcome Dinner-Reception
Join us for a dinner reception in the Peabody Grand Ballroom, meet and mingle with the other ACM-ICPC World Finals participants.

Collaborative Learning Institute Symposium
Teachers and researchers from around the globe share best practices and research in collaborative learning.

IBM Chill Zone
A place to hang out; have some fun, and meet some of the bright minds who work for IBM and see what the company is doing to help create a smarter planet.

IBM TechTrek
IBM’s innovators lead the industry in developing interesting and important technology for the world’s needs. This event will be held at Sea World and include presentations on some fascinating IBM projects. Attendance is required for teams and coaches, but others with badges are also encouraged to attend and visit Sea World courtesy of IBM.

Opening Ceremony
This required event recognizes some of the hundreds of volunteers who have worked to make this year’s World Finals a reality, and represents the first public introduction of this year’s World Finals contestants – the best of the best collegiate programmers.

UPE Dinner
Join us for dinner and special remarks from UPE

ICPC Challenge Tournament
Teams who entered the ICPC Challenge in January and May will get to see their entry compete against other teams for bragging rights and prizes.

The World Finals Competition
The time has come. One hundred and five teams from six continents battle in a five-hour competition to see who wins this year’s prizes, accolades and bragging rights as the top collegiate programmers in the world.

Awards Ceremony Dinner
This required event will be held to crown the ACM-ICPC World Champions and medal winners!

The World Finals Celebration hosted by IBM
Put on your play clothes, because after dinner we are headed to Universal Orlando for a phenomenally fun time for both participants and volunteers. Hosted by ACM-ICPC Sponsor IBM, this evening will be a blast!
## Schedule of Events

### The 2011 ACM-ICPC World Finals
Sponsored by IBM

**Attendance:** Required attendance for Teams with On-Site Coach Accessible.

**Team:** Contestants  
**Team++:** All registered with teams  
**Coach++:** All coaching staff

### Friday May 27th

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Description</th>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00</td>
<td>18:00</td>
<td>RCD/CLI/Staff Registration</td>
<td>Hotel Lobby</td>
<td>RCD/CLI/Staff</td>
</tr>
<tr>
<td>18:00</td>
<td>22:00</td>
<td>ICPC Team Registration</td>
<td>Registration Desk</td>
<td>Team++</td>
</tr>
<tr>
<td>18:00</td>
<td>22:00</td>
<td>IBM Welcome</td>
<td>Peabody Grand</td>
<td>All ICPC Guests</td>
</tr>
<tr>
<td>19:00</td>
<td>22:00</td>
<td>CLI Presentations</td>
<td>Blue Spring</td>
<td>All welcome</td>
</tr>
<tr>
<td>20:00</td>
<td>23:30</td>
<td>IBM Chill Zone</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
</tbody>
</table>

### Saturday May 28th

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Description</th>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:30</td>
<td>08:30</td>
<td>Breakfast</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
<tr>
<td>09:00</td>
<td></td>
<td>Transportation to IBM TechTrek</td>
<td>Hotel to SeaWorld</td>
<td>All with badges</td>
</tr>
<tr>
<td>09:30</td>
<td>16:30</td>
<td>IBM TechTrek and Excursion with lunch</td>
<td>SeaWorld</td>
<td>All with badges</td>
</tr>
<tr>
<td>14:00</td>
<td>17:00</td>
<td>Shuttles return to hotel</td>
<td>SeaWorld</td>
<td>All with badges</td>
</tr>
<tr>
<td>18:00</td>
<td>20:00</td>
<td>Welcome to Orlando Dinner</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
<tr>
<td>20:00</td>
<td>22:00</td>
<td>CLI Presentations</td>
<td>Blue Spring</td>
<td>All welcome</td>
</tr>
<tr>
<td>20:00</td>
<td>23:30</td>
<td>IBM Chill Zone</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
</tbody>
</table>

### Sunday May 29th

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Description</th>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:30</td>
<td>08:30</td>
<td>Breakfast</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
<tr>
<td>08:30</td>
<td>09:30</td>
<td>2011 ACM-ICPC Opening Ceremony</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
<tr>
<td>10:00</td>
<td>12:00</td>
<td>2011 ACM-ICPC Contest Orientation</td>
<td>Plaza International</td>
<td>Teams and On-site coaches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teams must leave notebooks at their workstations at the conclusion of the orientation, Teams wear ICPC T-shirts, No food or drinks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:30</td>
<td>14:00</td>
<td>Lunch &amp; ICPC Challenge Tournament</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
<tr>
<td>14:00</td>
<td>14:30</td>
<td>Answers to Orientation Questions</td>
<td>Peabody Grand</td>
<td>Team++</td>
</tr>
</tbody>
</table>
### Monday May 30th

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Description</th>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>06:00</td>
<td>08:00</td>
<td>Breakfast</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
<tr>
<td>08:00</td>
<td>15:30</td>
<td>ICPCLive - Have fun and watch the World Finals</td>
<td>Orlando</td>
<td>Public</td>
</tr>
<tr>
<td>08:00</td>
<td>08:15</td>
<td>Spectators enter</td>
<td>Plaza International</td>
<td>Public</td>
</tr>
<tr>
<td>08:00</td>
<td>08:30</td>
<td>Contestants prepare to enter contest area</td>
<td>Peabody Grand Foyer</td>
<td>Teams++</td>
</tr>
<tr>
<td>08:30</td>
<td>14:00</td>
<td>2011 ACM-ICPC World Finals Teams wear ICPC T-Shirts Notebooks at team workstations</td>
<td>Plaza International</td>
<td>Teams</td>
</tr>
<tr>
<td>11:30</td>
<td>13:00</td>
<td>Coaches Appreciation Luncheon</td>
<td>Orlando</td>
<td>All with badges</td>
</tr>
<tr>
<td>14:00</td>
<td>15:30</td>
<td>2011 ACM-ICPC World Finals Wrap-up</td>
<td>Plaza International</td>
<td>Public</td>
</tr>
<tr>
<td>18:30</td>
<td>21:00</td>
<td>2011 ACM-ICPC Awards Ceremony Dinner</td>
<td>Peabody Grand</td>
<td>All with badges</td>
</tr>
<tr>
<td>21:30</td>
<td>22:00</td>
<td>Transportation to Celebration</td>
<td>Hotel</td>
<td>All with badges</td>
</tr>
<tr>
<td>22:00</td>
<td>00:30</td>
<td>2011 ACM-ICPC World Finals Celebration Hosted by IBM</td>
<td>Universal-Orlando</td>
<td>All with badges</td>
</tr>
</tbody>
</table>

### Tuesday May 31st

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Description</th>
<th>Location</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>17:00</td>
<td>RCD Symposium</td>
<td>Orlando</td>
<td>RCDs</td>
</tr>
<tr>
<td>12:00</td>
<td>13:30</td>
<td>RCD Luncheon Courtesy of IBM</td>
<td>Spring Rooms</td>
<td>By invitation</td>
</tr>
<tr>
<td>18:00</td>
<td>20:00</td>
<td>ICPC Leadership Dinner Courtesy of IBM</td>
<td>Spring Rooms</td>
<td>By invitation</td>
</tr>
</tbody>
</table>

### Notes
- **Spectators** prepare to enter the spectator area at Plaza International Foyer Spectators.
- Contestants prepare to enter the contest area at Peabody Grand Foyer Team++.
- The 2011 ACM-ICPC World Finals Dress Rehearsal is at Plaza International Teams. Teams must leave notebooks at their workstations at the conclusion of the orientation. Teams wear ICPC T-Shirts. No food or drinks.
- UPE Dinner is courtesy of IBM at Peabody Grand All with badges.
- CLI Presentations are at Blue Spring All welcome.
- IBM Chill Zone is at Peabody Grand All with badges.
Mission
The ACM International Collegiate Programming Contest (ICPC) provides college students with opportunities to interact with students from other universities and to sharpen and demonstrate their problem-solving, programming, and teamwork skills. The contest provides a platform for ACM, industry, and academia to encourage and focus public attention on the next generation of computing professionals as they pursue excellence. (from the ICPC Policies and Procedures)

Introduction
The contest is a two-tiered competition among teams of students representing institutions of higher education. Teams first compete in regional contests, held around the world from September to December each year. The winning team from each regional contest advances to the ACM International Collegiate Programming Contest World Finals, that is typically held in March or April. Additional high-ranking teams may be invited to the World Finals as wild card teams. These rules are subject to change.

Organization
The ICPC is organized according to the ICPC Policies and Procedures. The Executive Committee, chaired by the Executive Director, sets the policy and general rules for the conduct of the contest. The Executive Director is solely responsible for interpreting the rules and for ruling on unforeseen situations.

World Finals Site
The World Finals will be held in Orlando, Florida, USA, at the Peabody Orlando hotel on May 30, 2011. Festivities will be conducted arriving Saturday, May 27, 2011, with departure on Tuesday, May 31, 2011.

Team Requirements
Teams qualify to advance to the World Finals through regional contests. Only one team from a given institution may advance to the World Finals. Contestants and registered student team members will be provided free one-year memberships in ACM. No team member on the qualifying team may have competed as a contestant in two previous World Finals.

The coach of a qualifying team is the point-of-contact prior to and during World Finals activities. The coach must complete certification at the Team Certification Web Site within five (5) business days of notification. Qualifying teams will be issued an invitation by email and postal mail (if requested) soon after completing certification.

Qualifying teams requiring visas must initiate the process of applying for visas within 10 business days of being issued an invitation. Teams failing to comply with any of these requirements will be ruled ineligible to compete in the World Finals. Upon completing these requirements, a qualifying team will advance to the World Finals.

A team advancing to the World Finals will be comprised of the same three members as when it qualified. In the event that a team member is unwilling, unable or unfit to compete in the World Finals, the coach must notify the ICPC Manager.

At on-site registration, participants must provide picture ID (passport, driver’s license, etc). Contestants must show proof of enrollment at the university during the term of the regional contest at which they qualified. A letter on university stationary with the signature of a university official accompanied by an English translation is sufficient.

Attendance
Finalists must attend all required events from On-Site Registration to Celebration as indicated in the Schedule of Events. Failure to attend any required event will result in disqualification and forfeiture of scholarships and prizes. Coaches must be accessible during On-Site Registration, Orientation, the Dress Rehearsal, the World Finals, and the Awards Ceremony.
Support and Prizes
Each finalist team will be provided with hotel accommodations for the coach and three contestants for four nights, arriving three days before the World Finals and departing the day after. The hotel accommodations will provide gender privacy. The teams and coaches will be treated to a full schedule of activities including a full course of complimentary food functions.

Transportation to the World Finals is the responsibility of the finalists. The ICPC encourages teams to raise funds for transportation and extracurricular activities from local sources to better strengthen community ties among academia, industry and government.

Teams finishing in the top four positions will be awarded Gold Medals. Those teams finishing fifth through eighth place will be awarded Silver Medals. Those teams finishing ninth through twelfth place will receive Bronze Medals. Additional Bronze Medals may be awarded.

The highest scoring team is the World Champion and will receive the World Champion Cup and plaques. The other of the top twelve teams, the North American Champions, the Latin American Champions, the European Champions, the South Pacific Champions, the Asian Champions, and the Africa & Middle East Champions will also receive plaques.

The World Champion team will be awarded $12,000. Each of the other three Gold Medal teams will be awarded $6,000. Each Silver Medal team will be awarded $3,000. Each Bronze Medal team will be awarded $1,500.

For each problem, the team first to submit a solution will be awarded $1,500, courtesy of the UPE Computer Science Honor Society, and First to Solve Each Subsequent Problem will be awarded $1050.

Conduct of the Finals
Eight or more problems have been posed in recent World Finals. Problems will be posed in English. During the contest, all communications from contest officials to contestants will be in English. Each team may identify an interpreter for translating questions posed by contestants to contest officials. Contestants may bring electronic natural language translators provided that they do not support math operations.

Solutions to problems submitted for judging are called runs. Each run is judged as accepted or rejected, and the team is notified of the results. Rejected runs will be marked as follows:
*run-time error
*time-limit exceeded
*wrong answer

Notification of accepted runs may be suspended at the appropriate time to keep the final results secret. A general announcement to that effect will be made during the contest. Notification of rejected runs will continue until the end of the contest.

A contestant may submit a claim of ambiguity or error in a problem statement by submitting a clarification request. If the judges agree that an ambiguity or error exists, a clarification will be issued to all contestants.

While the contest is scheduled to last five hours, the Finals Director has the authority to lengthen the contest in the event of unforeseen difficulties. Should the contest duration be altered,
Rules, continued

every attempt will be made to notify contestants in a timely and uniform manner.

Scoring of the Finals
The World Finals Judges are solely responsible for determining the correctness of submitted runs. In consultation with the World Finals Judges, the Director of Judging is responsible for determining the winners of the World Finals. They are empowered to adjust for or adjudicate unforeseen events and conditions. Their decisions are final.

Teams are ranked according to the most problems solved. Teams placing in the first twelve places who solve the same number of problems are ranked first by least total time and, if need be, by the earliest time of submittal of the last accepted run.

The total time is the sum of the time consumed for each problem solved. The time consumed for a solved problem is the time elapsed from the beginning of the contest to the submittal of the first accepted run plus 20 penalty minutes for every previously rejected run for that problem. There is no time consumed for a problem that is not solved.

Computing Environment
The World Finals programming language tools include Java and C/C++. See the Programming Environment Web Site, for detailed configuration information. Prior to the World Finals, the judges will have solved all problems in Java and C/C++.

Each team will be provided with a single computer and a calculator. All teams will have equivalent computing equipment.

Contestants may not bring any printed materials or machine-readable versions of software or data to the Contest Area. Contestants may not bring their own computers, computer terminals, calculators, or other electronic devices to the Contest Area.

Each team member may bring an unannotated natural language printed dictionary. On-line reference materials will be made available as described in the Reference Materials section of the Programming Environment Web Site. Each team will be permitted to provide a PDF file of up to 25 pages of notes within the limits described in the On-Site Registration Instructions.

Contestant Conduct
DO NOT TOUCH ANYTHING at the team workstations until so directed by the Finals Director.

Contestants are not to converse with anyone except members of their team and personnel designated by the Finals Director. Systems support staff may advise contestants on system-related problems such as explaining system error messages.

A team may be disqualified by the Finals Director for any activity that jeopardizes the World Finals such as dislodging extension cords, unauthorized modification of contest materials, or distracting behavior.

Recent Gold Medal Winners In order of Finish

2010
Shanghai Jiaotong University
Moscow State University
National Taiwan University
Taras Shevchenko Kiev National University

2009
St. Petersburg State University of IT, Mechanics & Optics
Tsinghua University
St. Petersburg State University
Saratov State University

2008
St. Petersburg State University of IT, Mechanics & Optics
Massachusetts Institute of Technology
Izhevsk State Technical University
Lviv National University

2007
Warsaw University
Tsinghua University
St. Petersburg State University of IT, Mechanics & Optics
Massachusetts Institute of Technology
The ICPC Challenge, 2011

The ICPC Challenge

The ICPC Challenge is an effort to continue to offer the kinds of visual, interactive, competitive programming problems popularized by previous offerings of the Java Challenge. Teams implement player code that competes with other teams’ players in a game-like simulation. A tournament among the players determines the winner.

2011 ICPC Challenge

The ICPC Challenge gives programming teams and their coaches a chance to work on a different kind of problem. Working with their coach, teams implement a player and compete against other teams’ players in a new game called Coercion. Preliminary matches during the two-week coding phase let teams know how well their players did. A final double-elimination competition among all the submitted players will decide whose player is best.

Coding and preliminary matches ran from the start of the UTC day on January 24, 2011, to the end of the UTC day on February 6. A second coding round ran in May. World Finals teams developed their players, submitted preliminary player versions, competed in matches against other teams’ players and saw how their strategy compared. A tournament among the latest versions of all teams’ players will be presented as part of the 2011 ICPC World Finals events in Orlando.

Queue and past challenges

Working together, the ICPC and ACM Queue Magazine have offered a challenge problem for interested Queue readers. Even if you’ve never competed in the ICPC, you can join us for the Queue ICPC Challenge and show what your programs can do. Visit the Queue ICPC Challenge site to find out more about this contest and how you can get involved.

2010 ICPC Challenge

The 2010 ICPC Finals featured an ICPC Challenge problem appropriate to the February weather in Harbin, China: The Icy Projectile Challenge. Teams developed a program to control a group of children in a snow-covered field. Children made snowmen and made and threw snowballs to try to score the most hits against the other player. The University of Canterbury team won in 2010.

2009 ICPC Challenge

The 2009 ICPC Finals featured Capture, a challenge problem in which players participated in the game by controlling three pieces, two bumpers and a sled. The bumpers were used to move pucks around the field, and the sled is used to change puck colors by drawing a closed loop around them. Strategic use of these elements let a player capture pucks to hopefully turn them his own color. The University of Tokyo won in 2009.
The ACM-ICPC Mark Measures Distinguished Service Award Winner

The Thirty-fifth Annual ACM International Collegiate Programming Contest
sponsored by IBM

The 2011 Mark Measures Distinguished Service Award

Patrick Hynan
Baylor University

for outstanding service to the ICPC as Director of Operations for the World Finals, systems support for the ICPC Headquarters, and as volunteer in the South Central Region since 1995.

The Mark Measures Distinguished Service Award is presented annually to a volunteer who has played an instrumental role in the success of the ACM International Collegiate Programming Contest for fifteen or more years.

30 May 2011
Orlando
The ACM-ICPC DeBlasi Outstanding Contribution Award winner

The Thirty-fifth Annual ACM International Collegiate Programming Contest
sponsored by IBM

The 2011 Joseph S. DeBlasi Outstanding Contribution Award

Baylor University
Competitive Infrastructure Initiative Lab

Michael Jeffry Donahoo, Director
Tomáš Cerný Ray Holder

and the CII team for providing global enterprise management tools for the ICPC and developer support for the CLI since 2002.

The Joseph S. DeBlasi Outstanding Contribution Award is presented annually to a person or group who has played an instrumental role in the success of the ICPC for five or more years.

30 May 2011
Orlando
The Thirty-fifth Annual acm International Collegiate Programming Contest

sponsored by IBM

The 2011 UPE Outstanding International Contribution Award

IBM

in appreciation for outstanding service and devotion to the world’s universities by sponsoring and technically supporting the ICPC from 1997 through 2017 and by hosting the

2011 ACM-ICPC World Finals

30 May 2011
Orlando
The Thirty-fifth Annual ACM International Collegiate Programming Contest

sponsored by IBM

The 2011 UPE Outstanding International Contribution Award

IBM

Doug Heintzman

in appreciation for outstanding service and devotion to the world’s universities by sponsoring and technically supporting the ICPC from 1997 through 2017 and by hosting the

2011 ACM-ICPC World Finals

30 May 2011
Orlando
IBM
BJ Chow

in appreciation for outstanding service and devotion to the world's universities by sponsoring and technically supporting the ICPC from 1997 through 2017 and by hosting the

2011 ACM-ICPC World Finals

30 May 2011
Orlando
The Thirty-fifth Annual ACM International Collegiate Programming Contest

sponsored by IBM

The 2011 UPE Outstanding International Contribution Award

IBM

Rodney D’Silva

in appreciation for outstanding service and devotion to the world’s universities by sponsoring and technically supporting the ICPC from 1997 through 2017 and by hosting the

2011 ACM-ICPC World Finals

30 May 2011
Orlando
The UPE Distinguished International Service Award

The Thirty-fifth Annual **acm** International Collegiate Programming Contest

sponsored by **IBM**

The 2011 UPE Outstanding International Service Award

**Baylor University**
Department of Computer Science

in honor of the university’s accomplishment by her teams, by hosting regional contests, and two decades of hosting the

**ACM International Collegiate Programming Contest Headquarters**

The UPE Distinguished International Service Award is presented annually to an institution that has played an instrumental role in the success of international educational programs for ten or more years.

30 May 2011
Orlando
2011 World Finals Staff

IBM Sponsorship Management

Brenda Chow
IBM Software Group Strategy, IBM/ICPC
Sponsorship Manager

Douglas Heintzman
IBM Software Group, Director, Strategy
IBM Collaboration Solutions
IBM/ICPC Sponsorship Executive

Michael Karasick
IBM Software Group Strategy, Vice President
of Architecture and Technology
IBM/ICPC Sponsorship Executive

IBM Sponsorship Team

Amanda Carl
Tierney Agency, IBM Media Relations Team

Steve Dale
IBM Software Group, Team Lead DEMO-central

Rodney D’Silva
IBM Canada, Toronto SW Laboratory, IBM
Systems Team Leader

Scott Gilmore
Strategic Event Management, IBM Events Team

Mark Guan
IBM Corporation, Media Relations Team
Lead

Christine Guerrini
Tierney Agency, IBM Media Relations Team

Len Hallke
Strategic Event Management, IBM Events Team

IBM World Finals Support Team

Chris Kale
IBM Canada, Toronto SW Laboratory, IBM
Systems Team

Debbie Kilbride
IBM Software Group Strategy, Sponsorship
Program Administrator

Vasile Petrasuc
IBM Canada, Toronto SW Laboratory, IBM
Systems Team

Tracey Santilli
Tierney Agency, IBM Media Relations Team

Emilia Tung
IBM Canada, Toronto SW Laboratory, IBM
Communications

Jo Zacharie
Strategic Event Management, IBM Events Team

Paulette Hopkins
Strategic Event Management, IBM Events Team

Monika Maciag
IBM Poland, IBM Media Relations Team

Kim O’Connell
Strategic Event Management, IBM Events Team

Robin Patton
Strategic Event Management, IBM Events Team

Chloe Perelgut
IBM Canada, Toronto SW Laboratory, IBM
Communications

Rob Retchless
IBM Software Group, IBM Technology
Support Team

Greg Schneider
Strategic Event Management, IBM Events Team

Lan Shan
IBM China, IBM Media Relations Team

Tomasz Stachera
IBM Poland, IBM Media Relations Team

Evie M Torres
IBM Software Group, IBM Technology
Support Team

Artur Trapizonyan
IBM Russia, IBM Media Relations Team

Tim Willeford
IBM Corporation, IBM Media Relations
Team

Xiaolan Yang
IBM China, IBM Media Relations Team
2011 World Finals Staff

ICPC Volunteers

Matt Aars, ICPC HQ Staff
Michael Aars, ICPC HQ Staff
Andru Anderson, ICPC HQ Digital Media
Roy Andersson, Subcontest Manager
Samir Ashoo, SysOps
Deirdre Athaide, ICPC Live – Program Host
Mikael Auno, ICPC Live Graphics
Per Austrin, World Finals Judge
Osman Ay, World Finals Judge
John Bonomo, World Finals Chief Judge
Bill Booth, CLIS Chief Editor
Troy Boudreau, SysOps
Stephen Bourne, ACM President Emeritus
Lukáš Camra, ICPC HQ Global Services
Carlos Marcelino Casas Cuadrado, CLI – ICPC On-line Judging
Tomáš Černý, ICPC HQ Global Services
Don Chamberlin, World Finals Judge
Alain Chesnais, ACM - President
John Clevenger, SysOps Lead

James Comer, Associate Director
Marjene Comer, ICPC HQ Assistant Manager
Jason Daly, ICPC Photographer
Kenneth Dommyr, ICPC Live – Media Exchange Manager
Mattias de Zalenski, ICPC Live Graphics - Group Lead
Joseph DeBlasi, ICPC Awards Committee
Hans Domjan, ICPC Digital Media Production
Jeff Donahoo, ICPC HQ Services Director; Deputy Executive Director
Lisa Donahoo, ICPC HQ Guest Services Assistant
Christian Eide, ICPC Live – Audio Engineer
Niklas Ek, ICPC Live – Camera Operator
Ivar Ekseth, ICPC Live – Technical Operations Manager
Yousry S. Elgamal, ICPC Arab Region Council
AbdelRahman ElGammal, CLI – Presenter
Ihab El-Aff, ICPC Arab Region Support
Ahmed El Sayed, SysOps
Roman Elizarov, ICPC EC Secretary
Emma Enström, CLICS
Mats Erixon, ICPC Live Technical Director

Wael Eweda, SysOps
Trille Fellstenius, ICPC Live - Audio Assistant
Xiaoning Feng, CLI – HEU Online Judge
Marcus Forsell Stahre, ICPC Live Graphics
Mohamed Fouad, Deputy Director of Operations
Elias Freider, ICPC Live Graphics
Marc Furon, CLI – Problem Pooling
Don Gaitros, World Finals Marshal
Vicki Gaitros, Registrar Assistant
Mikael Goldmann, CLICS
Chris Gouge, Orlando Volunteer Coordinator
Greg Hamerly, ICPC Live - Analyst
Andrew Harrington, World Finals Judge
Fredrik Heintz, ICPC Live - Analyst
David Hill, ICPC Photographer
Theodor Hofsten, ICPC Live – Camera Operator
Ray Holder, ICPC HQ Global Services
Sharon Humphrey, ICPC Registrar
Johanna Albinsson, ICPC Live - Assistant
2011 World Finals Staff

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Niklas Lind  
ICPC Live - Vision Mixer

Jeff Popyack  
UPE - ICPC Registration

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ICPC HQ Operations - Director

Zhiqiang Liu  
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ICPC Manager

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ICPC Host

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ICPC Executive Director

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Shahriar Manzoor  
World Finals Judge

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DMT – Story Content Apprentice

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World Finals Judge

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Lyles Kirk  
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Robert Roos  
World Finals Judge

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Deputy Director of Finals Operations

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World Finals Judge

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ICPC Digital Media Producer

Phillip Motley  
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Cindy Ryan  
ACM - HQ Coordinator

Zachary Korpi  
ICPC Digital Media

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ICPC Arab Region Support

Gunnar Kreitz  
CLICS - Group Lead

Fauzan Noordin  
CLI - Presenter

Adel Samir  
ICPC Arab Region Support

Vladimir Kuznetsov  
CLI – Workshop Camps

Stein Norheim  
Analyst

Waleed Eweda  
ICPC Website Support

Mikael Lagerkvist  
CLICS

Ali Orooji  
Finals Deputy Director

Roger Sandholm  
ICPC Live - Technical Manager

Douglas Lane  
SysOps

Jo Perry  
Director of Judging

Fernando Silva  
CLI – Porto Contest Systems

José Paulo Leal  
CLI – Porto Contest Systems

Xiufeng Piao  
CLIS – 2010 Harbin Committee

Brian Sitton  
SysOps
Regional Contest Directors

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North America East Central

Normaziah Abdul Aziz
Asia Kuala Lumpur

Raewyn Boersen
South Pacific

Rodrigo Cardoso
Latin America South America/North

Kyung-Yong Chwa
Asia Daejeon

John Cigas
North America Mid-Central USA

James Comer
Regional Contests

Ricardo Dahab
Latin America

Ming Fang
Asia - Beijing

Carlos Ferreira
Latin America South America/Brazil

Adam Florence
North America Greater New York

Phalgungi Gupta
Asia Kanpur

Abul L. Haque
Asia Dhaka

Luis Hernández Yáñez
Europe Southwestern

Maung Htay
North America Mid-Atlantic USA

David Hu
Asia Chengdu

C. J. Hwang
Asia

Ossama Ismail
Africa & the Middle East – Arab Region

Ramtin Khosravi
Asia Tehran

Jan Kubr
Europe Central

Alberto Lamadrid
Latin America Mexico, Central America & Caribbean

Zhiyi Li
Asia Dalian

Irene Loiseau
Latin America South America/South

Warren MacEvoy
North America Rocky Mountain

Bozena Mannova
Europe

Linda Marshall
Africa & the Middle East - South Africa

Tsunenori Mine
Asia Fukuoka

Vallath Nandakumar
Asia Amritapuri

Ali Orooji
North America

Vladimir Parfenov
Europe Northeastern & Russian Federation

Kris Rudin
North America Pacific Northwest

Rafael Saldana
Asia Manila

Ed Skochinski
North America Southern California

Heinrich Stamerjohanns
Europe Northwestern

Ryan Stansifer
North America Southeast USA

Wannarat Suntiamorntut
Asia Phuket
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Region</th>
<th>Country</th>
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</thead>
<tbody>
<tr>
<td>Nicolae Tapus</td>
<td>2011 World Finals Staff</td>
<td>Europe Southeastern</td>
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<tr>
<td>Isaac Traxler</td>
<td>North America South Central USA</td>
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<td>Kathryn Traxler</td>
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<td>Paul Tymann</td>
<td>North America Northeast</td>
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<td>Wei Wang</td>
<td>Asia Shanghai</td>
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<td>Stanley Wileman</td>
<td>North America North Central</td>
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<tr>
<td>Mugurel Ionut Andreica</td>
<td>Europe Southeastern Romania National Contest - Director</td>
<td>Romania</td>
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<tr>
<td>Ricardo de Oliveira Anid</td>
<td>Latin America - Chief Judge</td>
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<td>Magaz Asanov</td>
<td>Europe Northeastern Sub-contest – Director</td>
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<td>Vitalii Bondarenko</td>
<td>Europe Southeastern Ukraine Site – Chief Judge</td>
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<tr>
<td>John Buck</td>
<td>North America Greater New York - Chief Judge</td>
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<td>Beatriz Caicedo</td>
<td>Latin America South America/North Colombia – Manager</td>
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<td>Tom Capaul</td>
<td>North America Pacific Northwest – Chief Judge</td>
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<tr>
<td>Cassio de Campos</td>
<td>Latin America South America/Brazil – Software Director</td>
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<td>Hans Domjan</td>
<td>Europe – Information Director</td>
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<td>Hossam Elgindy</td>
<td>South Pacific – Chief Judge</td>
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<td>Lin Feng</td>
<td>Asia Dalian – Associate Director</td>
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<td>Carlos Alberto Fernandez Guillon</td>
<td>Latin America Mexico – Site Director</td>
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<tr>
<td>Donna Furon</td>
<td>North America Southern California – Registrar</td>
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<tr>
<td>Cheng-hui Gao</td>
<td>Asia South China Contest Steering Committee - Chair</td>
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<td>Rafael Garcia</td>
<td>Latin America South America/North Colombia – Chief Judge</td>
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<tr>
<td>Sandra Margarita Garcia-Herreros Sanchez</td>
<td>Latin America South America/North Colombia – Chief Judge Assistant</td>
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<td>Mohammad Ghodsi</td>
<td>Asia Tehran – Director Emeritus</td>
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<td>Trino Gomez</td>
<td>Latin America South America/North Venezuela – Director</td>
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<tr>
<td>Juan Pablo Guerra Ibarra</td>
<td>Latin America Mexico, Central America &amp; Caribbean – PC2 Chief</td>
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<tr>
<td>Arup Guha</td>
<td>North America Southeast USA – Support</td>
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<td>Apichat Heednacram</td>
<td>Asia Phuket – Associate Director</td>
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<td>Pablo Heiber</td>
<td>Latin America South America/South – Problem Committee</td>
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<td>Václav Herman</td>
<td>Europe Central – Executive Manager</td>
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<td>Oscar Hernandez</td>
<td>Latin America Mexico, Central America &amp; Caribbean – Site Director</td>
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<tr>
<td>Kiyoshi Ishihata</td>
<td>Asia - ACM Japan Board</td>
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<td>Bo Jin</td>
<td>Asia Dalian - Coordinator</td>
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<td>Victor Khlebnikov</td>
<td>Latin America South America/South Peru - Director</td>
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<td>Alexander Klenin</td>
<td>Europe Northeastern – Support</td>
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<td>Elena Kryuchkova</td>
<td>Europe Northeastern</td>
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<td>DongMei Li</td>
<td>Asia Provincial-National Contests – Coordinator</td>
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<td>Ken-Li Lin</td>
<td>Asia Hsinchu – Coordinator</td>
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<td>Shipping Lin</td>
<td>Asia Fuzhou – Committee</td>
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<td>Kaichang Liu</td>
<td>Asia Fuzhou - Committee</td>
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<td>Yun-Fang Liu</td>
<td>Asia Contest Council China - Advisor</td>
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<td>Bautista Jose Luis Manzo</td>
<td>Latin America Mexico, Central America &amp; Caribbean – Site Director</td>
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<td>Glenn Martin</td>
<td>North America Southeast USA - Support</td>
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<td>Linxi Meng</td>
<td>Asia Dalian Interpreter</td>
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<td>Volodymyr Mesyura</td>
<td>Europe Southeastern Ukraine – Site Director</td>
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<td>Prashant Nair</td>
<td>Asia Amritapuri – Associate Director</td>
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<tr>
<td>Jung-Heum Park</td>
<td>Asia Daejeon – Chief Judge</td>
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<tr>
<td>Katsiaryna Paziura</td>
<td>Europe Northeastern Sub-contest – Director</td>
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</tbody>
</table>
2011 World Finals Staff

Pedro Pérez
Latin America Mexico, Central America & Caribbean – Chief Judge

Yandry Pérez Clemente
Latin America Mexico, Central America & Caribbean Contests - Supporter

Willmar Pimentel
Latin America South America/South Bolivia – Director

Mykola Pradivliannyi
Europe Southeastern Ukraine - Registrar

Karel Richta
Europe Central – CZ ACM President

Charles Riedesel
North America North Central - Site Director

Dovier Antonio Ripoll Méndez
Latin America Mexico, Central America & Caribbean Cuba - Director

Philip Robbins
South Pacific – Manager

Ashraf Saad
North America Southeast USA – Site Director

Joel Schweiger
North America Southern California - Judge

Anand Shenoy
Asia Amritapuri - Associate Director

Miroslav Snorek
Europe Central CTU Open - Garant

Guillermo Solis
Latin America South America/North Venezuela - Assistant Director

Methi Sunbhanich
Asia Phuket – Committee

Jorge Teran
Latin America South America/South Boliva – Chief Judge

Chakadkit Thaenchaikun,
Asia Phuket - Coordinator

David Van Brackle,
North America Southeast USA - Chief Judge

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North America Greater New York – Representative

Wen Wu
Asia Fuzhou - Committee

Yingjie Wu
Asia South China Steering Committee – Coordinator

Yonghui Wu
Asia Shanghai – Coordinator

ShengHua Yi
Asia Chengdu – Assistant Director

Zhifeng Ying
Asia Shanghai – Advisor

Jingshan Yu
Asia Northeast China Council

Sablin Yusuf
Asia Future Site Director

Teodore Zarkua
Europe Northeastern Sub-contest - Director

Junnan Zhang
Asia Shanghai – Advisor

Yinghui Zhang
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Zhi Zheng
Asia Fuzhou – Committee

Peng Zhou
Asia Chengdu – Assistant Director

Wei-Min Zhou
Asia – Council China – Secretary General

Zhikai Zhou
Asia - Council China – System Support

Hong Zhu
Asia Dalian – Associate Director

Future World Finals Committees

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Krzystof Diks
Dorota Lesiak
Ilona Lesiak
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Alojzy Nowak
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Tadeusz Tomaszewski

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Matvey Kazakov
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Ligia Maria Ribeiro
Fernando Silva

Thailand
Apichat Heednacram
Methi Sunbhanich
Chakadkit Thaenchaikun
Per Austrin, University of Toronto
ICPC World Finals contestant in 2004 and 2005. World Finals judge since 2008. “Ten years ago I had never even heard of programming contests. My first contact was in 2002 when I participated in the Nordic Championship and Northwestern Europe Regionals. In 2004 and 2005, I was in the ICPC World Finals as a contestant. Since then I have served many times as judge and head judge in the Nordic Championships and Northwestern Europe Regionals. I was a general hang-around at the Finals until I became a World Finals judge in 2008.”

Osman Ay, Computer Science Editor, Surat Publishing
World Finals Judge since 2002. “My ACM-ICPC adventure started with a forwarded e-mail message signed by Mr. Dick Rinewalt. I sent candidate problems and I was very surprised and pleased to learn that one of my problems qualified. I attended as a judge every year except 2009. I can say that being a member of this organization has become a delightful part of my life.”

John Bonomo, Westminster College
Chief Judge. World Finals judge since 2002. “Actually, my first exposure to the contest was when I was in grad school at Purdue. They were hosting the East Central Regional contest that year to select Purdue’s team for the competition. I was asked to create a problem set to be used to select Purdue’s team for the competition. Since then, I have served as a judge for the East Central Regional Contest and had problems accepted in the East Central and North Central Regional Contests.”

Don Chamberlin, Retired IBM Fellow, UC Santa Cruz
World Finals judge since 1998. “I became interested in ICPC when the Finals were held in my home town (San Jose, CA, 1997)”

Walter Guttmann, Universität Ulm

Andy Harrington, Loyola University
World Finals judge since 2008. “I became a World Finals judge while serving as Chief Judge for the Mid-Central Regional Contest. I generally made up the hardest problems and the regional director suggested I contribute problems to the Finals.”
World Finals Judges

Martin Kacer, Czech Technical University
World Finals Judge since 2006. “As a former contestant, I participated in regionals in 1996-1999. Then I was an assistant RCD and chief judge for Central Europe, university coach, World Finals volunteer, and World Finals judge. I became more closely involved since 2003, serving as Associate Director in Prague in 2004 and Director of Operations in Shanghai in 2005.”

Derek Kisman, Google
World Finals Judge since 2004. Former World Finals contestant two times. “I've been competing in intellectual contests of all sorts since I was young. I participated for two years as a contestant: 1996/1997 (San Jose, 5th place) and 1997/1998 (Atlanta, 3rd place).”

Peter Kluit, Retired, Delft Technical University

Shahriar Manzoor, Southeast University

Jo Perry, NC State, Deutsche Bank
Director of Judging. World Finals Judge since 1987. “A colleague asked me to submit problems to the 1987 Finals. I did. They were accepted. And I've been working as a Finals judge ever since!”
Dick Rinewalt, Texas Christian University
Former Chief Judge and Director of Judging. World Finals Judge since 1982. “I had been the Chief judge for the South Central Regional Contest for a couple of years. I went to the Computer Science Conference in 1981 (I think it was 1981) and was drafted to do some clerical work for the Finals. I submitted problems and became a World Finals Judge the next year and served as Director of Judging for many years”

Bob Roos, Allegheny College
World Finals Judge since 1996. “I responded to a call for problems from a USENET newsgroup and have been invalid in the Finals ever since.”

Matthias Ruhl, Google
World Finals Judge since 1997. “I had participated in many programming contests after high school and in college, so when I saw an announcement for the 1994-95 regional contest in Zurich, I gave it a try. After being a contestant, I continued as a judge, since it’s as much fun, but with much less stress :)”

Stan Wileman, University of Nebraska
World Finals Judge since 1979 (or earlier). “My first involvement with the contest was as a contestant, I was part of the team that won an early variant of the national/international contest at Texas A&M University. I don’t remember the exact year, but it was before I got my MS, so it was in or before 1972. I recall that the prize for winning was $100 cash! After joining the faculty at University of Nebraska - Omaha in 1976, I coached the UNO teams (I remember packing numerous kids in a state of NE station wagon). I also served as co-director of the regional contest. My first involvement with the Finals was through John Metzner. He indicated to me that there was a plan to bring on new Finals judges, first as “apprentice” judges, so their prowess could be assessed. He asked me if I would be interested. I believe he did this when he was also serving as director of the regional contest, when it was held at the John Deere headquarters in Moline, IL. I don’t remember exactly the first Finals in which I participated as a judge, but I do recall the Finals in Dayton (in 1979), because my baggage was lost.”

Jakub Onufry Wojtaszczyk, Google, Poland
World Finals judge since 2011. “I realized I enjoy and have a good hand for preparing problems after preparing problems for the Polish Informatics Olympiad. I prepared and submitted a few for this year’s World Finals and was pleased when one was selected.”
Travel Facts

Arrivals: You have two reasonably priced options upon arrival at the Orlando Airport for getting to our hotel. You can take a taxi and or shuttle bus. A taxi stand is located directly out the baggage claim door. Taxis can carry 1-9 people and their luggage for around $45.00 per taxi to The Peabody Orlando and for around $40.00 per taxi back to the Orlando Airport. You do not need to make advance reservations for taxi services in Orlando, and this is an easy and fairly inexpensive way of traveling around the city.

If you prefer, you can reserve and buy a round-trip shuttle ticket from Mears Transportation. Mears has an excellent reputation and is offering a special rate that includes an ICPC discount off the normal price.

In order to take a shuttle, you must make an advance reservation. You can download a coupon from http://cm.baylor.edu/q/OrlandoFAQ which is the ICPC Local Information site.

Water: The tap water in the USA is safe for drinking for all visitors.

Clothing: Comfortable, lightweight resort clothing will be perfect for the ICPC events and in Orlando. The weather in the early summer is usually very warm and humid. The sun can be strong, and a good sun block lotion is recommended. You may also wish to have sunglasses and a hat.

Currency: U.S. Dollars are the currency accepted in the USA. ATMs are commonly found, so there is probably not a need to change money.

Electricity: Electricity is 110v in the US, with a 2-pronged plug. Grounded plugs are also widely available.

Cultural tips: Tipping is common in restaurants and for taxi drivers and some who provide personal services such as hairdressers.

Photography: You should not photograph anything official like security checkpoints in airports. It is polite to ask strangers first if you wish to take their pictures.

Shopping: The hotel has a souvenir shop, and there will be opportunities to buy souvenirs on the excursion and the celebration. Bargaining is not generally done in shops in the United States.

Health: If you should become ill while at ICPC, the front desk at your hotel will be able to help you obtain medical care. You may want advice from your own doctor prior to leaving. It is prudent to bring sufficient quantities of needed medicines as well as items like contact lens solutions prior to travel, as it may be inconvenient to obtain them while in Orlando.

Useful services at the Peabody Orlando hotel:
Your hotel stay includes wireless Internet, cable television, hair dryers, and soap and shampoo. The hotel has a pool, tennis and a fitness center available for guests.

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Brochure Credits:

Jeff Donahoo, Publisher
Lisa Donahoo, Writer
Waleed Eweda, Design
Pat Hynan
Kiyoshi Ishihata

Debbie Kilbride
Leigh Ann Marshall
Marsha Poucher
Amanda Sturgill, Editing and Layout

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BJ Chow
Jo Perry