

March 10 & 11
Santa Clara Marriott
Santa Clara, CA



2005

TopCoder Collegiate Challenge™

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Date: March 11, 2005

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Date: March 11, 2005

\$ 20,000.00

GREAT MINDS DON'T THINK ALIKE, THEY THINK AHEAD.

In this marketplace, there's a lot to look forward to.

There are problems yet to be solved. Innovations yet to be uncovered. Challenges yet to be conquered. The past ten years we've celebrated many accomplishments, but there's no limit to the rewards ahead. What does our future hold? You tell us.

YAHOO!
careers.yahoo.com

FOUNDER'S MESSAGE

Welcome to the 2005 TopCoder® Collegiate Challenge, sponsored by Yahoo!®. Since last year's Collegiate Challenge, TopCoder has grown by more than 14,000 members. Membership hit a critical point earlier this year and currently stands at over 50,000 members. Many of the finalists are tournament veterans, but with the continued membership growth, some new faces are spicing up the competition.

We started the Algorithm Competition of the TCCC05 with more than 1,300 students. Of the final 24, thirteen have been previous onsite finalists, eight are returning finalists from the TCCC04, and eleven are here for the first time. The competition maintains its significant worldwide presence, with four finalists from the US and the remaining 20 from other countries around the world. Many of the students have traveled a great distance to participate in the finals, and TopCoder welcomes each of you.

Rivalry in the Component Competition of the tournament continues to intensify as well. Participation in this year's Collegiate Challenge was 130% higher than in last year's tournament. TopCoder members remain focused on competing to develop commercial software for our customers in the form of components and applications. Our component competitions bring a real-world software development dimension to the tournament by measuring design and development ability.

Once again, our sponsors are top notch. Yahoo!® has been terrific to work with as the title sponsor for the second consecutive TCCC. They have been working very closely with us to make sure our collegiate event continues to expand and improve. Motorola® has joined us as a first-time sponsor of a major TopCoder tournament. They have broadened the range of our sponsoring companies into the mobile space, and we welcome their support. We are also thankful for NVIDIA®'s sponsorship of five consecutive major TopCoder events. It is evident that they are committed to celebrating and rewarding talent in the industry, and have teamed with TopCoder to do so.

I would like to personally thank the TopCoder staff. A more diligent and reliable group of people would be nearly impossible to find. Maintaining our large population of members and coordinating the myriad tasks that go into an event of this size would not be feasible without their enthusiasm and commitment. I would also like to thank all of the TopCoder members who build our systems, write problems, review designs and code, and administer contests.

Once again, I welcome you all to the 2005 TopCoder® Collegiate Challenge, sponsored by Yahoo!®. As always, best of luck to you in the Arena!



Jack Hughes
Founder, TopCoder, Inc.



SCHEDULE OF EVENTS



WEDNESDAY - March 9, 2005

9:00am – 5:00pm Competitor Game Room
6:00pm – 8:00pm Welcome Reception

THURSDAY - March 10, 2005

9:00am – 4:00pm **Component Design & Development Championship Round**
9:30am – 10:00am NVIDIA Presentation
10:00am – 12:00pm **Algorithm Semifinal Room 1**
12:00pm – 1:00pm Lunch
1:00pm – 3:00pm **Algorithm Semifinal Room 2**
3:00pm – 3:30pm Motorola Presentation
4:00pm – 6:00pm **Algorithm Semifinal Room 3**
5:00pm – 8:00pm Spectator Showdown
6:30pm – 10:00pm Yahoo! Evening Event

FRIDAY - March 11, 2005

10:00am – 12:00pm **Algorithm Wildcard Round**
12:00pm – 1:00pm Lunch
12:00pm – 3:00pm Spectator Showdown
1:00pm – 2:00pm Presentation by Steven Skiena, PhD
2:30pm – 4:30pm **Algorithm Championship Round**
4:30pm – 5:00pm **All Champion Announcements**
5:00pm – 6:00pm Media Hour / Press Conference
7:00pm – 9:00pm Awards Reception

CONTENTS

Founder's Message Page 1
Schedule of Events Page 2

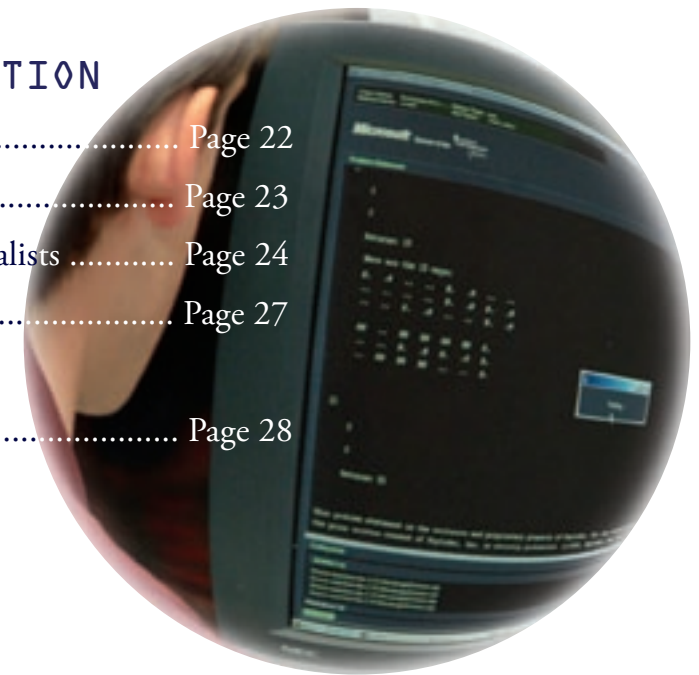
ALGORITHM COMPETITION

Brackets Page 4
Semifinal Room 1 Page 6
Semifinal Room 2 Page 11
Semifinal Room 3 Page 16

COMPONENT COMPETITION

Brackets Page 22
Design Finalists Page 23
Development Finalists Page 24
Review Board Page 27

TopCoder Admin Profiles Page 28



tomek

Jan_Kuipers

kalinov

krijgertje

aneubeck

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kindloaf

SEMIFINAL ROUNDS

John Dethridge

ploh

marian

overwise

Im2Good

AdrianKuegel

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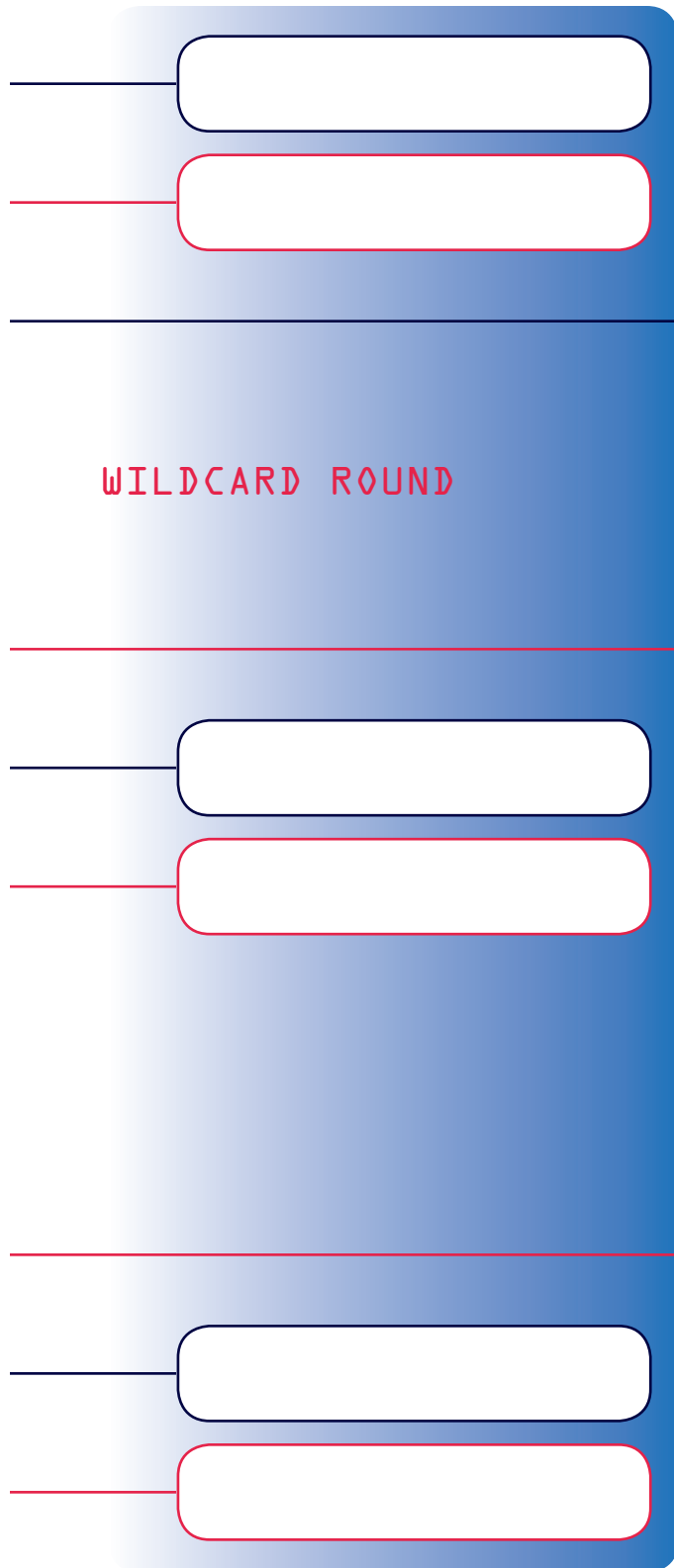
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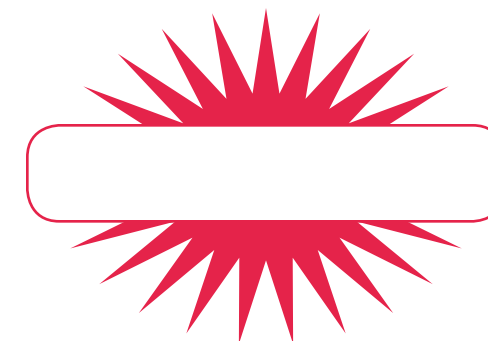
RalphFurmaniak

dvickrey



ALGORITHM COMPETITION

CHAMPION



ALGORITHM SEMIFINAL

ROOM 1

Purdue University

tomek

Utrecht University

Jan_Kuipers

FER, Zagreb

kalinov

University of Twente

krijgertje

Swiss Federal Institute of Technology, Zurich

aneubeck

Comenius University

misof

Stanford University

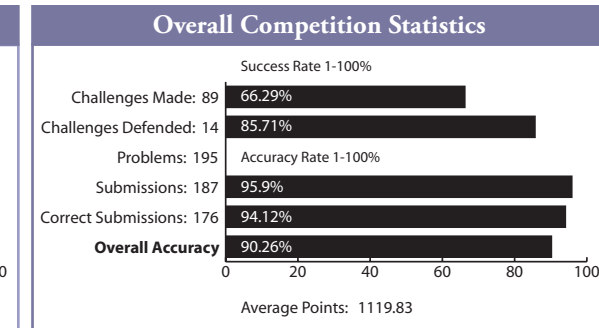
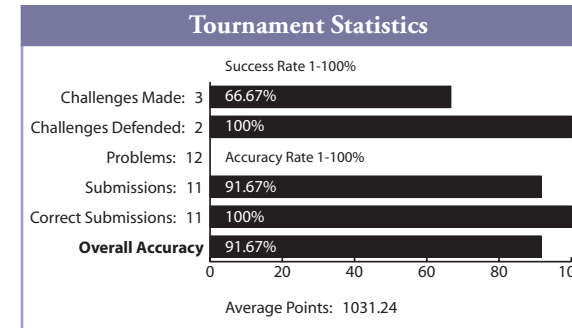
ante

Purdue University

kindloaf

tomek seed 1

Tomasz Czajka, Purdue University



Country: Poland
 Current Rating: 3447
 Current Ranking: 1
 Rating Percentile: 99.990
 Number of Ratings: 66
 Highest Rating: 3577
 Lowest Rating: 1816

Out of the history of science, who would you choose as your role model and why?

Richard Feynman - because of his passion for many aspects of science and life.

How do you generally approach solving TopCoder problems?

Read the problem statement; read the easy examples; read the problem statement with understanding; read the easy examples with understanding. If I don't know the algorithm off the top of my head - I think about possible approaches, draw more difficult examples on paper, draw some random things on paper. Now

comes the implementation: if it's a few-liner - I write it in my head then copy into the editor; if not - overall design on paper, then copy into the editor while filling out the details in my head.

What do you think is the most beautiful algorithm?

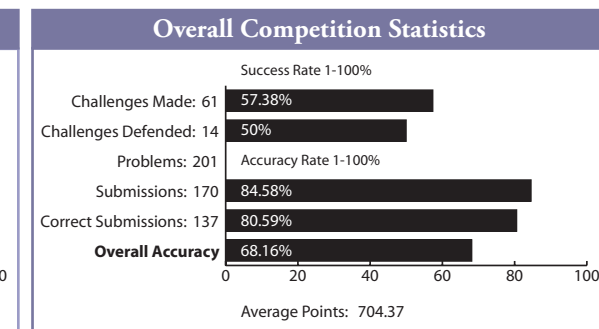
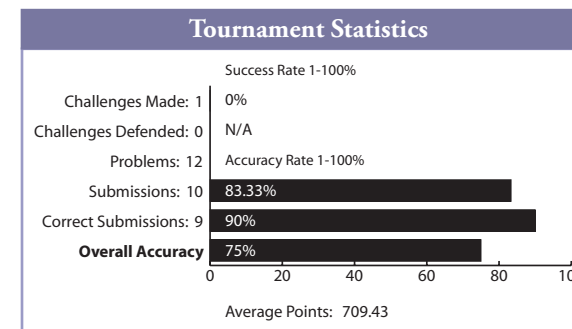
Quadratic Sieve.

If relentless bragging were more socially acceptable, how would you introduce yourself?

I am here to win.

Jan_Kuipers seed 9

Jan Kuipers, Utrecht University



Country: Netherlands
 Current Rating: 2982
 Current Ranking: 11
 Rating Percentile: 99.886
 Number of Ratings: 68
 Highest Rating: 2982
 Lowest Rating: 1411

If you could choose to work for any company in the world, which would it be and why?

After my graduation, I'd like to do interesting research as a PhD student at a good university. Regarding commercial companies, I think Google sounds interesting.

What is your favorite computer animated movie or TV show and why?

Shrek (both part I and II), because these movies make you laugh all the time and the animations are so cool!

What qualities does one need to be among the TCCC onsite finalists?

Good problem solving skills, excellent bug-free coding and nerves of steel!

What will you do with the money if you win the grand prize in this tournament?

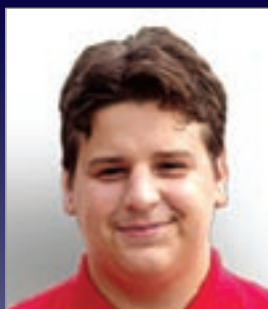
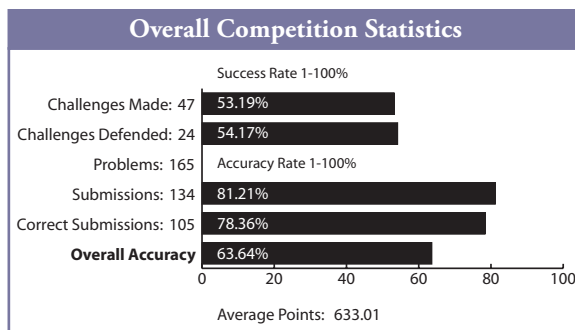
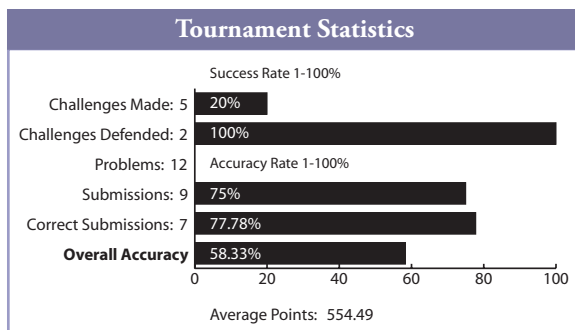
I just got my driver's license, so I'd probably buy a car.

In the movie of your life, what car would you be driving in a high-speed chase?

A Ferrari Testarossa.

kalinov seed 10

Luka Kalinovic, FER, Zagreb



Country: Croatia
 Current Rating: 2497
 Current Ranking: 44
 Rating Percentile: 99.543
 Number of Ratings: 56
 Highest Rating: 2863
 Lowest Rating: 1637

What is the most interesting field in computer science?

Algorithms are the most interesting field in computer science.

What's the secret to your success?

Practice is the key. I was on the Croatian IOI team for the last 3 years where I learned a lot about preparing for competition. To be among the best in IOI competition, you have to practice a lot. So I did!

What beverage is most analogous to your personality?

Beer is most analogous to my personality.

How do you generally approach solving TopCoder problems?

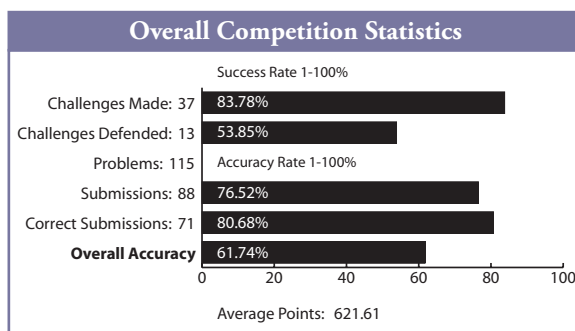
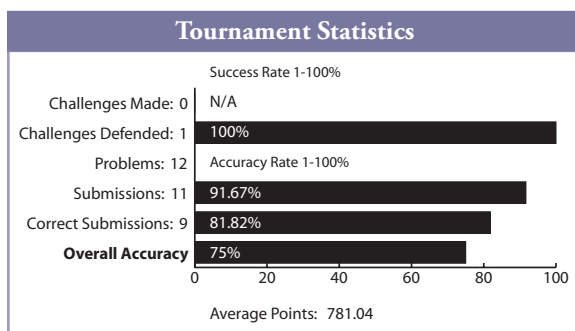
Because of the very limited competition time, it is usually not hard to think of an algorithm for a TopCoder problem, but it is very important to figure out the cleanest and the fastest way to implement it. If you don't think about implementation details first, you will end up debugging messy code for a long time.

If computers hadn't been invented, what would your career path be?

Hard to say. Maybe a mathematician or a musician.

krijgertje seed 20

Erik-Jan Krijgman, University of Twente



Country: Netherlands
 Current Rating: 2706
 Current Ranking: 22
 Rating Percentile: 99.772
 Number of Ratings: 39
 Highest Rating: 2706
 Lowest Rating: 1818

What is your favorite computer animated movie or TV show and why?

I have to say 'The Incredibles', since I've just seen it and I really liked it, especially the humorous scenes.

Do you think there's too much computer animation in entertainment today?

As long as it's good, I don't have a problem with it.

What do you think is the most beautiful algorithm?

Ford-Fulgeron.

What qualities does one need to be among the TCCC onsite finalists?

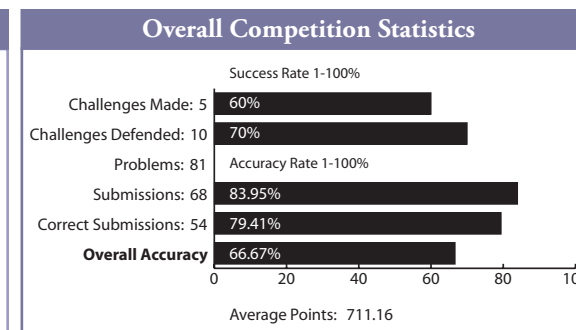
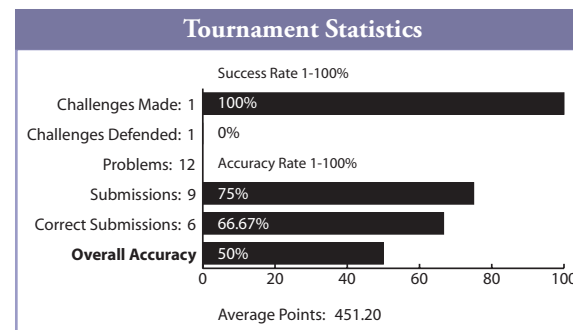
You have to be very consistent. You must always code the easy/medium problems fast and correct. It's great if you get the hard, but the foundation is consistency on the easy/medium ones.

What separates you from the rest of the contestants who didn't make it this far in the tournament?

I'm just better than most of them, although some of the contestants who didn't make it probably just had bad luck.

aneubeck seed 22

Alexander Neubeck, Swiss Federal Institute of Technology, Zurich



Country: Germany
 Current Rating: 2512
 Current Ranking: 42
 Rating Percentile: 99.564
 Number of Ratings: 28
 Highest Rating: 2596
 Lowest Rating: 1807

What qualities does one need to be among the TCCC onsite finalists?

First of all, luck (unless you are tomek :-)). Second, basic algorithmic knowledge. Third, lots of training. Fourth, a clear mind and error-free programming.

How do you generally approach solving TopCoder problems?

I read them, think about an algorithm on paper, and estimate the time complexity. If that fits, I start coding.

What do you think is the most beautiful algorithm?

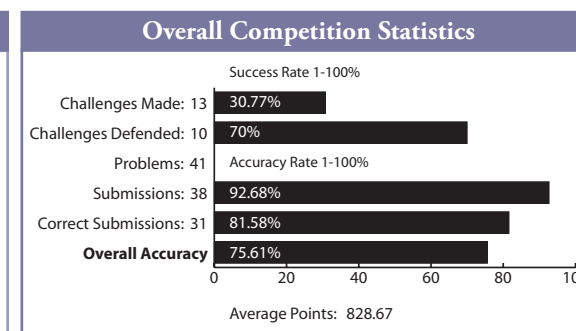
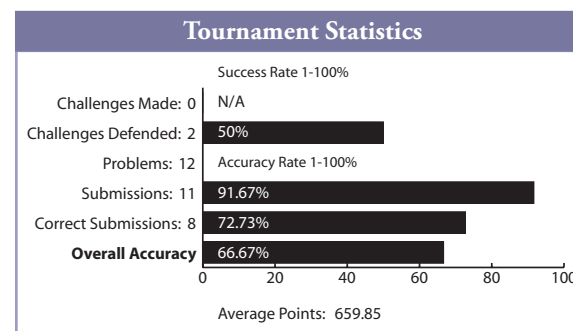
I have one! One that I discovered myself. Maximum filter for image processing in $O(n)$ independent on the filter size.

Do you think there's too much computer animation in entertainment today?

There are so many bad movies, with maybe some nice graphic effects. They try to compensate for a bad story with special effects, which often doesn't fit very well. So I don't think the problem is too much computer animation; it's just that there are no interesting stories.

misof seed 34

Michal Forisek, Comenius University



Country: Slovakia
 Current Rating: 2734
 Current Ranking: 19
 Rating Percentile: 99.803
 Number of Ratings: 14
 Highest Rating: 2734
 Lowest Rating: 1754

What is the most interesting field in computer science?

My personal favorites are effective algorithms (of course), parallel and distributed computations, formal languages and automata theory, and cryptography. In other words, mainly the theoretical areas.

What qualities does one need to be among the TCCC onsite finalists?

The most important from my point of view: ability to think clearly between 3am and 5am. This is by far the greatest problem I'm facing at the online rounds. Otherwise, one needs lots of

practice both in coding and in reading problem statements. Be smart, be fast, make no mistakes. It's that simple.

Do you think there's too much computer animation in entertainment today?

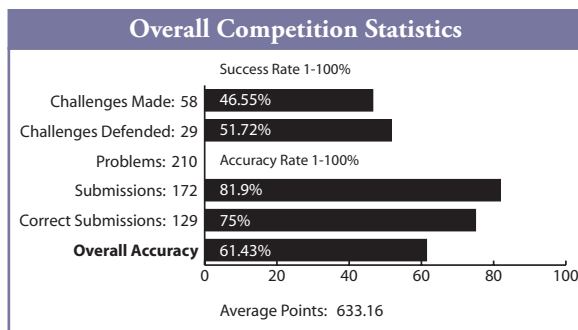
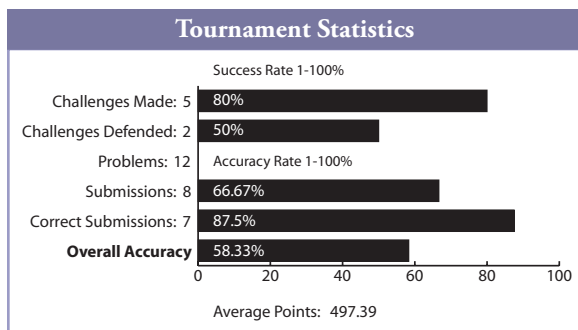
No... can there really be "too much computer animation"? I mean, I will still enjoy live actors more than their computer counterparts, but I'm not against using computer animation in movies.

What is your favorite computer animated movie or TV show and why?

The short movies by Pixar... the one with the baby lamp, "For the Birds", etc.

ante seed 36

Ante Derek, Stanford University



Country: Croatia
 Current Rating: 2539
 Current Ranking: 37
 Rating Percentile: 99.616
 Number of Ratings: 70
 Highest Rating: 2539
 Lowest Rating: 1374

If you could choose to work for any company in the world, which would it be and why?

I would like to work for a small research-oriented company.

What qualities does one need to be among the TCCC onsite finalists?

Ability to stay concentrated under pressure, broad knowledge of algorithms, great coding skills.

If computers hadn't been invented, what would your career path be?

I would have a career in inventing computers.

What is your favorite computer animated movie or TV show and why?

South Park, for the obvious reasons.

In the movie of your life, what car would you be driving in a high-speed chase?

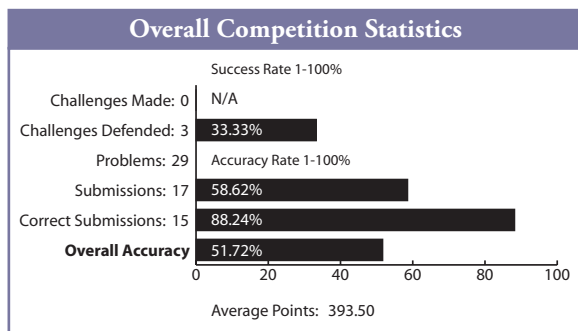
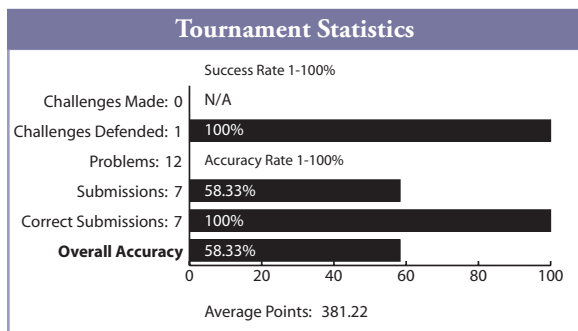
Skoda Favorit.

If relentless bragging were more socially acceptable, how would you introduce yourself?

Master of the universe.

kindloaf seed 247

Hong Chen, Purdue University



Country: China
 Current Rating: 1789
 Current Ranking: 360
 Rating Percentile: 96.264
 Number of Ratings: 10
 Highest Rating: 1827
 Lowest Rating: 1257

Out of the history of science, who would you choose as your role model and why?

Gauss. He is genius and a very hardworking scientist.

If you could choose to work for any company in the world, which would it be and why?

IBM, because it has a long history, and is very good in various areas. And they do very good research work.

What do you think is the most beautiful algorithm?

Dijkstra algorithm for the shortest path problem.

What will you do with the money if you win the grand prize in this tournament?

Buy a car.

What qualities does one need to be among the TCCC onsite finalists?

Fast Accurate Clever Confident Lucky.

What's the secret to your success?

Luck.

What beverage is most analogous to your personality?

Mountain Dew.

ALGORITHM SEMIFINAL

ROOM 2

University of Melbourne

John Dethridge

California Institute of Technology

ploh

University of Pavol Jozef Safarik, Kosice

marian

University of Ulm

overwise

Norwegian University of Science and Technology

Im2Good

University of Waterloo

AdrianKuegel

Warsaw University

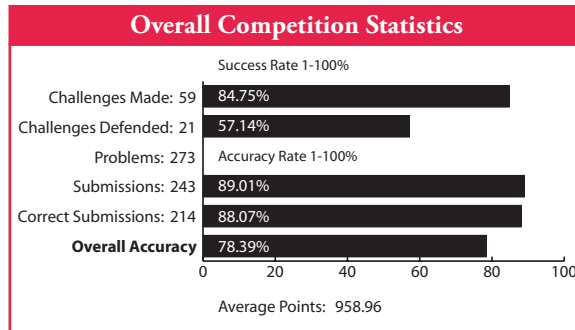
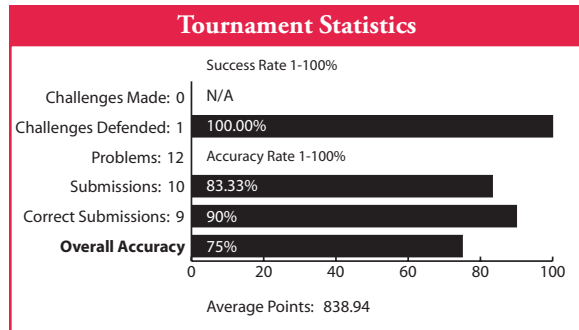
monsoon

Cornell University

qixin99

John Dethridge seed 3

John Dethridge, University of Melbourne



Country: **Australia**
 Current Rating: **3366**
 Current Ranking: **3**
 Rating Percentile: **99.969**
 Number of Ratings: **90**
 Highest Rating: **3386**
 Lowest Rating: **1908**

Out of the history of science, who would you choose as your role model and why?

John von Neumann, for his work in game theory and other areas; and G. H. Hardy, for the book "A Mathematician's Apology," amongst other achievements.

How did you get to the point where you program as fast as you do?

The hard part is being able to type that fast. Practice helps with that, and ensuring that you have a keyboard you're comfortable with. Then, you just have to learn to solve problems as quickly as you can type.

If computers hadn't been invented, what would your career path be?

Mathematician.

What's the secret to your success?

Do what you're good at.

What will you do with the money if you win the grand prize in this tournament?

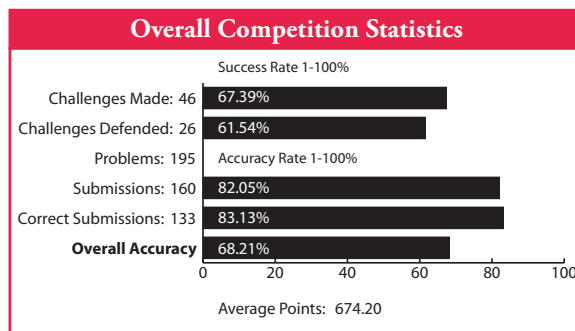
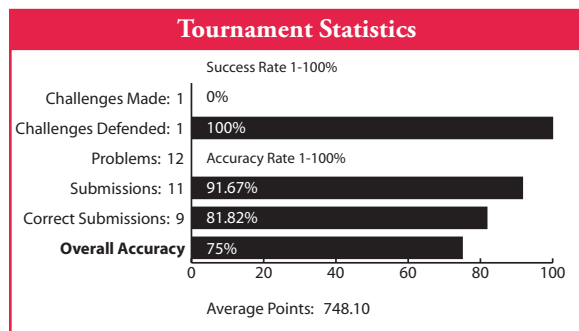
Buy everyone drinks, and hire some ghostwriters to finish writing up my thesis for me!

If relentless bragging were more socially acceptable, how would you introduce yourself?

"Hello, I'm John Dethridge."

ploh seed 8

Po-Ru Loh, California Institute of Technology



Country: **United States**
 Current Rating: **2835**
 Current Ranking: **14**
 Rating Percentile: **99.855**
 Number of Ratings: **66**
 Highest Rating: **2878**
 Lowest Rating: **1108**

What is the most interesting field in computer science?

Haven't a clue, since I'm a math major and TopCoder is about the extent of my encounters with computer science. Computability theory sounds cool though.

What do you think is the most beautiful algorithm?

Floyd-Warshall, which even I can code without bugs. Actually, I take that back; I put the loops in the wrong order once. D'oh.

What qualities does one need to be among the TCCC onsite finalists?

Speed, smarts, and a lucky streak.

What beverage is most analogous to your personality?

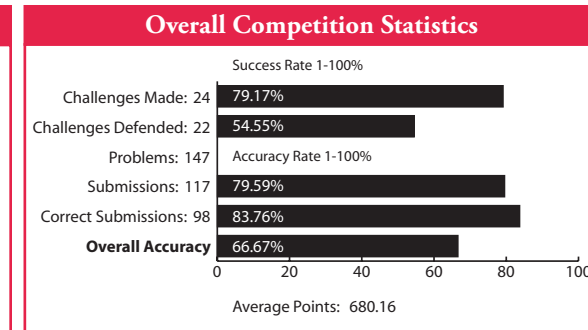
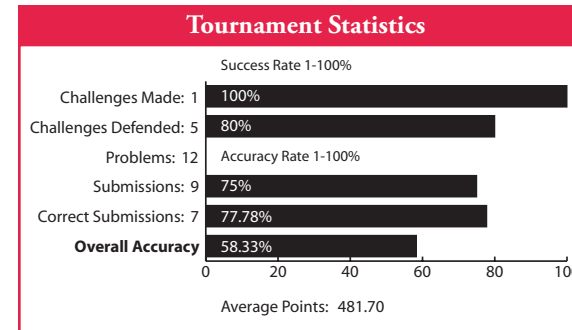
Water. Plain and unremarkable in many ways, tending to be dominated when combined with stronger hues; miscible with most types but repulsive of oiliness.

In the movie of your life, what car would you be driving in a high-speed chase?

A Model-T. (It'd be a comedy.)

marian seed 11

Marian Dvorsky, University of Pavol Jozef Safarik, Kosice



Country: **Slovakia**
 Current Rating: **2823**
 Current Ranking: **15**
 Rating Percentile: **99.844**
 Number of Ratings: **50**
 Highest Rating: **2842**
 Lowest Rating: **1421**

What is the most interesting field in computer science?

Theory of computation, because you are working with things that don't exist.

What qualities does one need to be among the TCCC onsite finalists?

He has to be a fast coder and fast thinker. Practice helps, but is probably not sufficient, unfortunately.

What do you think is the most beautiful algorithm?

Depth First Search, because it's simple and yields many important efficient algorithms.

How do you generally approach solving TopCoder problems?

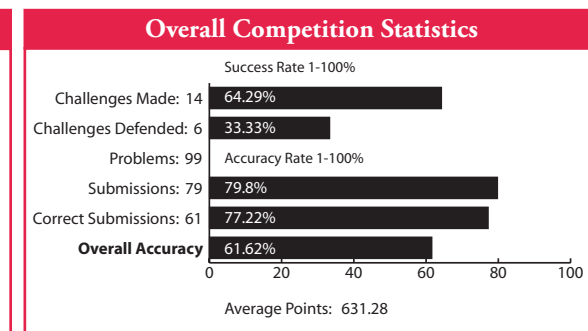
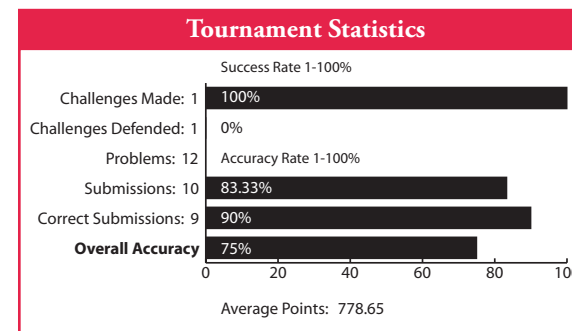
I read the statement. If I get it, I code it as fast as possible. If I don't get it, then I think for a very long while until I realize how blind I was and then code it. Then I test it on examples and corner cases and submit.

In the movie of your life, what car would you be driving in a high-speed chase?

Red Ferrari.

overwise seed 19

Robin Nittka, University of Ulm



Country: **Germany**
 Current Rating: **2652**
 Current Ranking: **26**
 Rating Percentile: **99.730**
 Number of Ratings: **34**
 Highest Rating: **2713**
 Lowest Rating: **1805**

Out of the history of science, who would you choose as your role model and why?

Euclid, because he was the first one to see the need for axioms in mathematics.

What do you think is the most beautiful algorithm?

The Stable Marriage problem's solution. Very complicated task, it seems, but a very easy solution.

How did you get to the point where you program as fast as you do?

Practice, purely practice.

What is the most interesting field in computer science?

Programming language design (I like functional programming.)

What's the secret to your success?

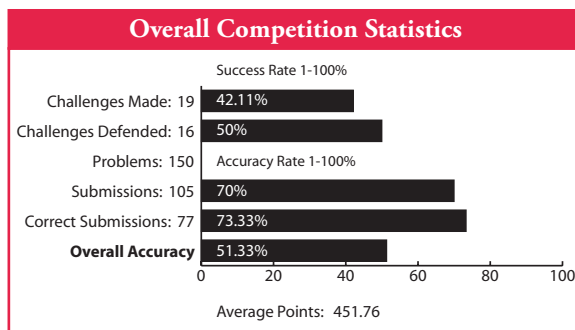
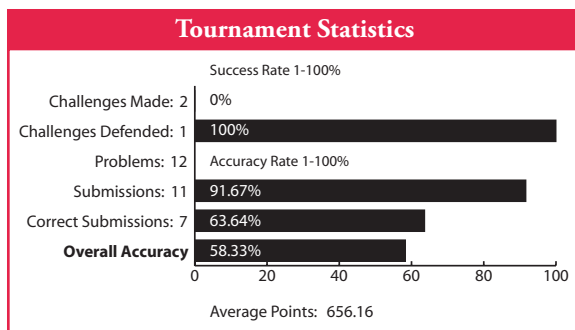
To have no private life.

In the movie of your life, what car would you be driving in a high-speed chase?

Something really old, that can't drive faster than perhaps 80 km/h. Would be kind of funny, I think.

Im2Good seed 27

Rune Fevang, Norwegian University of Science and Technology



Country: Norway
 Current Rating: 2650
 Current Ranking: 27
 Rating Percentile: 99.720
 Number of Ratings: 51
 Highest Rating: 2671
 Lowest Rating: 1311

If you could choose to work for any company in the world, which would it be and why?

NVIDIA, because I would love to know how those graphics cards get that fast.

What is the most interesting field in computer science?

Algorithms, because they make me think, and it gives a good feeling when I finally understand why a particular algorithm works.

Out of the history of science, who would you choose as your role model and why?

Albert Einstein, for his ability to think outside of the box.

How did you get to the point where you program as fast as you do?

By trying to solve the div. 2 easy problems as quickly as possible in the practice rooms.

What do you think is the most beautiful algorithm?

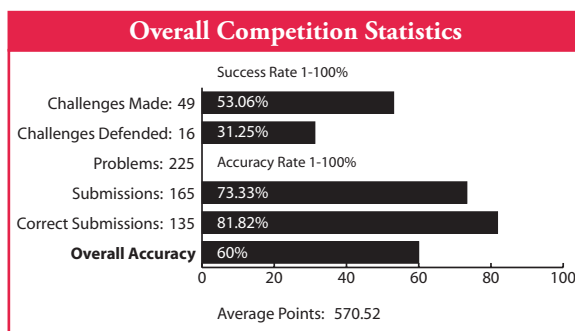
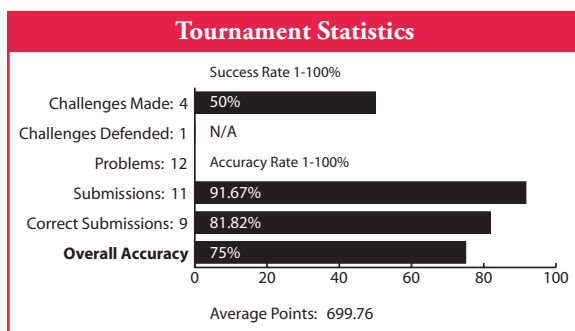
Any $O(n^2 \log n)$ dp algorithm. Just because the code looks sweet.

What beverage is most analogous to your personality?

Whiskey, because it takes time to get used to me.

AdrianKuegel seed 33

Adrian Kuegel, University of Waterloo



Country: Germany
 Current Rating: 2669
 Current Ranking: 25
 Rating Percentile: 99.741
 Number of Ratings: 76
 Highest Rating: 2669
 Lowest Rating: 1336

If computers hadn't been invented, what would your career path be?

I would probably study mathematics.

How do you generally approach solving TopCoder problems?

First, I read the statement and write everything down that is necessary to solve the problem and that seems to be difficult to remember (special cases, certain numeric constants, etc.). Then if I don't know instantly how to solve the problem, I check the given examples, and try to work out how to obtain the given answer. If I think I know the solution to the problem, I start coding.

What do you think is the most beautiful algorithm?

Floyd Warshall. It is so short and easy to implement, however it is not trivial to invent it oneself.

Out of the history of science, who would you choose as your role model and why?

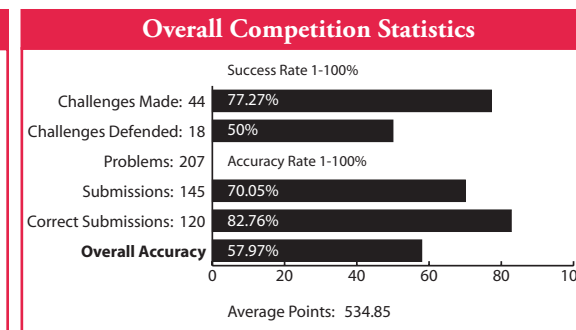
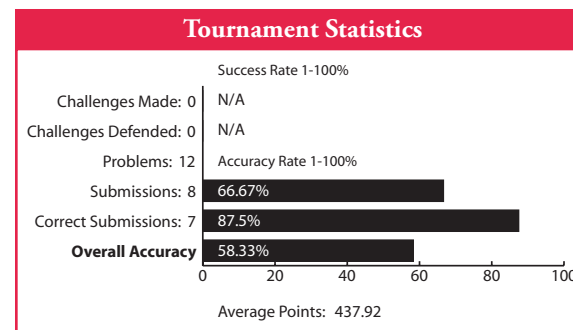
Thomas Edison, because he was so creative and invented many useful things.

In the movie of your life, what car would you be driving in a high-speed chase?

I would be driving a police car (it can't be too bad for such a thing).

monsoon seed 38

Tomasz Idziaszek, Warsaw University



Country: Poland
 Current Rating: 2413
 Current Ranking: 55
 Rating Percentile: 99.429
 Number of Ratings: 70
 Highest Rating: 2786
 Lowest Rating: 1779

What do you think is the most beautiful algorithm?

Binary Search. It is efficient, simple (but quite tricky to code) and very useful.

What's the secret to your success?

It is hard to keep in secret that you spend several hours a day in front of your computer's monitor (no matter what the time is). I would say that practice is the key.

If relentless bragging were more socially acceptable, how would you introduce yourself?

You have always wanted to have a son like me.

Out of the history of science, who would you choose as your role model and why?

John von Neumann for his contributions to the field of computing and his mathematical talent.

If computers hadn't been invented, what would your career path be?

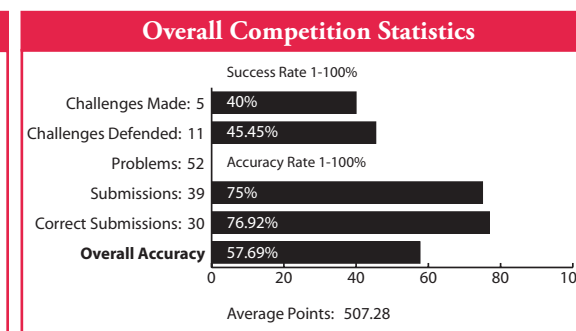
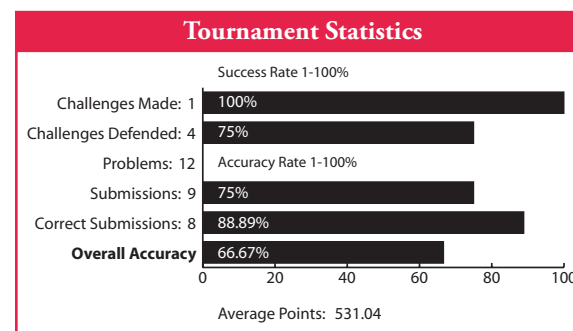
I would probably be a director. As a kid I wanted to be one, but I did not have a camcorder (so clearly I don't know if I would be a good one).

What beverage is most analogous to your personality?

Mineral water. Sparkling. With lemon.

qixin99 seed 96

Xin Qi, Cornell University



Country: United States
 Current Rating: 2315
 Current Ranking: 85
 Rating Percentile: 99.118
 Number of Ratings: 18
 Highest Rating: 2315
 Lowest Rating: 1380

What qualities does one need to be among the TCCC onsite finalists?

He/she needs to be knowledgeable about algorithms, fast in speed, and quick in mind.

What separates you from the rest of the contestants who didn't make it this far in the tournament?

I have the ability to solve tricky problems, and more importantly to make my solution work correctly.

What do you think is the most beautiful algorithm?

Floyd's cycle-detection algorithm.

What will you do with the money if you win the grand prize in this tournament?

Buy some gifts for my wife.

If you could choose to work for any company in the world, which would it be and why?

IBM. They (at least used to) have a great research environment, and a good life-style.

In the movie of your life, what car would you be driving in a high-speed chase?

Ford Mustang

ALGORITHM SEMIFINAL

ROOM 3

Warsaw University

Eryx

University of Illinois Urbana-Champaign

haha

TU Berlin

gepa

University of Groningen

mathijs

Warsaw University

cyfra

California Institute of Technology

dangelo

University of Waterloo

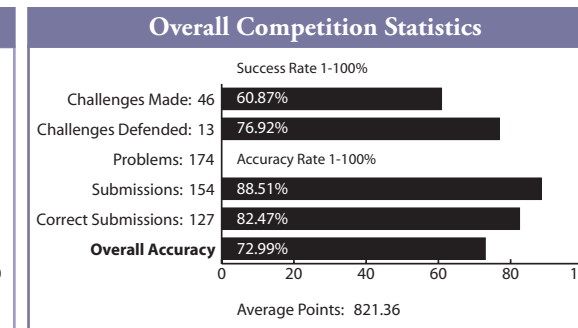
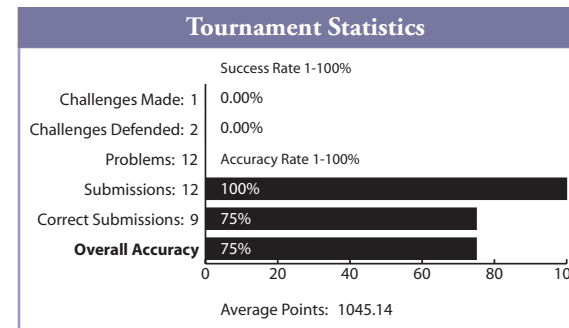
RalphFurmaniak

Stanford University

dvickrey

Eryx seed 4

Eryk Kopczyński, Warsaw University



Country: Poland
 Current Rating: 3287
 Current Ranking: 4
 Rating Percentile: 99.959
 Number of Ratings: 59
 Highest Rating: 3287
 Lowest Rating: 1594

How do you generally approach solving TopCoder problems?

I quickly read the problem statement. Sometimes an algorithm is obvious, sometimes it is not. I usually have a sheet of paper, which is very useful for geometric and some other problems. I generally implement the first algorithm I find that is reasonable. Sometimes I implement parts of the solution that I think I'll need to use, like parsing, before I know the whole solution. I usually submit my solution when it passes all systests, and then I look at it and/or test it.

What's the secret to your success?

If I told you, it would not be a secret.

What is the most interesting field in computer science?

I like computability theory and algorithms. I also like inventing programming languages (as can be seen from my macros).

In the movie of your life, what car would you be driving in a high-speed chase?

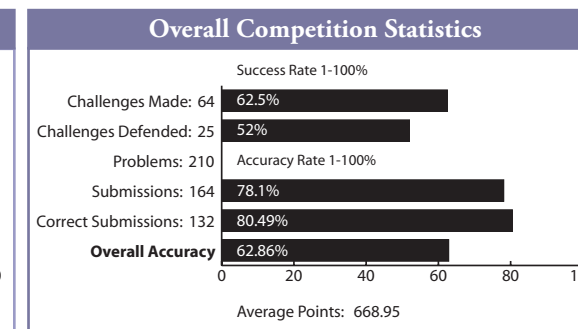
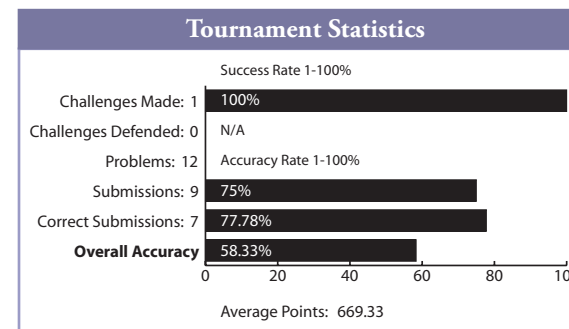
This car would be able to fly, and would be controlled by an onboard AI which would not allow it to crash.

What beverage is most analogous to your personality?

Carrot juice mixed with multifruit juice.

haha seed 5

Zheng Shao, University of Illinois Urbana-Champaign



Country: China
 Current Rating: 3090
 Current Ranking: 6
 Rating Percentile: 99.938
 Number of Ratings: 69
 Highest Rating: 3127
 Lowest Rating: 1559

If you could choose to work for any company in the world, which would it be and why?

Google or Yahoo. I like the companies which can touch everybody's daily life.

Out of the history of science, who would you choose as your role model and why?

Gauss, because he has so many contributions to the maths and the super skills of calculation purely in the mind.

What do you think is the most beautiful algorithm?

MCMC (Markov Chain Monte Carlo).

What separates you from the rest of the contestants who didn't make it this far in the tournament?

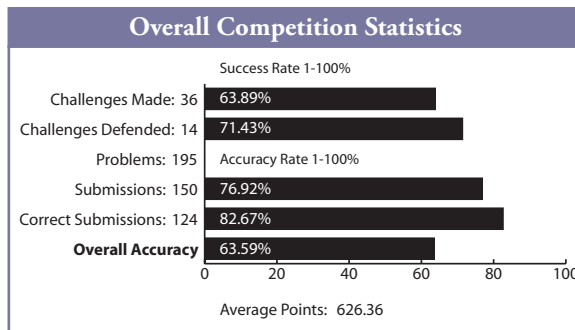
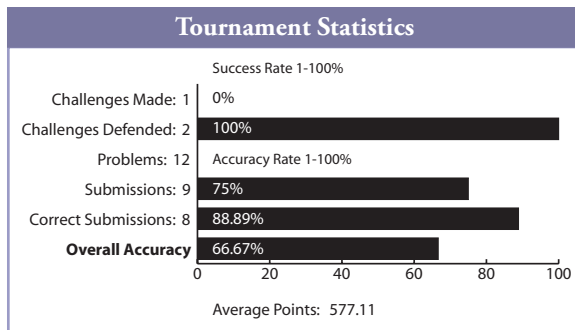
A tiny bit of luck.

What is your favorite computer animated movie or TV show and why?

Toy Story. This is the first computer animated movie I saw and it impressed me a lot (I was a high school student at the time).

What beverage is most analogous to your personality?

Coca Cola.



Country: Germany
 Current Rating: 2738
 Current Ranking: 18
 Rating Percentile: 99.813
 Number of Ratings: 66
 Highest Rating: 2738
 Lowest Rating: 1599

What is the most interesting field in computer science?

Artificial Intelligence. Algorithmic complexity.

If computers hadn't been invented, what would your career path be?

Probably a physicist (which I am studying now anyway), or a mathematician.

Out of the history of science, who would you choose as your role model and why?

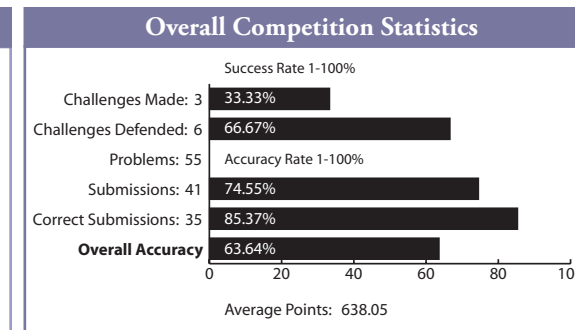
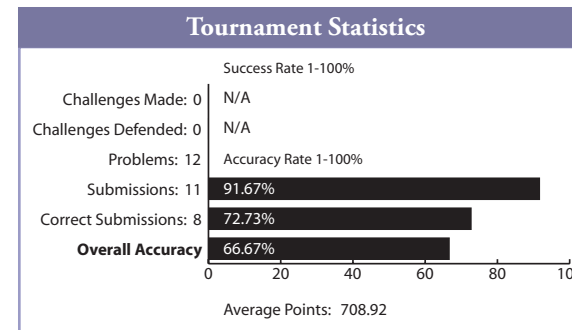
Albert Einstein for changing our view of the world (it also fits to the 100 years of relativity we are celebrating this year).

What is your favorite computer animated movie or TV show and why?

Toy Story, for being the first full-length completely computer animated movie. And of course because Debian is naming their releases after Toy Story characters.

Do you think there's too much computer animation in entertainment today?

I don't see any problem with computer animation being used. It just provides more possibilities to the entertainment industry.



Country: Poland
 Current Rating: 2714
 Current Ranking: 20
 Rating Percentile: 99.793
 Number of Ratings: 19
 Highest Rating: 2714
 Lowest Rating: 1482

If you could choose to work for any company in the world, which would it be and why?

That's a hard question to answer. I'd like to work for a company with an interesting research program, good employees and a sufficient amount of money to cover all these. Name is irrelevant.

What separates you from the rest of the contestants who didn't make it this far in the tournament?

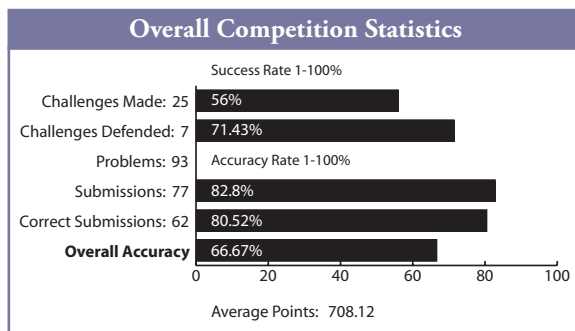
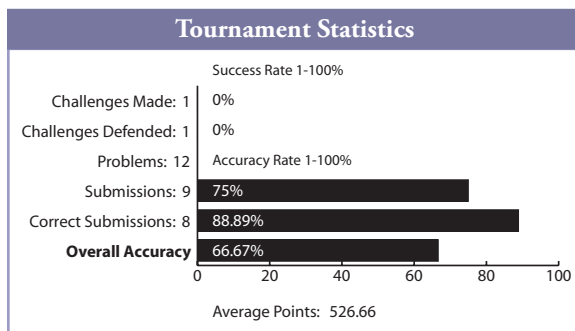
There is always some luck involved. A lot depends on tasks, but we are only human and during these elimination rounds every mistake may eliminate you from the tournament. The difference is I haven't made this mistake yet.

What is your favorite computer animated movie or TV show and why?

Shrek. First, the screenplay is very good - there are lots of jokes and funny situations. Moreover, I was amazed by the animation. If you compare Shrek to animations that were produced a few years ago, the differences are amazing.

What beverage is most analogous to your personality?

I can't point to exactly one beverage, but I'm sure that it must have carbon dioxide. When I have any new idea, I'm also filled with energy and enthusiasm. Later its level decreases, but it doesn't disappear.



Country: Netherlands
 Current Rating: 2744
 Current Ranking: 17
 Rating Percentile: 99.824
 Number of Ratings: 32
 Highest Rating: 2906
 Lowest Rating: 1411

Out of the history of science, who would you choose as your role model and why?

Pierre de Fermat, who was doing mathematics purely as a hobby and for fun, and that's how I like to think about science: not as a job but as a fun and interesting project.

What separates you from the rest of the contestants who didn't make it this far in the tournament?

The mix of skill, practice and luck was a little bit more favorable for me than for them. Also, statistically I have a higher chance of making the finals because I didn't make it last year.

What is the most interesting field in computer science?

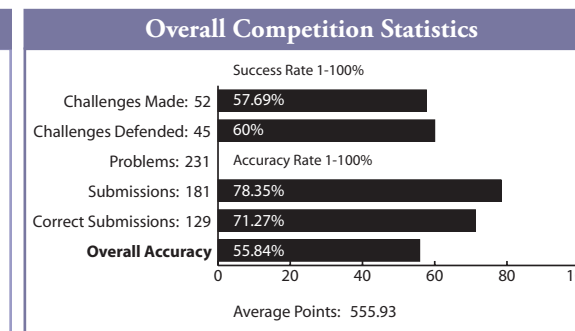
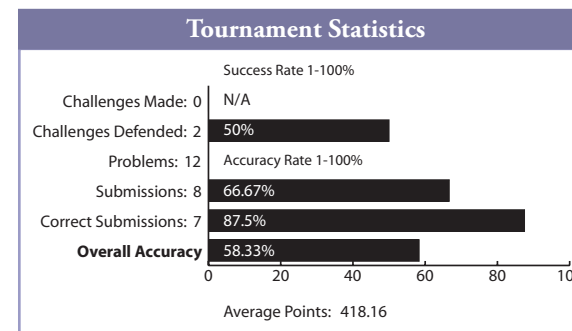
Bioinformatics. There is a huge pile of information that is waiting for computational tools to be analyzed and reveal valuable information and insights about how biological systems work.

What beverage is most analogous to your personality?

Vodka-martini: shaken, not stirred.

If relentless bragging were more socially acceptable, how would you introduce yourself?

Mathijs Vogelzang, top notch doctor and excellent computer scientist, pleased to meet you!



Country: United States
 Current Rating: 2395
 Current Ranking: 58
 Rating Percentile: 99.398
 Number of Ratings: 76
 Highest Rating: 2530
 Lowest Rating: 731

What do you think is the most beautiful algorithm?

I don't like specific algorithms, I like the process of designing new ones.

What is the most interesting field in computer science?

Distributed systems.

What separates you from the rest of the contestants who didn't make it this far in the tournament?

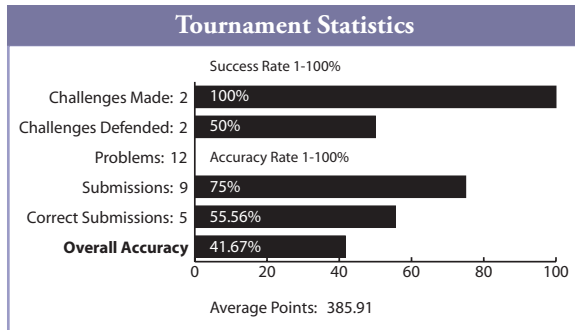
I haven't made any stupid mistakes yet.

If relentless bragging were more socially acceptable, how would you introduce yourself?

I still wouldn't brag.

Ralph Furmaniak seed 39

Ralph Furmaniak, University of Waterloo



Out of the history of science, who would you choose as your role model and why?

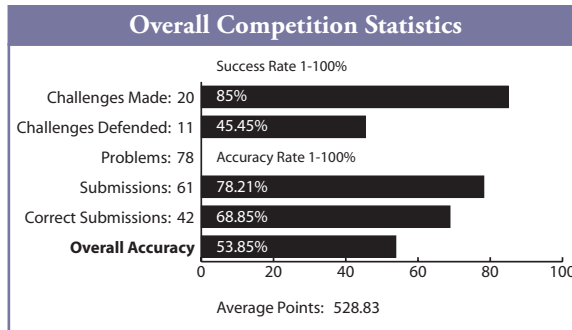
Leonhard Euler: he did amazing work throughout his whole life, and still lived well.

How do you generally approach solving TopCoder problems?

From the front, otherwise I cannot see the monitor.

What is your favorite computer animated movie or TV show and why?

Finding Nemo: Pixar consistently puts out great movies.



In the movie of your life, what car would you be driving in a high-speed chase?

A supersonic hovercraft full of eel.

If relentless bragging were more socially acceptable, how would you introduce yourself?

I'll wait until being myself is socially acceptable.

What separates you from the rest of the contestants who didn't make it this far in the tournament?

The Canadian border.



Country: Canada

Current Rating: 2408

Current Ranking: 56

Rating Percentile: 99.419

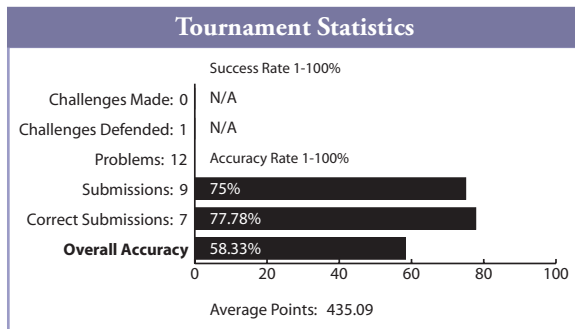
Number of Ratings: 27

Highest Rating: 2433

Lowest Rating: 1645

dvickrey seed 61

David Vickrey, Stanford University

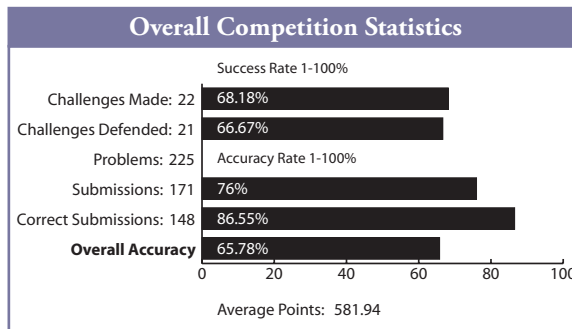


If you could choose to work for any company in the world, which would it be and why?

Either Google or Microsoft, as they are the companies which currently do the most research in the areas I am interested in.

What is the most interesting field in computer science?

Artificial intelligence (specifically machine learning). Computers are getting powerful enough that really interesting things can be done using large amounts of data.



What's the secret to your success?

My biggest strength at TopCoder is consistency. I rarely make small mistakes, and when I submit a solution I am usually very confident it will succeed.

Do you think there's too much computer animation in entertainment today?

For the most part, computer animated movies have been "better" than the average non-animated movie (although I'm not really sure why). It's definitely not at the point (yet) where people are making computer-animated movies just to make computer-animated movies.



Country: United States

Current Rating: 2284

Current Ranking: 89

Rating Percentile: 99.077

Number of Ratings: 76

Highest Rating: 2361

Lowest Rating: 1301



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COMPONENT COMPETITION

DESIGN

adic

aubergineanode

MPhk

CHAMPION

DEVELOPMENT

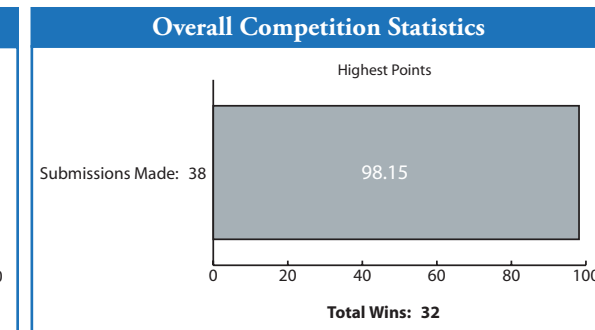
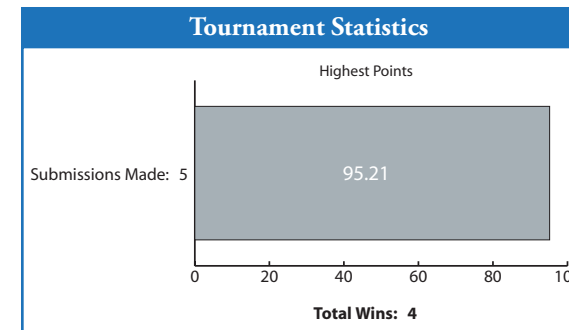
oldbig

dmks

XuChuan

gladius

CHAMPION



Country: Romania
 Algorithm Rating: 2232
 Design Rating: 2167
 Development Rating: 1821
 TC Earnings: \$45,707

If you could choose to work for any company in the world, which would it be and why?

Sun Microsystems, because I would love to have the chance to work at improving Java.

What is the most interesting field in computer science?

Development / design tools.

What separates you from the rest of the contestants who didn't make it this far in the tournament?

Although there was very little competition in design, I guess the level of experience made the difference.

What's the secret to your success?

Choosing to work in a domain that I like and which I'm reasonably good at.

If relentless bragging were more socially acceptable, how would you introduce yourself?

Designer, developer and coder.

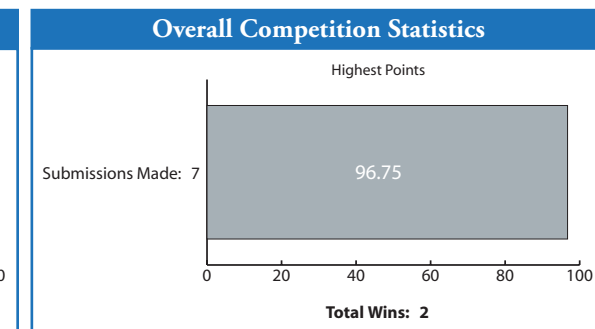
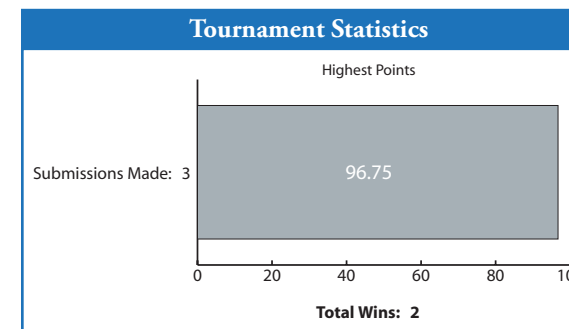
What qualities does one need to be among the TCCC onsite finalists?

Quick thinking.

In the movie of your life, what car would you be driving in a high-speed chase?

A Ferrari.

aubergineanode DESIGN



Country: United States
 Algorithm Rating: 1420
 Design Rating: 1976
 Development Rating: 916
 TC Earnings: \$1,800

What is the most interesting field in computer science?

Theory of computation.

Out of the history of science, who would you choose as your role model and why?

Nikola Tesla – because there's something to be said for eccentricity.

What qualities does one need to be among the TCCC onsite finalists?

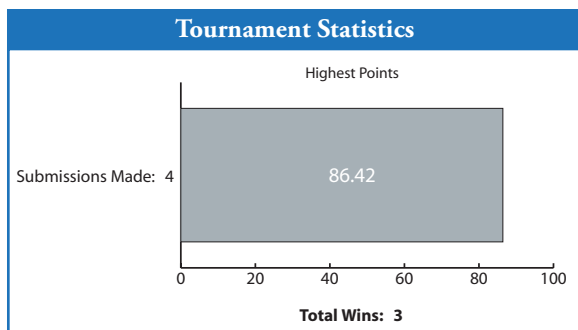
Attention to detail under pressure and a commitment to wanting to be there.

How do you generally approach solving TopCoder problems?

For the algorithm competition I just plunge right in and hope that I think of an efficient algorithm and of all the corner cases. For component design, I try to sketch out an overall plan and then fill in the details, always making sure as I go that I'm doing the "right" thing.

What is your favorite computer animated movie or TV show and why?

The Incredibles, since it's the one I've seen most recently and it was quite entertaining.



If you could choose to work for any company in the world, which would it be and why?

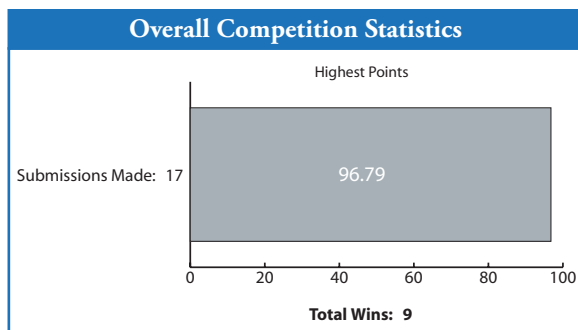
I would love to work for IBM, Google or Microsoft because they represent, in my opinion, the most innovative companies in the world.

Out of the history of science, who would you choose as your role model and why?

I admire most Leonardo da Vinci, because he was able to be both a great scientist in a wide variety of fields, and an original and famous artist.

In the movie of your life, what car would you be driving in a high-speed chase?

A Porsche Carrera GT - beautiful and strong.



What is the most interesting field in computer science?

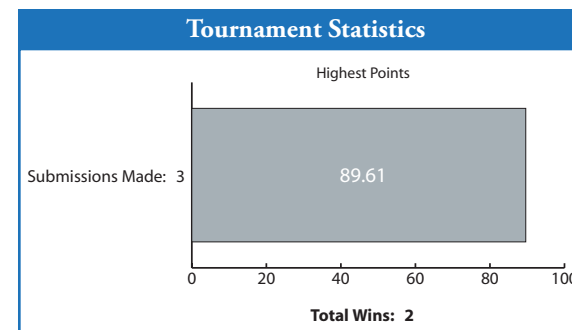
To me, programming languages, compilers and Software Engineering addressing tools for developers. I consider these to be the fields from which the evolution of computer science and the development of better applications begins - simple and powerful programming languages, smart and performant compilers, easy to use and helpful developer tools.

If computers hadn't been invented, what would your career path be?

I think I would have been a writer or a poet.



Country: Romania
 Algorithm Rating: 1251
 Design Rating: 1689
 Development Rating: N/A
 TC Earnings: \$14,395



Out of the history of science, who would you choose as your role model and why?

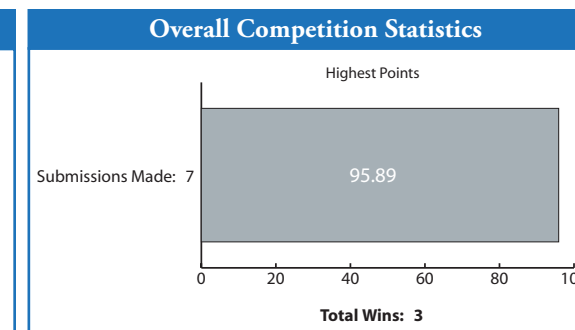
Newton.

If computers hadn't been invented, what would your career path be?

Mathematics research.

How do you generally approach solving TopCoder problems?

Just do as the specs & requirements say.



What separates you from the rest of the contestants who didn't make it this far in the tournament?

Persistence.

What will you do with the money if you win the grand prize in this tournament?

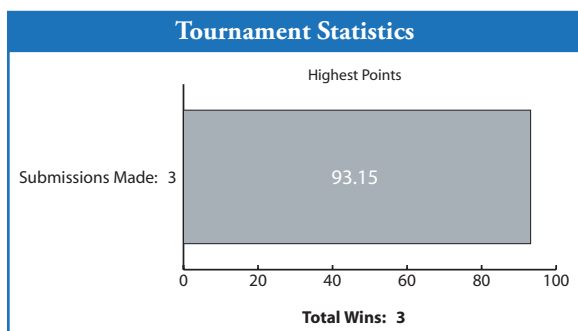
Give it to my father and mother.

If you could choose to work for any company in the world, which would it be and why?

TopCoder, I love it. :-)



Country: China
 Algorithm Rating: 2182
 Design Rating: N/A
 Development Rating: 1680
 TC Earnings: \$2,100



If you could choose to work for any company in the world, which would it be and why?

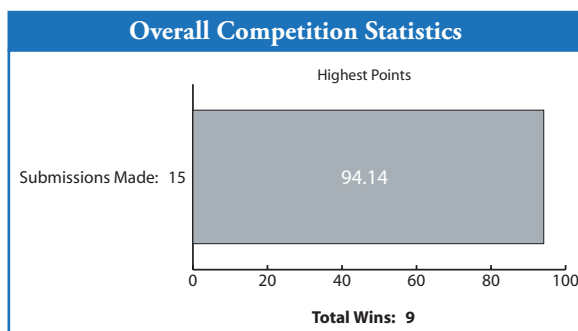
Microsoft. It was the first IT company I knew when I was young and it's still really great.

Out of the history of science, who would you choose as your role model and why?

Mao Zedong - the man built the new China.

If computers hadn't been invented, what would your career path be?

A doctor.



What's the secret to your success?

Sleep 12 hours a day - LOL!

What beverage is most analogous to your personality?

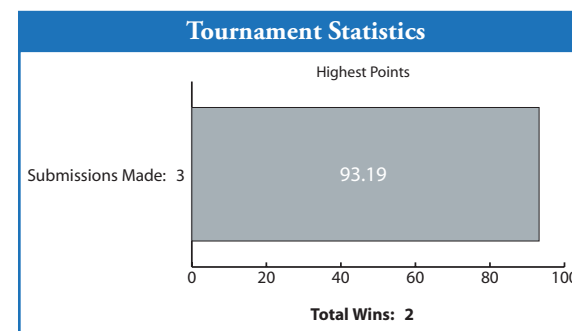
Cola - It means happy in Chinese and I am always very happy.

What will you do with the money if you win the grand prize in this tournament?

Buy a good bicycle and ride far away.



Country: China
 Algorithm Rating: 1712
 Design Rating: 1320
 Development Rating: 1429
 TC Earnings: \$6,677



If you could choose to work for any company in the world, which would it be and why?

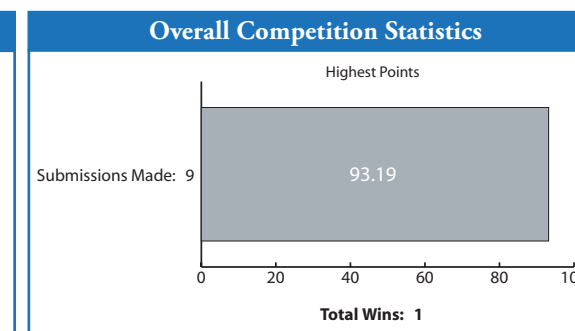
IBM or Microsoft because they are leading IT companies. Google because of their good culture and working environment.

What qualities does one need to be among the TCCC onsite finalists?

Patience & willpower. It can be boring at times doing development.

If computers hadn't been invented, what would your career path be?

Mathematician or economist. I'd like to be a scholar.



How did you get to the point where you program as fast as you do?

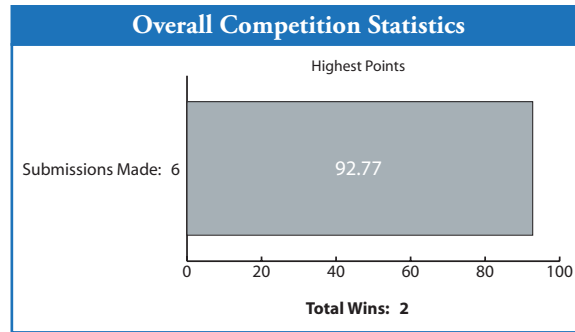
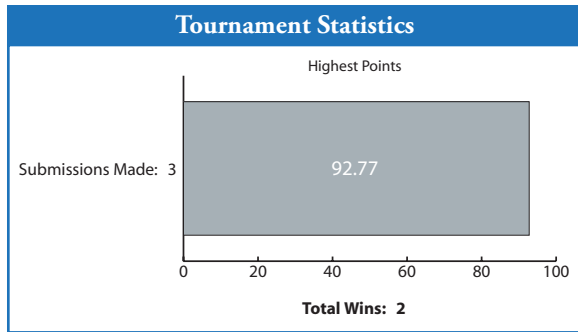
I do not program very fast, just a little faster than ordinary people. I have to admit that I cannot catch up with the top programmers. I didn't use a special approach to get where I am, just did it by nature.

In the movie of your life, what car would you be driving in a high-speed chase?

No doubt it would be a Ferrari!



Country: China
 Algorithm Rating: 2332
 Design Rating: N/A
 Development Rating: 1342
 TC Earnings: \$2,161



Country: **Canada**
 Algorithm Rating: **2060**
 Design Rating: **N/A**
 Development Rating: **1325**
 TC Earnings: **\$3,996**

What is the most interesting field in computer science?

There are so many. :-) If I had to pick one, I'd go with Artificial Intelligence. This means many different things, but essentially making computers do the things that humans do so well is a fascinating problem.

How did you get to the point where you program as fast as you do?

Through writing a ton of code and practicing on TopCoder and ACM problems.

What do you think is the most beautiful algorithm?

The elegance and power of Floyd-Warshall is tough to beat.

Do you think there's too much computer animation in entertainment today?

Yes, sometimes there is. It should be used only where necessary, otherwise the illusion is easily lost. Computer Animation is good, but no replacement for the real thing most of the time.

What beverage is most analogous to your personality?

Root beer.

REVIEW BOARD

About Design: Highly rated and experienced TopCoder members fill the ranks of the Architecture Design Review Board. These members screen and review all design submissions to ensure the components meet the functional requirements, are documented properly and contain the appropriate sequence, use and case diagrams. Additionally, the Architecture Design Review Board recommends design enhancements and verifies the design is flexible enough to be reused and customized in the future.

About Development: TopCoder Software utilizes past component development winners and accomplished TopCoder competitors to staff the Development Review Board. These reviewers verify that each development submission meets the required functionality, coding style, adheres to the component design and contains a suitable test suite. Furthermore, to certify the component belongs in the TopCoder catalog, the development review board adds a suite of test cases including stress, accuracy and failure to the component.

Design Reviewers:



WishingBone

Jiazhi Wu
 Country: **China**
 Algorithm Rating: **2630**
 Design Rating: **2302**
 Development Rating: **1424**
 TC Earnings: **\$14,686**



aksonov

Pavlo Aksonov
 Country: **Ukraine**
 Algorithm Rating: **1574**
 Design Rating: **2086**
 Development Rating: **1229**
 TC Earnings: **\$59,091**



kyky

Sergey Kalinichenko
 Country: **United States**
 Algorithm Rating: **1518**
 Design Rating: **1667**
 Development Rating: **N/A**
 TC Earnings: **\$22,881**



Adam Selene

Gregory Eldridge
 Country: **United States**
 Algorithm Rating: **1676**
 Design Rating: **780**
 Development Rating: **1106**
 TC Earnings: **\$1,869**

Development Reviewers:



theCois

Francois Bonin
 Country: **Ghana**
 Algorithm Rating: **1354**
 Design Rating: **1200**
 Development Rating: **784**
 TC Earnings: **\$371**



cucu

Alejandro Marcu
 Country: **Argentina**
 Algorithm Rating: **1464**
 Design Rating: **1070**
 Development Rating: **1399**
 TC Earnings: **\$2,420**

TopCoder Admins:

What would you do if you won \$20,000?



bblais

Bill Blais
Project Manager

"I would go on a vacation to Australia."



chippydip

Chip Bradford
Project Manager

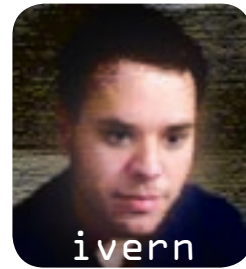
"I would put some of it toward college loans, but the rest I would invest."



TheFaxman

Ryan Fairfax
Developer

"I'd use the money to take some time to write a book."



ivern

Javier Fernandez-Ivern
Component Manager

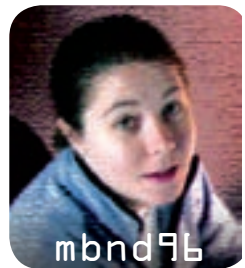
"I'd pay off my college loans."



thx1138

Travis Haas
Infrastructure Manager

"I'd buy a freaking Walser carbonfiber bicycle with all Campagnolo parts."



mbnd96

MaryBeth Luce
Operations Manager

"Take an around-the-world vacation for as long as the money lasted."



mike

Mike Lydon
CTO

"Put it on red."



mess

Dave Messinger
Project Manager

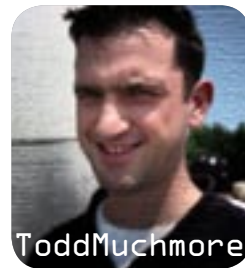
"Buy club seat season tickets to the New England Patriots."



mmorris

Mike Morris
VP Software Development

"Try to win more next time."



ToddMuchmore

Todd Muchmore
Application Architect

"I'd buy my first rental property, so my future job consists of sitting on a beach, signing rent checks for deposit."



veredox

Matt Murphy
Project Manager

"Buy enough socks to wear a new pair every day until I am 70 years old. I like new socks."



dok

Greg Paul
Director of Competitions

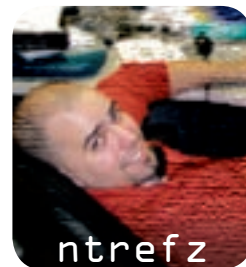
"Prove that you can't swim in Jell-O."



chrsie

Christie Tanguay
Accountant

"Take a trip to Paris for a week and buy a convertible."



ntrefz

Nick Trefz
Graphic Designer

"Pay someone else to process member photos."



TangentZ

Anthony Yuen
Project Manager

"I would use it to enter the World Series of Poker Tournament."



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