

2017

Southeast USA regional



Agenda

- ▶ Welcome and Introductions
- ▶ Thanks to volunteers, sponsors, and others
- ▶ Schedule and instructions
- ▶ Questions?

SER Steering Committee

Ali Orooji, North American Contest Director

David van Brackle, Chief Judge

Ryan Stansifer, Regional Contest Director

Site directors:



Jim Bowring, College of Charleston



Sarah North, Kennesaw State University



Ezhil Kalaimannan, et al, U. of West Florida



Kip Irvine and Giri Narasimha, Florida International U.

Key People

Two key people have enabled this regional contest for over the last ten years:

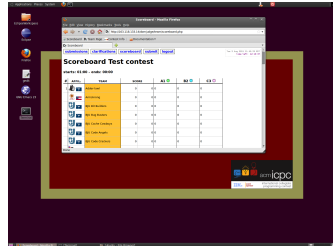
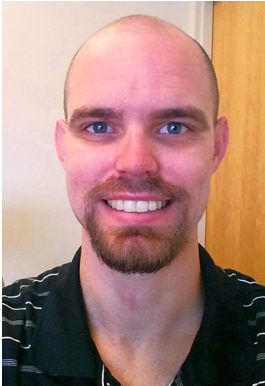
1. David van Brackle, Chief Judge
2. Keith Johnson, Chief of Operations

Judging



David van Brackle, Chief Judge
<http://serjudging.vanb.org/>

Contest Operations



Keith Johnson, Chief of Operations
DOM Judge developer
creator of the contest environment

Thanks

IBM has been the world-wide ICPC sponsor for 15 years. This has changed.

JetBrains the creator of IntelliJ and the programming language Kotlin is the ICPC global tools sponsor.

Two Sigma, a data science copying founded in 2001, is the North American Contest Sponsor.

Their financial support to the Southeast USA Regional programming competition helps keep participation fees low.

Thank you!

Volunteers



Volunteers



Volunteers

All student volunteers, as well as all contestants, are eligible for free membership in the ACM.

The Association for Computing Machinery (ACM) is delighted to offer student participants a free one-year ACM Student Lite Membership!

This offer will be sent to you via email in early 2018. This special offer is available to registered contestants, reserves, student coaches, and student volunteers of the 2017 ACM-ICPC Regional Contests and is also extended to all registered members of teams solving at least one problem in regional subcontests, such as qualifiers and preliminaries.

<https://icpc.baylor.edu/regionals/acm-student-membership>

Team Managers

Teams managers and coaches are also important: they teach, inspire, chauffeur, and manage the teams.

We would like to acknowledge their contribution.

To all that have made this event possible

Thanks!

Information

`http://ser.cs.fit.edu/`

`http://ser.cs.fit.edu/ser2017`

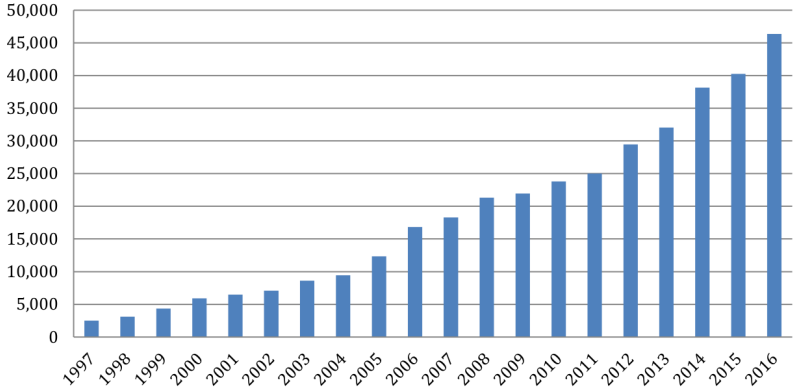


The ACM Intercollegiate Programming Contest contest goes back to 1970's and is headquartered at Baylor University.

It is the longest running and most well-known collegiate programming contest.

This past year 46,381 contestants from 2,948 universities in 103 countries competed in regional competitions at over 530 sites worldwide.

ACM-ICPC Student Participation



Two Divisions

The SE USA Regional pioneered the use of two divisions to accommodate the increasingly high-level of competitiveness in the ICPC.

BTW the problem are shared with other regions we are not able to offer copies of the problem set to non-contestants, nor are we able to offer an Internet version of the contest to non-contestants.

We award medals in each division at each site.



world finals
acm icpc
April 15-20

icpc 2018
Beijing

hosted by
Peking University and CYSC: Children and Youth Science Center of CAST



Instructions and Information

- ▶ Schedule – five hour contest starts at 1:30pm EST/12:30pm EST
- ▶ Reference material – limited to 12" by 12" by 2" per team
- ▶ DOMJudge – submission and judging
- ▶ Scoreboard are available at:
<http://ser2017.cloudcontest.org>
- ▶ Printing with the script `pcpr`
- ▶ Teams may keep the flash drives after the contest

Schedule

- ▶ Practice contest from 11am EST/10am CST to noon EST/11am CST
- ▶ Main event: simultaneously at all sites from 1:30pm EDT/12:30 CST to 6:30pm EDT/5:30pm CST

The computers are all set to go. We must all be ready on time.

Only a limited amount of reference material is permitted back during the contest— and no electronic devices or media. Leave your phone with your team manager, or coach.

Each team (not each person) may bring written material (books, notebooks, etc) up to a total volume of 12x12x2 inches.



12 inches by 12 inches by 2 inches

Contest Start

1. Take everything with you from your workstation at the end of the practice contest, bring back only allowed items.
2. Before the contest teams should find their assigned work stations and must not disturb the problem sets or the computers.
3. All teams should already be logged into DOMJudge.
4. When the time comes, the contest starts automatically.
5. Open the problem sets and begin.

- ▶ All programs are submitted over the WWW via DOMJudge.
- ▶ Twenty penalty minutes are assessed for each incorrect submission that is eventually solved.
- ▶ The scoreboard is available on the WWW; there will be no updates to the scoreboard in the last hour of the contest.
<http://ser2017.cloudcontest.org>
- ▶ Other access to the WWW by contestants is prohibited.
- ▶ A bookmark on the browser leads to Java, C++ STL, Haskell and other documentation.

It is possible to submit solutions to the problems in many different programming languages.

The ICPC World Finals have recently included Python and Kotlin.

Some Accepted Programming Languages

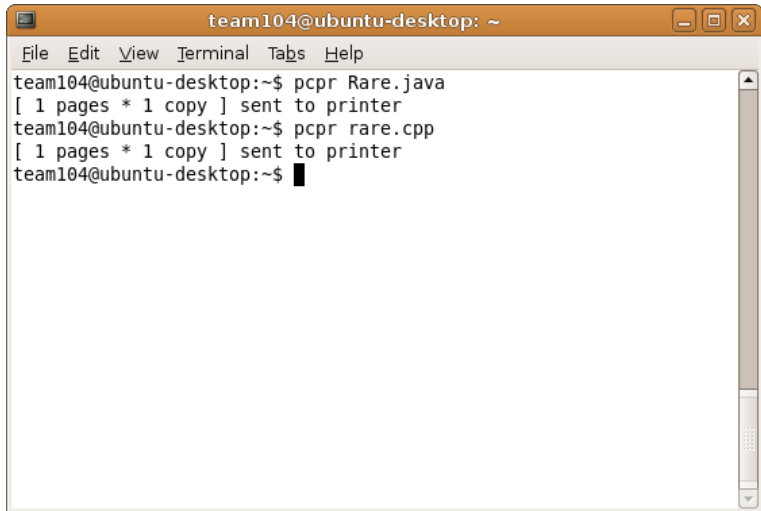
- ▷ Ada GNAT 4.9.3
- ▷ C gcc 5.4.0-6
- ▷ C++ g++ 5.4.0-6
- ▷ C# Mono C# version (mcs) 4.2.1.102
- ▷ F# 4.0
- ▷ Go gccgo 5.4.0-6
- ▷ Haskell GHC 7.10.3
- ▷ Java Oracle 1.8.0_131
- ▷ Kotlin 1.1.4-3
- ▷ Lua 5.2.4
- ▷ Pascal Free Pascal Compiler version 3.0.0
- ▷ Python 2 2.7.12
- ▷ Python 3 3.5.2
- ▷ Scala 2.11.6

A Note About Python

Python: do not use `#!/usr/bin/env` (shebang). For reasons of security such Python scripts will not be run.

Programs in Python 2 *or* Python 3 be submitted — choose the correct language when submitting with DomJudge.

Programs in Python (and Lua for that matter) may be significantly slower the program written in some other language. All the problems have solutions that run in the order of a few seconds in some language.

A terminal window titled "team104@ubuntu-desktop: ~" with a menu bar containing "File", "Edit", "View", "Terminal", "Tabs", and "Help". The terminal shows three lines of command execution: "pcpr Rare.java" followed by "[1 pages * 1 copy] sent to printer", "pcpr rare.cpp" followed by "[1 pages * 1 copy] sent to printer", and a final prompt "team104@ubuntu-desktop:~\$" with a cursor. A vertical scrollbar is on the right side of the terminal area.

```
team104@ubuntu-desktop:~$ pcpr Rare.java
[ 1 pages * 1 copy ] sent to printer
team104@ubuntu-desktop:~$ pcpr rare.cpp
[ 1 pages * 1 copy ] sent to printer
team104@ubuntu-desktop:~$ █
```

Print command: `pcpr`, or `printfile`.
Do not collect the output yourself.

To print use the special script `pcpr`, or `printfile`. Only output printed with the script is allowed. Do not use the print facility of any application. Do not collect the output yourself.

The volunteers will try to deliver the print outs as soon as possible, but it is not possible to guarantee fast delivery at all times.

Likewise be patient while waiting for judging responses. Delays are possible at anytime. The vast majority of responses last year were instantaneous. But it is not possible to guarantee fast response at all times.

rare.cpp; page 1 of 1; time=14:41:39; user=team104; team=team104; mac=00:1E:4F

```
#include <iostream>
#include <stdio.h>
#include <ctype.h>
#include <strings.h>

using namespace std; // Make

#define MAX 1000
char line[MAX];

int indexC (char c) { return

short preceeds [26][26];
short present [26];
int countP[26]; // predece

void
init () {
    for (int i=0; i<26; i++)
        countP[i]=0; present[i]
        for (int j=0; j<26; j+
    }
}

void
remove_node (int x) {
    for (int i=0; i<26; i++) {
        if (preceeds[x][i]) cc
    }
    present[x]=0;
}

void
learn (char *s, char *t) {
    // printf ("%s %s\n", s,
    for (; *s=='A'; *s++, *t+
        if (*s==*t) continue;
```

Rare.java; page 1 of 1; time=14:41:39; user=team104; team=

```
import java.util.Arrays;
import java.util.Scanner;
import java.io.BufferedReader;

public class Rare {

    final static int index (char c) { return c-'A'; }

    private static boolean[][] preceeds = new boolean[26][26];
    private static boolean[] present = new boolean[26];
    private static int[] count = new int[26]; // number of predecessors

    final static void remove (int x) {
        for (int i=0; i<26; i++) {
            if (preceeds[x][i]) {
                assert count[i]>0;
                count[i]--;
            }
        }
        present[x]=false;
    }

    final static void learn (final String s, final String t) {
        for (int i=0; i<s.length(); i++) {
            assert i<t.length(); // ow t would have to precede s
            if (s.charAt(i)==t.charAt(i)) continue;
            // char s must precede char t
            final int j=index(s.charAt(i)), k=index(t.charAt(i));
            if (preceeds[j][k]) break; // knew it already
            preceeds[j][k] = true;
            present[j]=true; present[k]=true;
            count[k]++;
            break;
        }
    }
}
```

A team may be disqualified by the site director for receiving unauthorized help, or for any disruptive, offensive, malicious, or deceptive activity.

Please be considerate and respectful of others.



The best advice is that given already by Douglas Adams:
"DON'T PANIC."

FUTURE SITES ?

Please consider being a contest site in 2018 or beyond. More sites mean less travel and less work for everyone. Let us have a site in every state: Alabama, Florida, Georgia, Mississippi, and South Carolina.

For information e-mail: ryan@fit.edu

SER 2018

Saturday, 3 Nov 2018

Registration deadline: Saturday, 6 Oct 2018*

*Early registration is a great help to the organizers.



Good Luck

