

## SICSA Research Theme Activity Report

Please complete all sections of this reporting template and submit within 3 months of your event or activity taking place. This report will allow the SICSA Directors to provide detailed information about the progress of SICSA Education to the Pool funders, SFC, and your cooperation is appreciated.

Name of event organiser: Hans-Wolfgang Loidl

Email address: H.W.Loidl@hw.ac.uk

Institution: Heriot-Watt University, Edinburgh

Title of event: SICSA Programming Challenge

Location of the event: Online

Date of event: 17.6.2020

Total funds claimed for event: 150 GBP

Please outline in brief what took place at the event, providing details of speakers and titles of talks:

On Wed 17th of June, a SICSA wide team, led by the Computer Science department at Heriot-Watt University ran an online programming competition, tailored for undergraduate and (taught) post-graduate students, featuring a series of programming tasks to be completed in a one afternoon session. The team led by Dr Hans-Wolfgang Loidl (Heriot-Watt University) picked the OpenKattis platform (<https://open.kattis.com/>) which provides a huge repository of online problems, and performs automatic scoring of challenges submitted by students. As many of these platforms, it markets itself as a tool for preparing for technical interviews and honing programming skills, thus it is highly relevant for computer science students, who will be entering the job market soon.

The event attracted more than 100 students and about 80 of these students submitted at least one correct solution to the challenge tasks posed. Five students in total managed to solve all six problems in the time available. The highest scoring student was a PhD student from the University of Edinburgh. Places two and three were captured by one under-graduate student from the University of Edinburgh and one under-graduate student from the University of Glasgow. Students from at least six Scottish universities participated in this challenge.

After running one challenge at Heriot-Watt University and this SICSA-wide challenge, we now have an organising team from several Scottish universities in place: Dr Hans-Wolfgang Loidl, Dr Rob Stewart (Heriot-Watt University), Dr Vesselin Velichkov (University of Edinburgh) and Dr Chris Brown (University of St Andrews). We encourage other academics to get in touch in order to grow the effort and expand the base of potential participants. We plan to build on the success of this challenge and run more SICSA-wide instances of this programming competition over summer.

Our thanks go to SICSA for funding the prize money for winners of the event and for promoting this event.

More information on the programming challenge is available on this web site:

[http://www.macs.hw.ac.uk/~hwloidl/Events/SICSA\\_ProgrammingChallenge/](http://www.macs.hw.ac.uk/~hwloidl/Events/SICSA_ProgrammingChallenge/)

Please provide details of how many attended and if possible, information about which institutions were represented:

The online challenge was attended by more than 100 students, and about 80 of these submitted at least one successful solution to one of the six programming tasks (see details above).

### **Outcomes:**

Please provide details of any further outcomes that have come as a result of this activity:

This event served as a community building and engagement activity for CS students across Scotland. Overall, the event was a great success, judging from the feedback the students have been giving in post-event surveys: 91% of the students answered Yes to the survey question

"Would you be interested in participating in a similar challenge again?"

Some quotes given by the students in the free-format feedback questions are:

"It was great to have a opportunity to practice programming competitively during the summer."  
and

"it was good fun! early challenges good for novices, later challenges good for those with more experience."

Do you have any plans to bid for further SICSA Education in the future?

Based on the success of this event, and the positive feedback from the students, we plan to run another SICSA wide event either over summer, or at the start of the academic year 20/21. Considering the challenges in teaching and building a learning community, a placement at the start of the academic year might be the most effective choice.