

CPCI Moral Report 2017–2018

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This report summarizes the activities of the CPCI association over the year 2017–2018. The CPCI association is a French non-profit (RNA identifier W751238568), whose mission statement is to promote competitive programming. The focus of CPCI’s activities in 2017–2018 was to organize the SWERC’17 programming contest.

The contest. SWERC is a 5-hour on-site programming contest for teams of three students, focused on algorithmic problem solving and practical coding. It is open to teams from France, Israel, Italy, Portugal, Spain, Switzerland, and Western Austria. SWERC serves as the regional selection phase for the ACM International Collegiate Programming Contest¹: the winning teams of SWERC are qualified to advance to the ACM ICPC World Finals and compete against teams from all over the world.

In 2017, SWERC was co-organized by École normale supérieure² and Télécom ParisTech³ and managed by the CPCI association. It is run under the auspices of ACM and of the ICPC contest, but is otherwise rather independent from them, although it receives financial support from ACM via the ICPC Foundation. Its structure, rules, and regulations also follow the ICPC regulations. SWERC was hosted by Télécom ParisTech, who contributed financially to the contest, but also contributed in kind, by providing the location and computer rooms, and by offering us the help of its staff (IT, logistics, communication, security, mail, electricity, etc.).

Participants. SWERC has taken place in Télécom ParisTech on November 25–26, 2017. The number of teams of three students who were admitted at the contest was 76, the highest number of teams ever at SWERC; this number was higher than our original planned capacity of 70, though sadly there were still a small number of teams that we were not able to accommodate. Of these 228 contestants, all were physically present at SWERC, and 75 teams were ranked. In addition to these teams, we welcomed two teams of engineers from our gold sponsor Criteo.

These 76 teams came from 48 universities. We have published⁴ a complete list of the teams, including a map, and including the name and contact informations of team

¹<https://icpc.baylor.edu/>

²<https://www.ens.fr/>

³<https://www.telecom-paristech.fr/>

⁴<https://swerc.eu/2017/teams/>

member and coaches who wished us to publish this information. We also posted online the past results of these institutions at previous SWERC contests⁵, which we aggregated.

In addition to the 228 contestants, we also welcomed coaches from these institutions: 63 coaches and co-coaches registered to attend the event, although not all of them were physically present. We also had 15 registered participants from our sponsors (including the engineers who participated to the contest, and also including Télécom staff from the international relations department), and one guest from ICPC.

In terms of organizers, the team was lead by the contest director, contest deputy director, and chief judge. It comprised 10 judges (who also acted as problem setters), and 31 registered volunteers, 30 of which participated. The team also included 2 engineers from the Télécom IT department. Overall, we prepared 355 nominative badges. There were other participants without a badge: Télécom security and cleaning staff, catering staff, and members of the Télécom student association Comète for photo and video coverage.

Activities. The registration process was handled by volunteers, and included the distribution of prepared badges to the contestant teams, the collection of their notebooks and dictionaries (for verification by the judges and installation in the labs), the distribution of contest bags to participants (including a badge holder, t-shirt, notebook, pen, information leaflet, and promotional information from sponsors); last, we took a picture of all participating teams in front of the contest banner (for all teams but one).

The event started with an opening ceremony, which summarized some general points and statistics, and included an opening talk by Télécom ParisTech director Yves Poilane and by ICPC European Regional Director Boba Mannova. We continued by a talk by our gold sponsor Palantir, and, after the coffee break, by Criteo, and Société Générale. We then gave an introductory talk to the practice session, followed by lunch.

The practice session was the opportunity for contestants to get acquainted with the contest environment. We were able to help contestants with some problems with the environment, and to collect feedback during the Q&A session (after the coffee break). We fixed some of these problems during the evening, just before the contest banquet at the Maison des Polytechniciens: the contestant brochure proposed a scenic route to the banquet venue for contestants who wished to walk there by foot.

On Sunday, we started with last minute information about the contest, to point out the changes that we had made to the contest environment. The contest then took place from 9:30 to 14:30: the team of volunteers provided snacks, supervised the rooms, and delivered balloons and printouts. Contestant submissions were reviewed by the team of judges, who had prepared the problems and were all physically present. The contest control system (DomJudge) was managed by the chief judge, while the contest director was in charge of the contest environment. A copy of the contest environment (virtual machine image) had been made available for download before the contest⁶, and a publicly available instance of the contest control system was made available during the contest for

⁵<https://swerc.eu/2017/past-editions/>

⁶<https://swerc.eu/2017/environment/>

coaches and other interested parties: there were 30 users who made submissions using this system, including 8 coaches and 22 self-registered participants.

During the contest, the director and deputy director had a meeting with coaches and with the ICPC European Regional Director to discuss about the future of SWERC. After the contest, we had a break that included lunch and snacks. We then had a problem analysis session, where the judges briefly presented their problems and possible solutions, and an award ceremony where we announced the results, congratulated the winning teams, handed out prizes, and said a few words of thanks. The event concluded by the delivery of the team certificates.

Results and communication. The rankings of the contest are available online⁷. The contest was won by team “ENS Ulm 1” from École normale supérieure (Paris), with 9 problems solved; the runner-ups were “rETHink togETHER” from ETH Zürich, with 9 problems solved, and “SNS Pisa” from Scuola Normale Superiore (the first participation ever of this institution at SWERC), with 7 problems solved. These 3 teams qualified to the ICPC World finals in Beijing.

We posted photos of the contest⁸, taken by volunteers and the Télécom student association Comète, and a video⁹ was also produced by Comète, totalling over 500 views so far.

The problem set for the SWERC 2017 contest and for the practice contest have been published online¹⁰. The problems from the contest are already available on UVa Online Judge¹¹ and on ACM-ICPC Live Archive¹².

We also conducted an opinion survey of SWERC participants, which we sent out to participants and coaches. We received 104 replies, and posted the results online¹³.

Assessment. Overall, we believe that CPCI has successfully ran the 2017 edition of SWERC. The number of 76 participant teams is a 27% increase relative to last year, a 72% increase relative to 2012, and our participant list included many newcomer institutions who had not participated before. The satisfaction rate on our study (grade of “fine” or above) is over 89% for all core contest activities. We are not aware of any serious problem with the contest environment, hardware, contest control system, or judging infrastructure, that would have jeopardized the fairness of the contest. Three minor issues with the problem statement and test cases were identified during the contest, but they were communicated to candidates using the contest control system and had limited impact. While one team resigned during the contest, there are no incidents with participant behavior to be reported. Overall, we believe that SWERC has adequately

⁷<https://swerc.eu/theme/results/official/public/>

⁸<https://swerc.eu/2017/photos/>

⁹<https://youtu.be/18jwZmMKVA4>

¹⁰<https://swerc.eu/2017/problems/>

¹¹https://uva.onlinejudge.org/index.php?option=com_onlinejudge&Itemid=8&category=874

¹²https://icpcarchive.ecs.baylor.edu/index.php?option=com_onlinejudge&Itemid=8&category=750

¹³<https://swerc.eu/2017/the-contest/#Poll>

performed its core task of identifying the best teams to promote to the ICPC world finals.

For other activities and aspects of SWERC, the satisfaction grades are also high in most cases, in particular for the award ceremony, information, registration, venue, facilities, billing, and registration, that all were all judged satisfactory by over 95% of answers. There are still areas where SWERC can improve, in particular in terms of catering, but also for other specific points mentioned in participant feedback, and in the light of some difficulties and incidents that arose during the event, the most serious of which was related to a food allergy.

The 2018 edition of SWERC will also be co-organized by École normale supérieure and Télécom ParisTech, managed by the CPCI association, and hosted at Télécom ParisTech, and we will do our best to make it better based on our experience for the 2017 edition.

Sponsors. SWERC was co-organized by Télécom ParisTech and by École normale supérieure. It was supported by the ICPC Foundation; by our gold sponsors Criteo, Palantir, and Société Générale; by our silver sponsors Almerys and Télécom ParisTech; and by our bronze sponsors Google and Inria. We are also grateful to all Télécom staff members who have supported this endeavor. Last, we are extremely grateful to the judges, volunteers, and everyone who helped make SWERC possible.