Organising a Multidisciplinary Postgraduate Colloquium: A Critical Reflection

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Abstract

The Warwick Postgraduate Colloquium in Computer Science (WPCCS) is an annual event for research students in the Department of Computer Science at the University of Warwick. The aims of the colloquium are to provide: (i) an experience of a conference setting for students, (ii) a place to practise presentation skills, (iii) a place to receive feedback and suggestions on their research, and (iv) an opportunity to learn about research being performed by other attendees. WPCCS has been held annually since 2003, but since 2016 many changes have been made to the event; in particular the introduction of networking aids (such as conference guides and lanyards), a new venue, the introduction of guest speakers and various efforts to encourage attendance. Meanwhile the number of submissions has increased, placing strain on the colloquium’s schedule and budget. In this paper the organising committees from 2016, 2017, and 2018 reflect critically on the experience WPCCS delivers to the attendees. We present an examination of what worked well, what did not work, and what we would like to try in the future, with the aim that these experiences are useful to the organisers of similar events.

Keywords: critical reflections, multidisciplinary, colloquium, student-led, postgraduate
Introduction

The Warwick Postgraduate Colloquium in Computer Science (WPCCS) (University of Warwick, 2018a) is a one-day colloquium held annually at the University of Warwick. Run by doctoral students, the colloquium aims to engage students within the Department of Computer Science (DCS) (University of Warwick, 2018b) by inviting them to present their research to an audience of their peers. Each student either provides a poster or is allocated a short presentation slot followed by Q&A. The event aims to provide research students the opportunity to practice submitting to, preparing for, and presenting at an academic conference, whilst simultaneously fostering collaboration between researchers. Academics and external guests are also encouraged to attend the event, with many having participated as guest speakers and audience members.

Whilst originally focused on computer science, the conference has expanded over its sixteen-year history to reflect the multidisciplinary research that the Department of Computer Science interacts with. Two of the current, significant, collaborations are discrete mathematics and urban science. Discrete mathematics is a branch of mathematics which is particularly applicable to theoretical computer science, for which the department has an ongoing relationship with the Warwick Mathematics Institute and the Warwick Business School. Urban science is the study of interdisciplinary solutions to the world’s urban challenges, and can be approached from the perspectives of economics, architecture, human and physical geography, history, urban planning and politics. Particular emphasis within the department is placed on geo-informatics (analysis and mapping of spatial data), large scale data analytics and data management. These can enrich the study of cities from all perspectives, enabling multidisciplinary research with computer science.

The colloquium has been held annually since 2003. For the three events held between 2016 and 2018 (Bradbury, 2016; Kirk, 2018; Watson, 2017), the colloquium’s organising committee has remained relatively unchanged, and has been allocated a budget ranging from £1400 to £2100 per year. These events each received between 50 and 75 submissions, of which 10 to 25 per colloquium were poster submissions. Presentations at each event were divided into specific topic tracks (such as High Performance Computing, Machine Learning and Urban Science), with each track possibly spanning multiple sessions, and up to three sessions running concurrently at any one time (forming a timetable block). Therefore, in contrast to a traditional conference which covers a single discipline or sub-discipline, the scope of research presented at WPCCS is highly diverse. This diversity raises challenges that require careful consideration, such as the structuring of the day and engagement with attendees. This paper reflects
on the recent changes, growth, failures, and successes of the colloquium from the perspective of the 2016, 2017 and 2018 organising committees, and concludes by proposing a series of recommendations for those running similar events in the future.

2 Reflections

2.1 Content and Structure of the Colloquium

![Figure 1: Poster and Presentation Submissions to WPCCS and total postgraduate research students in the Department of Computer Science (DCS) (Warwick Strategy & Policy Group Analytics Office, 2007–2018, Table 2.7)](image)

Over the past few years the number of research students submitting to WPCCS has steadily increased (as shown in Figure 1), with the event always accepting all submissions received before the submission deadline. As the colloquium has grown, the schedule of the day has changed to allow time for guest speakers and an increased number of presentations. A key change in permitting this growth has been reducing the length of student presentations from 20 to 15 minutes, including Q&A. From 2017 onwards, students were asked to prepare a 10-minute presentation and allow for a further 5 minutes of questions at the end of their talk. This allowed for an increase in the number of students that could present and permitted the inclusion of guest talks. However, reducing the length of presentations had the effect of reducing the quantity of work able to be discussed in presentations, and forced some students to narrow the focus of their talk. This has been to the detriment of attendees less familiar with the topic.

A fuller schedule has been accommodated by increasing the overall length of the colloquium. Traditionally, student presentations began at 9am. However, in 2017, a registration period and introductory guest talk were added, and student talks began at 10:05am. The growth in the number of
submissions in 2018 necessitated a further change, with registration opening at 8:30am and the first student presentations beginning at 9:50am. From feedback and analysis presented in Section 2.6, this did not seem to negatively affect attendee satisfaction, as careful considerations were taken with the change in schedule. Firstly, three student presentations and a guest talk preceded the first break. This ensured attendees were not seated for a prolonged period and were provided refreshments early in the day. Secondly, ensuring lunch began promptly between 12:15pm and 12:30pm maintained attendees’ alertness during these sessions. Finally, providing a third refreshment break mid-way between afternoon talks again maintained alertness, attendee retention, and allowed for further networking. Using breaks to divide the day into shorter and longer blocks allowed each session to focus on a single topic containing between three and six talks. In some cases, a single topic contained enough submissions to require spanning multiple, consecutive sessions.

The addition of three guest talks to the colloquium in 2017, and 2018, required an additional 90 minutes to be added to the timetable of the day. The first guest talk was scheduled for the start of the day, the second was placed after the first break and the third after lunch. These talks were aimed at all attendees and were intended to provide an engaging talk for all members of the audience. They also served to bring all of the participants together, rather than allowing each to focus purely on their own track. In practice, a number of the guest talks were too technically complex for some members of the multidisciplinary audience, and attendance was notably lower at the guest talks than the surrounding blocks (Figure 2). The organising committees believed this could not be remedied since finding suitable speakers for the multidisciplinary audience was already very difficult. This was made even more difficult by the limited travel budget and resources made available to the colloquium.

The number of submissions is likely to rise in future years, so scheduling presentations is likely to become more problematic. One way to curtail this is to increase the number of concurrent sessions to four throughout the day. However, this would require more session chairs and splits the audience between more rooms. Another option may be to spread the colloquium over two days. Whilst this would reduce the number of simultaneous tracks to two and allow for longer presentations, the increase in costs and additional day required for attendees may make it infeasible. A second day of commitment may reduce attendance on each of the days.
2.2 Attendance and Engagement

As can be seen in Figure 1, the number of submissions has increased over time, driven mainly by an increase in research students registered to the department. However, attendance and engagement has been a challenge when organising the colloquium. Of particular note, the attendance of academic staff has been low as noted particularly by the feedback from the 2016 colloquium. Students have often attended only their own talk or session, or have chosen to send a poster without attending the conference at all. Importantly, the number of students within the department who do not engage with the colloquium at all has increased since 2014.

Figure 2 shows the number of students in attendance over each part of the day, across all rooms (typically three concurrent sessions running for all four blocks of the day), demonstrating that in particular attendance was very poor in 2016. Whilst the number of attendees per session improved for 2017 and 2018, the engagement of students and remains disappointing, particularly with guest talks. Despite potential attendance from over 90 research students and over 35 academic staff in the department, external attendees and those from other departments, the total number does not peak above 50 attendees.

Due to the historical low attendance and engagement, an increased emphasis was placed on improving engagement in 2017 and 2018. In particular, encouraging staff to attend was important both for the feedback they provide to students with whom they do not routinely interact, and the opportunity for increased research collaboration.

Figure 2: Attendance throughout the 2016, 2017 and 2018 events, showing the number of people across all rooms. In the introduction and guest talks one room is used, whilst three are used concurrently during each block (except block 4 in 2016 where two were in use). Attendance includes staff and students; as breakdowns were not collected consistently across all years.
Two approaches were trialled in 2017: (i) providing handwritten and hand delivered invitations to staff, and (ii) inviting staff members to provide a 5-minute introduction to each session. Writing and delivering approximately 50 invitations was a time intensive task for the organising committee, but it was effective in some cases. However, this was deemed to have too little benefit for the cost, so was not repeated for the 2018 event.

Inviting staff to provide introductions at each session was more effective at encouraging staff to attend the event. This ensured at least one staff member was present in each session, and in some cases colleagues attended together. Feedback from student attendees noted that staff introductory talks were short and uninspiring, often feeling contrived and insincere. For this reason, staff introductory talks were not continued in 2018.

The apathy felt by staff towards the event is also reflected in student participation. The committee each year has noted that some students have either refused to engage with the process or have submitted posters as a method for not attending the colloquium (students submitting posters are still encouraged to attend the colloquium). This is particularly apparent in 2016, which has the lowest submission rate (69%) since 2007, when the size of the department was much smaller. In 2017, to combat students attending only their talk or session, attendance was made mandatory for the entire event unless exceptional circumstances prevailed. Some students felt this was overly prescriptive and so in 2018 the rule was maintained but enforced to a lesser extent. Accordingly, there was a noticeable reduction in the number of student attendees and those who did attend were unlikely to remain for the entirety of the event.

Several feature changes in 2017 and 2018 are believed to have improved the quality of the attendees’ experience and, hopefully, improved engagement. In 2017, the colloquium changed from its original venue within DCS to the newly built Oculus Teaching Building (AV Services, 2018) at the University of Warwick. This change of location meant that the colloquium was no longer held in the same building many students and staff worked in. Therefore, many attendees remained at the colloquium for longer periods which led to higher attendance per session than in previous years. The venue also enabled the use of digital signage, where four large TV screens are combined to give the effect of a single display. This was used to detail the schedule and layout of the conference to ease navigation and highlight guest speakers.

Alongside a change of venue, professionally designed posters and colloquium guides were introduced to market the event. Additionally, name badges were replaced with lanyards as they provided a better keepsake in the hope of encouraging repeat attendance and, combined
with the colloquium guides, it was hoped these would encourage greater networking between researchers. In 2018, an additional room was booked and made available for participants to practice their presentation. Overall, the 2017 and 2018 committees believed these features combined made the colloquium more alike a traditional conference, which is beneficial for those who have yet to attend one.

An alternative possibility for increasing attendance at the colloquium is to change when the event is held. WPCCS traditionally takes place on the final Friday of each academic year. This day ensures research students and staff are able to attend, as it is prior to the summer holidays and after the examination season. Moving the colloquium to earlier in the academic year would make it less likely to clash with conferences and personal summer holidays. However, this would mean first-year research students would not have an opportunity to give a presentation due to being in an early stage of their research. An advantage would be that they are exposed to more experienced work and become aware of what is expected of them early on.

2.3 Broadening Engagement

The multidisciplinary aspects of WPCCS have encouraged more engagement with the broader research community at the University of Warwick. In particular, research by students and staff from the departments of Statistics (University of Warwick, 2018c) and Engineering (University of Warwick, 2018d), as well as WMG (University of Warwick, 2018e) and the Warwick Mathematics Institute (University of Warwick, 2018f), may align with attendees of WPCCS. In 2016, attempts were made to encourage submissions and increase engagement with the aforementioned departments by email advertising; ultimately this was unsuccessful. However, 2018 saw three students from external departments present their work, although each was already engaged with DCS in some way. An external company with funding links to DCS expressed interest in attending the event, however their lack of specialised knowledge with many of the subject areas present at the colloquium meant they did not attend. Whilst the specialised language used in the abstracts discouraged attendees from industrial partners, this is typical of academic conferences and the highly specialised nature of PhD research.

Students at the nearby Universities of Oxford (University of Oxford, 2018) and Birmingham (University of Birmingham, 2018) were invited to attend a discrete mathematics track. Seven people were individually invited, who had previously engaged with events held at the University of Warwick. Of these, two responded, confirming that they had also passed the invitation around the relevant department, but none attended. Particular focus was given to this track as it is a research theme for which DCS is nationally and
internationally renowned. The lack of interest is likely due to the student-run nature of the colloquium, the distance between the universities and the lack of funding to cover travel expenses. As such, networking opportunities have been missed.

In addition to those outside DCS, undergraduates from within the department were invited to attend. In particular, third and fourth year undergraduates, and those who took part in the Undergraduate Research Support Scheme (URSS) (Student Careers & Skills, 2018b), were encouraged to attend. However, as the event occurs on the final day of the academic year, most undergraduate students had left for the summer and therefore did not attend.

2.4 Organisation and Communication of the Committee

As the colloquium has grown in size and scope, so too has the organisational effort required. The 2016 colloquium was organised by a single student with help from a group of five students who reviewed abstracts and chaired sessions. The 2017 and 2018 colloquia necessitated a larger organising committee of seven students with a range of academic backgrounds and skills, who also reviewed abstracts and chaired sessions.

Increasing the size of the organising committee has allowed for organisational tasks to be split amongst the committee members. This has, however, raised issues around the coordination and communication of the team; several methods have been used to aid this. Initially, WhatsApp (an instant messaging application) was used with a single group containing all committee members. This allowed for quick responses to questions amongst the team, however it did not facilitate conversations on multiple topics simultaneously. Furthermore, the quantity of messages in the conversation (1758 messages) meant finding answers to previously asked questions was difficult. Instead of WhatsApp, Slack (a messaging platform for teams) was used by the 2018 organising committee. Slack allows for multiple conversations containing different members of the committee. Whilst this solved the issue of multiple conversations happening in the same thread, using a platform which was not ubiquitous caused several issues. Namely, the tool used required committee members to install and check regularly an application which they did not already use. This meant members often missed messages, were unreachable and did not receive important notifications. From this experience, the 2018 committee acknowledged the need for a single platform that permits multiple conversations or workspaces and is mainstream enough for members to check it regularly.
Retaining knowledge and experience between committees is an important issue that remains unresolved. Before 2016, each year’s colloquium was organised by a single student. Since 2016, however, the organising committee of each colloquium has remained relatively unchanged. Planning for changes in skill sets between committees is important. One example of this is the design skills used to create the colloquium booklet and leaflets. Since 2016, a report has followed each colloquium (a condition of Research Students Skills Programme funding) with the aim of transferring knowledge from one committee to the next.

Finally, the need for a central repository of communications with students, staff and external bodies has increased with the growth of the colloquium. Thus, in 2017, a single University-managed email account for all contact with the organising committee was established. This meant communications could be referenced by future committees. Since then the account has been passed on to future committees under a generic WPCCS name.

2.5 Funding

Similar to previous years, in 2016, WPCCS received £1100 from DCS. This money allowed the event to purchase a wider variety of food, as well as offer a series of awards and a subsidised evening meal. In addition, £300 was received from the Research Students Skills Programme (Student Careers & Skills 2018a) at the University of Warwick. This programme provides training, resources and support to postgraduate researchers to develop professionally and personally. Their extra funding allowed for the colloquium to give attendees the opportunity to produce a poster rather than a presentation. As mentioned previously, the option to produce a poster was particularly suited to those who could not attend the colloquium. Due to a disappointing turnout at the subsidised evening meal, the colloquium was £398.25 under budget. It was clear that future work should focus on improving attendance numbers of the entire colloquium.

In 2017, to aid the move to the Oculus Teaching Building and improve the experience for colloquium attendees, DCS increased their funding from £1100 to £1500. The committee again received £300 from Research Students Skills Programme, which allowed them to include features often seen in more traditional conferences than in student colloquia, such as a professional grade colloquium guides (WPCCS, 2018) and lanyards. With both attendance and submissions increased, expenditure on posters increased by 53%.

Accommodating this attendance increase in 2018 proved problematic; more money was required for printing a higher volume of posters and
adding more pages to the colloquium guide, yet the income from funding sources was initially the same. The committee investigated alternative suppliers, however this was prohibited under university spending rules. The committee was limited to university suppliers and had to work to reduce outgoings.

As 2018 was the 50th anniversary of DCS, the department gave the event an additional £300 of funding for anniversary-related expenditure. This extra funding allowed for the event to host an exhibition of the history of the department and provide celebratory cupcakes for attendees. The use of the additional funding for a novel colloquium attraction, in this case the 50th anniversary exhibition, was well-received by attendees, and is something that is felt should be repeated in future events.

2.6 Feedback

Feedback has been collected after each WPCCS event for several years. Figure 3 shows the average feedback received relating to specific areas, from 2016 through to 2018. Each year, attendees were asked to rank various aspects of WPCCS as Awful, Poor, Neither Good nor Poor, Good, or Excellent. These ranks are presented in Figure 3 as an ordered score, where 1 represents Poor and 5 represents Excellent, averaged across all responses. Some years did not ask for feedback for particular categories, and accordingly these results are missing from the graph.

![Figure 3: Feedback from the three WPCCS events (on a scale of 1–5).](image)

For the colloquium guide, digital signage and event organisation, a small positive increase in feedback can be observed. This can most likely be attributed to the significant overlap in the organising committee between 2016 and 2018. As for why the increases can be observed, we hypothesise the following:

The digital signage used during the 2017 event was low resolution. For the 2018 event, the content was rendered at a significantly higher 8K resolution, a four-fold increase from 2017.
In 2017, session rooms were arranged in cabaret style. A common piece of feedback for the year was that this did not work in many sessions, with some people having to stand uncomfortably around the room. This was fixed in 2018 by arranging chairs in theatre style rows facing the presenter, which allowed for more chairs in the session rooms.

The 2016 event acted simply as a means for postgraduate researchers to present their work to their peers. The addition of activities and sessions in 2017 and 2018, such as guest speakers and the 50th anniversary exhibition, may have caused attendees to praise the event organisation. However, feedback on the quality of food saw a decline from 2016 to 2018. This is unusual, as food ordered between the three events was very similar, with the only significant change being the quantity of food ordered due to the increase in expected attendees in later events. In addition, 2018 saw the introduction of vegan options and a salad buffet alongside the previously available pizza and sandwich options. Feedback on the timeliness and usefulness of abstract reviews also saw a decline in positive feedback. The organising committees attributed this to the significant increase of submissions placing a greater workload on the organising committee.

Feedback obtained from 2016 and 2017 was used to alter later events, such as:

‘PhD students should attend the whole session’ - From 2017 attendance at the event was compulsory for all students.

‘More staff need to attend to give feedback’ - Staff were invited to get significantly more involved in the event in 2017, which increased the absolute numbers of staff attending.

‘A more generous number of prizes and individual value may help attract more students’ - The prize total was increased from £100 in 2016 to £140 in 2017, and £160 in 2018. The number of awards was increased from 5 in 2016, 12 in 2017, and 14 in 2018.

‘I would like to see all of these again’ (in reference to the lanyards, guest speakers and media introduced in 2017) - The 2018 event was heavily based on the 2017 event, including the most well-received concepts introduced in 2017.

‘To maximise the opportunity to see work, I would suggest to increase the number of posters and the duration, and to reduce the number of talks’ - The ratio of posters to presentations was increased slightly in 2018.
2.7 Awards

For several years, WPCCS has issued awards during the closing speech at the end of the colloquium. They have been chosen by the organising committee after all sessions have concluded. Initially, five awards were given: one for Best Presentation in Colloquium, one for Best Poster in Colloquium plus three runners up. Winners have been given modest cash prizes and a certificate. In more recent years, as the number of presenters and posters at the colloquium has grown, the number of awards has increased. In 2017 and 2018, an award was given per session, in addition to Best Presentation in Colloquium and Best Poster in Colloquium. Accordingly, the budget for prizes has also grown, with session prizes consisting of £10 Amazon gift vouchers and the Best in Colloquium prizes consisting of £20 Amazon gift vouchers.

However, in 2018, several sessions consisted of few presenters that were not members of the organising committee. Since organising committee members were exempt from awards, some sessions were left with just two presenters eligible for awards. Feedback for the 2018 colloquium highlighted this imbalance and complained that people in some tracks had a higher chance of winning compared to others. This happened despite the committee’s attempts to maintain consistent numbers of presenters across sessions and is a consideration for future organising committees. Furthermore, in earlier colloquia when few prizes of a higher value were awarded, some feedback requested more prizes of smaller denominations. In more recent years, when this has been implemented, some feedback has requested few prizes of higher value again. We suggest, as prizes give incentive to present at the colloquium, a large number of lower value awards is preferable.

3 Conclusion

WPCCS has been successfully held for over 16 years. In the past three years significant attempts have been made to improve the experience of attending. Factors such as providing a colloquium guide, guest talks and the change of venue have increased engagement with students and staff. However, engagement with some groups of attendees remains low and efforts to improve this have been met with varied success. Future committees need to endeavour to ensure attendance is the result of encouragement and interest rather than requirement.

For a broad and multidisciplinary colloquium, such as WPCCS, we recommend scheduling guest talks which are accessible to a diverse academic audience. Furthermore, engagement may be encouraged with the inclusion of unique features such as the 50th anniversary exhibition. A risk to events like WPCCS is disorganisation; setting clear responsibilities
and expectations for the organisation of the event is important. In particular, communication between team members can become overwhelming if the correct tools are not used — what constitutes correct may vary with the experiences of different organising committees. It is also important to perform knowledge transfer between committees of previous and future years. Maintaining consistency of feedback mechanisms is also important to ensure data collected is comparable between years. For WPCCS, further effort is required to broaden engagement, particularly with other departments and universities; despite the obvious relevance and opportunities their participation may bring, several factors seem to prevent their engagement.

In our opinion WPCCS has met the aim of providing an event that enriches the experience of multidisciplinary research students in the early stages of their academic career. Changes in the last three years have led to improvements in the overall experience for those attending the colloquium. However, some changes can still be made to improve the experience.

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