Summer School: Functional Programming and Logic Modelling

Initiative
The team ran a three day summer school (11-13 July 2017) to introduce 25 Year 12 students to some advanced computer science topics, and provide an insight into the University experience, thereby improving subject insight and raising aspiration.

The core (staff) team attracted funding from the National Collaborative Outreach Programme (NCOP), recruited PGR students and formed the project team, which developed and designed a curriculum and teaching material, and delivered the three day summer school. This involved a combination of masterclass lectures, delivered by lecturers and researchers, and hands-on workshops involving exercises, delivered by PGR students. The core theme and activities of the summer school revolved around the question of how to model real world problems with complex relationships and properties via functional programming and logical models. The students gained hands-on practice using functional programming and logical modelling to apply the ideas introduced in the masterclasses.

The summer school was pioneering, with research-level material recast for an interactive workshop-based 3-day course for sixth-form school students; the adaption of advanced topics for school students, and the development and delivery of high quality material and activities was largely undertaken by PGR students.

How the Summer School team has Made a Difference
The summer school reached 25 students with a satisfactory gender balance from some of the most deprived areas in Greater Manchester. We gathered structured feedback at the end of the activity, which was very positive. We plan to re-use the experience gained and material developed in a re-run of this summer school in 2018, again aiming at NCOP Target Schools. The use of PGR students for this activity was particularly useful, giving both the PGR students teaching experience and giving the participating students the ability to chat with people close to their age about the subject, higher education, career plans, etc.