

Further Information for External Applicants for PhD Places in Theoretical Physics

Every year DAMTP receives a large number of applications for PhD places in the High Energy Physics (HEP) and General Relativity and Cosmology (GR) research groups. In recent years the number of students admitted to these groups has fluctuated between eight and twelve depending on the number of available supervisors. There are typically over ten applicants for each available place.

In these subject areas, a large majority of successful applicants will have first taken Part III of the Mathematical Tripos (now also known as Master of Advanced Study in Mathematics). This is a one year graduate-level course offering lecture courses in a wide range of topics in mathematics and theoretical physics. For more information about Part III please see the DAMTP webpages (<http://www.maths.cam.ac.uk/postgrad/mathiii/>).

There are two reasons why most of our PhD students come through Part III. First, Part III provides the necessary preparation for research in theoretical physics at a level matched by only a few other courses worldwide. Starting PhD students are expected to have covered all the material in those Part III lecture courses which are most relevant to their research project. A description of the content of each Part III lecture course can be found in the “Guide to Courses” which is available at the above address.

Second, the Part III class typically provides fifty or so well-qualified applicants for the available PhD places. Many of these applicants were at or near the top of their undergraduate class at their previous university. Performance in Part III allows us to rank these candidates accurately. It is much harder for us to rank external applicants. For these reasons, if you are interested in doing a PhD in theoretical physics in Cambridge we would strongly encourage you to consider applying for Part III.

Ultimately, the decision to accept any applicant as a PhD student is made by the faculty member who will become their supervisor. The HEP and GR groups cover research in a wide range of areas and the precise requirements of individual supervisors may vary. In particular, we continue to admit a few students (one or two per year) who have not taken Part III. These admissions are usually in areas which could be loosely described as being “less formal” such as lattice gauge theory and cosmology. Successful external applicants often have relevant research experience in one of these areas.