

# Postgraduate Study Opportunities in Statistics and Probability at Bristol

The Statistics Group at Bristol is one of the largest groups in the UK, and a research center of international excellence. In the 2008 Research Assessment Exercise (RAE) we were ranked jointly fourth with University of Warwick, after University of Oxford, University of Cambridge and Imperial College London. Postgraduate study in statistics and probability at Bristol will give you the opportunity to develop skills that are highly valued in both academia and in industry, and to work on important applications with some of the world's leading experts. You will be joining a large and friendly group of postgraduate students, and be located at the heart of an exciting city in a beautiful part of the country.

As a prospective postgraduate student, this document should provide you with most of the information you need to know about postgraduate study within the Statistics Group at Bristol, along with links to further information on our website, [http://www.stats.bris.ac.uk/study/admissions\\_postgrad/stats/](http://www.stats.bris.ac.uk/study/admissions_postgrad/stats/). You can also contact the Postgraduate and Research Coordinator, Miss Briony Maitland, at the following address:

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If you have an enquiry about a particular project, you should contact the relevant member of staff directly. All contact details are available at <http://www.maths.bris.ac.uk/research/stats/people/>.

Details on the applications procedure are given in [subsection 2.4](#). *You are strongly urged to apply early—preferably by mid-February.*

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# 1 Overview of the Statistics Group at Bristol

The Statistics Group is an integral part of the School of Mathematics, which has about sixty academics, about forty postdoctoral researchers, about eighty postgraduate students, and about fifteen administrative and IT staff. In the Statistics Group there are currently (as of December 2011) eighteen academics, eleven postdocs, and twenty-one postgraduate students.

Research in the Statistics Group is informally organised into a number of themes: for more details see [section 3](#). All of our work is mathematically rigorous, and is ultimately stimulated by its potential for understanding the world around us. Many staff work on collaborative projects involving other University Departments and external agencies, including: the Biotechnology and Biological Sciences Research Council (BBSRC), the Engineering and Physical Sciences Research Council (EPSRC), the Natural Environment Research Council (NERC), the Government Communications Headquarters (GCHQ), Ministry of Defence (Data and Information Fusion Consortium), The UK Met Office, the Nuffield Foundation, the Royal Society, Toshiba Research Europe, the Wellcome Trust, BAE Systems and etc.

In recent years, our PhD graduates have gone on to academic jobs at Bristol, Lancaster, Oxford, Cambridge, London (LSE, UCL and Imperial), British Columbia, New South Wales, Heidelberg and Essen. Outside academia, they have found employment at ATASS Ltd, Smartodds, Toshiba, Commerzbank, eSure, Shell and etc.

The Statistics Group has expanded rapidly in recent years as a result of winning a major strategic funding in the form of a Science and Innovation Award from the EPSRC. This multi-million pound grant funds a new initiative entitled SuSTaIn (Statistics underpinning Science, Technology and Industry) led by three senior members of the group, and runs from 2006 to 2012. SuSTaIn supports an ambitious programme to conduct and disseminate internationally-leading research in mathematical statistics, equipping the discipline to face the challenges of future applications. In partnership with the University of Bristol, the Award has fund a new Chair of Statistics, several Lectureships, Postdocs and Studentships, as well as activities including workshops and research kitchens (informal small-scale research meetings), visitor support, international conferences and a comprehensive programme of research training for postgraduate students. More details are available at <http://www.sustain.bris.ac.uk/>.

## 2 Degree Programmes

### 2.1 Research programmes

The statistics group in the School of Mathematics currently offers two postgraduate research degrees: the PhD and the MSc by Research. A student would be expected to undertake research in an area of interest to one of the staff here. Our sample research topics, available online at [http://www.maths.bris.ac.uk/study/admissions\\_postgrad/stats/research/](http://www.maths.bris.ac.uk/study/admissions_postgrad/stats/research/), give an idea of the type of project you might work on. The period of study is usually three years for a PhD and one year for an MSc. The PhD is typically attained along one of three routes. For more details on the funding opportunities summarised below, see [subsection 2.5](#).

**‘3’** The traditional three-year PhD. Funded, for example, by DTA, EPSRC project grant, University Research Scholarship, or self-funding. Minimum entry requirement: relevant Masters or MSci at First Class or 2.i level, or BSc at First Class level AND evidence of a comprehensive syllabus.

**‘0.5+3’** Two semesters of coursework (approx. 6 months) followed by a three-year PhD. Funded, for example, by DTA, EPSRC project grant, or self-funding. Minimum entry requirement: BSc at First Class or 2.i level or equivalent.

**‘1+3’** A one-year MRes, which consists of two semesters of coursework followed by project work. See [subsection 2.2](#) below for a description of the MRes programme. This is then followed by a 3 year PhD. Funded, for example, by SuSTaIn grant, DTA, EPSRC project grant, or self-funding. Minimum entry requirement: BSc at First Class or 2.i level or equivalent.

**APTS.** To build on and complement the in-house lectures, first year PhD students in statistics and students taking the MRes as the first year of a 1+3 programme will be expected to attend four one-week residential courses provided by national APTS (the Academy for PhD Training in Statistics). The APTS website can be found at <http://www.pts.ac.uk/>. Delivered collaboratively by nine prominent UK Statistics research groups, these intensive APTS courses give new postgraduate students drawn from across the UK the chance to meet together and learn (formally and informally) from top class researchers, in a stimulating academic and social environment. In 2011/12, the following courses are offered: statistical computing, statistical inference, statistical modelling, statistical asymptotics, applied stochastic processes, computer intensive statistics, spatial and longitudinal data analysis and nonparametric smoothing.

**PhD in Complexity Sciences.** The School of Mathematics is part of the Bristol Centre for Complexity Sciences. This Doctoral Training Centre recruits 10-15 students a year into a multidisciplinary PhD programme which involves Applied Mathematics and Statistics in partnership with Engineering Mathematics and Computer Science. The period of study is four years, the first year being based around taught courses. More detailed information is available at <http://bccs.bristol.ac.uk/toProgramme/>.

**PhD in Communications.** The Statistics Group plays a major role in the £10 million Centre for Doctoral Training in Communications Engineering, funded by EPSRC and industrial partners. This offers 10 fully funded 4 year PhD studentships per year, and involves interdisciplinary work and collaboration with industry. Applications are welcomed from students with a mathematical background. For more information, please visit <http://www.bristol.ac.uk/cdt-communications/>.

## 2.2 Taught programmes

**MRes in Statistics.** The Statistics Group offers the taught postgraduate programme of Master of Research (MRes) in Statistics, with two thirds of the final assessment based on the taught units and one third based on the project dissertation. The main aim of the programme is to form a bridge for strong students between undergraduate and PhD study, allowing them to increase the depth and breadth of their understanding in a range of topics in statistics and probability and develop their overall research perspective and vision before finalizing their research project. For further details see <http://www.sustain.bris.ac.uk/postgradcourses.html>. As well as forming the first year of a 1+3 MRes/PhD programme, the MRes can also be taken as a standalone programme. Minimum entry requirement is BSc at First Class or 2.i level or equivalent.

**MSc in Mathematical Sciences.** This course allows students to get a thorough foundation of an area at the forefront of research in Mathematics from internationally renowned researchers in this area. The course runs for a full year with a combination of taught units examined in April and early June, and a research project during the summer. It is possible to swap some of the taught units with a literature review that will be assessed in June and then becomes part of the research project. In the first case the research project counts one third of the final mark and in the second case the research project counts half of the final mark. The standard entry requirement for this MSc course is normally a high 2.1 degree in Mathematics or a related discipline, subject to a case-by-case consideration.

## 2.3 Admission and progression

If the student is to be admitted onto MRes, MSc, ‘1+3’ or ‘0.5+3’, then an admission decision is based purely on the quality of the student (rather than the proposed research area). On offering a ‘1+3’ or ‘0.5+3’ place, we will inform the student of approximately how many vacancies are expected in their proposed research area when they will progress. If the student is to be allocated onto ‘3’, then a decision is made, in conjunction with a potential advisor, as to whether they can be matched to a particular PhD project, for which a brief (1 page) project plan exists. See [section 3](#) for more details of research themes and staff interests.

Progression decisions for ‘1+3’ and ‘0.5+3’ students will be made on the basis of a programme of taught courses (e.g. the MRes coursework). For ‘1+3’ students only, another set of progression decisions will be made after the dissertation. For a ‘3’ student, his advisor ensures that the student produces a comprehensive literature review and completes at least two pieces of assessed coursework from the MRes programme in time for a progress review after six months.

## 2.4 Application procedure

Applications should be made online at <http://www.bristol.ac.uk/prospectus/postgraduate/2012/apply.html>. If you cannot (or prefer not to) apply online, please email [pg-admissions@bristol.ac.uk](mailto:pg-admissions@bristol.ac.uk) to request a paper application form. Please include in the application the full list of courses and marks from your university, syllabuses for the courses related to probability and statistics, English language certificates for overseas students, two references and the areas of research you are interested in. The references can be sent directly by the reference writers.

UK applicants for postgraduate study are usually invited to visit Bristol to meet appropriate members of staff and to discuss possible projects with them. Reasonable travel expenses will be reimbursed. For overseas applicants we will often conduct interviews by phone or skype. Applications to any of the above programmes will be considered regularly, roughly monthly between December and June for entry in October. Once an offer of a place is accepted, students will be asked to provide evidence of financial support both for fees and for subsistence.

There is no fixed closing date for applications, but we strongly urge prospective candidates to apply as early as possible (preferably before mid-February for entry in October) to facilitate our admissions procedure. Applications for University of Bristol Postgraduate Research Scholarships should be received by **early January 2012**.

**Language requirement.** Overseas students whose native language is not English are required to give evidence of their fluency in English. There are various ways in which this may be done, e.g. in many countries there are offices of the British Council where a test such as the IELTS may be taken leading to a report for the University. The University's normal minimum requirement is 6.5 on IELTS with 6.0 in each band, 600 on TOEFL (old style), 250 on TOEFL (computerised) or 100 on TOEFL (Internet-based). However, the faculty of Science offers a degree of flexibility for postgraduate students in Statistics. We accept:

- For PhD or MSc: IELTS 6.0 overall, with a minimum of 5.5 in each band;
- For MRes in Statistics: IELTS 6.0 overall, with a minimum of 6.0 in writing, and a minimum of 5.5 in speaking/listening/reading.

## 2.5 Fees and financial support

The tuition fees for one year's full time postgraduate study for 2012/13 are:

	MSc/MRes	PhD
UK and other European Union students	£9,000	£3,825
Other overseas students	£17,000	£14,900

Fees are quoted per annum and are subject to annual increase.

Information about eligibility criteria for 'home' (UK/EU) tuition fees can be found at <http://www.bristol.ac.uk/academicregistry/fees/class/>. The University believes that overseas students without dependents require about £9,000 per year to live in Bristol.

### PhD Studentships in Mathematics

The School of Mathematics offers up to five fully funded four-year PhD Studentships in Mathematics with a start date 1 October 2012. Each studentship includes an annual stipend at EPSRC rates (currently 13,590 p.a.), and covers the University's tuition fees for EU or overseas students. An integral part of these studentships is for the candidate to develop their teaching skills alongside their PhD research. The successful candidate will teach four hours per week in term time and assist in the examination process. Training and mentoring will be provided.

Applicants are expected to hold a first or upper second class honours degree, or international equivalent, in Mathematics. There are no restrictions on nationality. The closing date for applications is **1 February 2012**. Short-listed applicants will be

interviewed in the week commencing 20 February 2012. Interviews of overseas applicants may be carried out via video-link (skype). To apply, complete the online application process <http://www.bris.ac.uk/prospectus/postgraduate/2012/dept/SCIF/MATH> with reference PhD Studentship in Mathematics. Your application should include (1) Full list of courses and marks from your university, (2) English language certificates where applicable, (3) two academic references, (4) an up-to-date CV and (5) a brief statement of your research interests and teaching skills.

### Funding opportunities for home (UK/EU) students

- **DTAs.** The most common method of funding is directly from the School of Mathematics which receives partial funding from the EPSRC for students undertaking PhD degrees by research, known as Doctoral Training Accounts (DTAs). These EPSRC studentships, normally available for a maximum period of three and a half years, are awarded on a competitive basis across the School of Mathematics, to students with relevant degrees at the First Class or 2.i level, or equivalent.

For UK and EU students who have been residents in the UK for three years prior to application, an EPSRC studentship meets all the tuition fees and pays a maintenance allowance to the student. Enhanced EPSRC stipends will be available in Statistics but not in Applied Probability. No tax is payable on this stipend, and tax allowances remain unchanged (for full-time students at least). Supplements may be available for disabled students, mature students, students with dependents and for students with suitable postgraduate work experience. Other students from European Union countries may be eligible for fees-only grants from the EPSRC and awards from the EU.

- **Project-specific grants.** Some supervisors hold grants to pay postgraduate students working on a specific projects. These openings are advertised on <http://www.maths.bris.ac.uk/admin/jobs/>.
- **SuSTaIn studentships.** The Statistics Group can also fund a number of studentships to those studying for the MRes Statistics either alone or as part of our '1+3' program. It provides a maintenance stipend and fees at home rate for the one year of MRes. Any successful applicants from outside the EU would need to find other funding sources to cover the difference between non-EU and EU fees.
- **Studentships for MRes in Statistics.** The Statistics Group can also fund a number of studentships to those studying for the MRes in Statistics either alone

or as part of our '1+3' program. Normal EPSRC funding eligibility rules apply to this award. For UK and EU students who have been residents in the UK for three years prior to application, the studentship meets all the tuition fees and pays a maintenance allowance to the student. Other students from European Union countries may be eligible for fees-only grants.

- **University of Bristol Postgraduate Research Scholarship.** EU students are also eligible to apply for a University Research Scholarship, which will cover tuition fees and a maintenance stipend. More details will be available soon at [http://www.bristol.ac.uk/studentfunding/home\\_pg/schols.html](http://www.bristol.ac.uk/studentfunding/home_pg/schols.html).

### Funding opportunities for non-EU students

Many overseas students are funded by their own governments. Details of other sources of support for students planning to study at Bristol are available at [http://www.bris.ac.uk/studentfunding/overseas\\_pg/](http://www.bris.ac.uk/studentfunding/overseas_pg/) and at [http://www.stats.bris.ac.uk/study/admissions\\_postgrad/funding/](http://www.stats.bris.ac.uk/study/admissions_postgrad/funding/). Here is a list of some of the options: please check the deadlines carefully.

- **University of Bristol Overseas Postgraduate Research Scholarships.** Competitive scholarships to attract the best international students to Bristol. This award covers the full overseas tuition and offers a maintenance stipend of 10,000 per year approximately.
- **The British Council.** Contact the British Council Office in your own country for details.
- **Commonwealth Scholarships.** Offered to citizens of Commonwealth countries. Apply to the Commonwealth Scholarship Agency in your own country for details.
- **Dorothy Hodgkin Postgraduate Awards.** For overseas students from China, India, Hong Kong, Russia, Brazil, South Africa and the developing world wishing to study for a three year PhD research degree.
- **University of Bristol Santander Abbey Masters Scholarships.** The scholarships aim to increase academic mobility between Central and South America and the UK. These scholarships are aimed at candidates from Argentina, Brazil, Chile, Colombia, Mexico, Puerto Rico, Uruguay, Venezuela and Peru who demonstrate the highest level of academic achievement. There are normally five awards available each year for 5,000 each, offset against tuition fees.

- **Marshall Scholarships.** For young Americans wanting to study in the UK. These are extremely prestigious scholarships, and the University would typically provide matched funding.
- **British Chevening Scholarships.** Currently available in 160 countries around the world.

### Income from tutoring and marking

Graduate students may have an opportunity to supplement their income by giving first-year undergraduate tutorials and marking undergraduate work, and these are also useful transferable skills. For the academic year 2011/12, the hourly rate for tutoring and marking tutorial or lecture homework is £13.79. Graduate students are not permitted to give more than 6 hours of classes per week. Overseas students would need to provide proof that they are allowed to work in the UK.

## 3 Research Themes and Staff Interests

The Statistics Group's research is informally organised into the following themes. You can read more about each theme by following the '[Read more ...]' link. This will also allow you to link to the relevant members of staff, postdocs, and postgraduate students.

- **Applied Probability.** Real-world applications, such as queueing systems, communication networks and financial markets, evolve in a random fashion over time. Research in applied probability provides insight into these processes that exhibit randomness using results from the theory of probability, so that they can be mathematically modelled and better understood. [\[Read more ...\]](#)
- **Bayesian Modelling and Analysis.** Research into Bayesian methods includes work on both generic issues, such as model selection, graphical models and default priors, and on application-specific models and methods in a wide variety of domains, including genetic epidemiology, econometrics, hydrology and traffic management. The key characteristic of Bayesian methods is that all variables – data, parameters, latent variables etc – are treated as random and all uncertainties are expressed as probabilities. This gives Bayesian analysis an attractive uniformity and coherence. Inferential tasks such as hypothesis testing and the construction of confidence intervals, which have to be performed indirectly in classical inference, can be replaced by direct probability statements about unknowns. [\[Read more ...\]](#)

- **Behavioural Biology.** Natural selection produces organisms that are well-adapted to their environment. So we can use optimisation or game theory models in which their fitness for the environment is maximised to predict broad animal behaviours, for example typical growth and response of the immune system to infection. [\[Read more ...\]](#)
- **Monte Carlo Computation.** Monte Carlo methods are simulation algorithms designed to compute answers to deterministic questions using random numbers. Although used in many branches of science, in statistics they are principally used to compute probabilities and expectations in complex stochastic models. Research in the group is focused on several key areas of Monte Carlo methodology, including adaptive MCMC, particle filters, trans-dimensional MCMC and simulated annealing. It addresses both methodological issues (construction of algorithms) and theoretical aspects (proof of convergence, quantifying performance) [\[Read more ...\]](#)
- **Multiscale Methods.** In recent years multiscale methods have revolutionised the modelling and analysis of phenomena in a number of different disciplines. The ‘multiscale’ paradigm typically involves a multiscale representation and then manipulation of that representation to achieve a desired goal. Practical applications include: modelling communications network traffic - such as queues on routers - and image compression. [\[Read more ...\]](#)
- **Nonparametric Regression.** Given noisy data observed at certain intervals, the aim is to approximate the data by a function without restricting ourselves to functions from a small family like linear or polynomial models. Smoothness or simplicity assumptions are made instead. Many methods have been suggested and studied, the most popular ones are kernel estimators, spline smoothing, local polynomial regression and wavelet thresholding. [\[Read more ...\]](#)
- **Optimisation under Uncertainty.** Optimisation under uncertainty covers a broad framework of problems at the interface of applied probability and optimisation. The main focus of work is on Markov decision processes, game theory, reinforcement learning and multi-agent systems. [\[Read more ...\]](#)
- **Statistical Bioinformatics.** Statistical bioinformatics stands at the junction of biology and statistics, with input from mathematics and computer science, and is an interdisciplinary effort in which statisticians are responsible for modelling and data analysis, and biologists generate questions, and provide scientific knowledge and interpretation. The main current interests in bioinformatics within the group are in gene expression data, protein matching and alignment, macromolecular structure modelling and some modelling issues in genetic epidemiology. [\[Read more ...\]](#)

- **Statistical Signal Processing.** Uncertainty is present in various forms in numerous information engineering activities, for example, telecommunications, target tracking, sensor data fusion, signal and image processing. The present interdisciplinary research program at Bristol bridges the Statistics group and the Department of Electrical and Electronic Engineering by promoting the transfer of modern statistical methodology to the area of signal processing using the tools in concrete applications. Particular interests include approximate inference in large-scale statistical models, applications to communication and coding, machine learning, wavelet methods for data fusion, distributed computations, vesicle tracking in biological image processing and multiscale network visualisation. [[Read more ...](#)]
- **Time Series.** Time series are observations on a variable ordered in time. They arise in many fields, including biology, telecommunications, physics, finance or economics. Ongoing projects include “locally stationary” processes, Bayesian methods in time series analysis and many others. [[Read more ...](#)]

We are looking to attract high quality applicants for postgraduate study in each of these themes. Example projects offered by members of staff can be found at [http://www.stats.bris.ac.uk/study/admissions\\_postgrad/stats/research/](http://www.stats.bris.ac.uk/study/admissions_postgrad/stats/research/). Applicants keen to study in other areas are also welcome, subject to a suitable supervisor being available.

## 4 Life in Statistics Group at Bristol

### 4.1 Skills: training and development

The Faculty of Science at Bristol provides an induction course for all postgraduate students, providing an introduction to Bristol University and to basic skills required for postgraduate work. Within the University, the Student Development Unit, Staff Development, and Information Services all provide skills training: see [http://www.bris.ac.uk/postgraduates/#Skills\\_training](http://www.bris.ac.uk/postgraduates/#Skills_training) for more details (note that research students are eligible for the University’s staff development courses). The school of Mathematics itself provides a course in skills such as statistical computing and technical writing.

For academic development, postgraduate students are expected to attend many of the M-level taught units, as well as the four one-week residential courses offered by APTS: see [subsection 2.1](#) for more details. Postgraduate students are welcome to attend any third/fourth year undergraduate courses in statistics and probability, to

fill in any gaps in their own undergraduate experience (MRes students typically take one such course as part of their degree).

**Seminars and other opportunities.** There are separate external seminar series in Statistics and in Probability, with a high level of cross-over. Attending the seminars is a crucial part of the research degree programmes. In each series, seminars are typically held fortnightly during Term, and comprise either one or two presentations, with tea and biscuits. Details of recent and forthcoming speakers can be found at <http://www.stats.bris.ac.uk/seminars> (Statistics) and <http://www.maths.bris.ac.uk/events/seminars/series/index.php?id=33> (Probability). Postgraduate students have the opportunity to meet the speakers beforehand over lunch, or afterward (typically in the pub). The Statistics Group also organises internal seminars (and ‘new faces’ seminars to introduce new academics and post-docs). In addition, graduate students organise their own seminar series where they have the opportunity to practise their presentation skills in a friendly and supportive atmosphere. Finally, informal ‘journal clubs’ meet regularly. Currently these comprise the *Bayesian Cake Club*, and reading groups on *Nonparametric Statistics*, *Time Series and  $n \ll p$* , *Information Theory and Communications*, *Reinforced Processes*, and *population genetics*.

**Conferences.** Research students are funded to attend relevant conferences, often accompanying their advisor. They are also encouraged and funded to attend the annual Research Students’ Conference and Young Statisticians’ Meeting, and second- and third-year students will often present their work there. Meetings of the Royal Statistical Society are held locally in Bristol and Bath, and we also provide funding for students to attend RSS meetings in London.

## 4.2 Facilities for Statistics research at Bristol

The Statistics Group occupies the top two floors of the School of Mathematics, located in the University precinct just a few minutes walk from the libraries in Engineering (which has the Mathematics collection), Chemistry, and Physics, and the Arts and Social Sciences library. The building is number 29 on the precinct map, available at <http://www.bris.ac.uk/university/maps/precinct.html>.

**Computing facilities.** Many aspects of statistics are now highly computer-intensive. Not surprisingly, given the research theme on Monte Carlo methods, the computing facilities for statistics research at Bristol are excellent, among the best available to any statistics group in the country. They were partly funded by the EPSRC, DERA and by industry. There are a variety of resources available for more intensive computations

within the School of Mathematics, including seven 64-bit machines dedicated to the Statistics Group, departmental SCONE HPC facility, and a 160-CPU Beowulf cluster based in the Laboratory for Advanced Computation in the Mathematical Sciences (LACMS). The University's central facilities are operated by the Advanced Computing Research Centre with 'BlueCrystal', the University's High Performance Computing (HPC) machine: more details are available at <https://www.acrc.bris.ac.uk/>.

Each full-time postgraduate student has a fast well-equipped PC on their desk (they can choose either Windows or Linux, or, if there is funding available, a Mac), with all the usual software, including Maple and Mathematica (for Computer Algebra); Matlab and R (for modern mathematical numerical computation); TeX and its variants (for mathematical typesetting); FORTRAN, C and C++ (for programming).

**Statistics@bristol.** There is a lot of statistics going on in the University outside the School of Mathematics, for example in Medical Sciences, Geography and Earth Sciences, Engineering, Education, Economics, and the Veterinary School. The University of Bath also has a strong Statistics group, and so there is a high concentration of statisticians and statistical applications in the region. The Bristol Environmental Risk Research Center (BRISK) provides interdisciplinary research across the natural, engineering and social sciences in environmental hazard risk assessment and uncertainty science. There is also an informal network, 'Statistics@bristol', that holds occasional seminars, focusing on applications.

### 4.3 Living in Bristol

Bristol is a thriving city of 400,000 people, which offers a mixture of the old and the new. It was founded in the Ninth Century, and historically was one of the most powerful cities in the country, due to its port and the business savvy of its merchants. Its wealth has left a legacy of beautiful streets and buildings, and a harbourside at the centre of the city that is now a centre for arts and entertainment. There are many reminders of the work of Isambard Kingdom Brunel, not least the spectacular Clifton Suspension Bridge and the SS Great Britain. Over the last century the city has transformed itself from a port to a centre for technology, playing a key role in the Concorde and Airbus projects and currently boasting about 400 micro-electronics companies. More details are available from the official tourist website <http://visitbristol.co.uk/>.

The city is well-known for its thriving arts scene, particularly urban artists such as Massive Attack, Tricky, Portishead and the infamous graffiti artist Banksy. Aardman Animations, creators of Wallace and Gromit, are based here. It is also has strong environmental credentials: it is home to the Soil Association and Sustrans (who organise

the national cycle network, see <http://www.sustrans.org.uk/>), and the Environment Agency. There is a thriving grass-roots social and environmental movement, with plenty of independent shops selling organic and locally-produced food, and a local branch of the Slow Food movement. Sports fans are well catered for, with two league football clubs, a Premiership rugby side and a county cricket ground which regularly hosts one-day international matches.

The University is located at the heart of Bristol, within walking distance of most of the city's facilities, including the Central Library, the Cathedrals (Anglican and Catholic), Bristol Temple Meads railway station, the Bus Station, the museums, theatres, cinemas (mainstream and independents) and art galleries, concert halls and music venues, the main shopping streets and the shopping centres at Broadmead and Cabot Circus, restaurants and clubs at the Harbourside, open space at Brandon Park. A walk through the beautiful Georgian streets of Clifton takes you to the Suspension Bridge over the Avon Gorge, and if you cross you get to Leigh Woods and the deer park and manor house of Ashton Court.

From either of the two railway stations (Bristol Temple Meads or Bristol Parkway) it is under two hours to travel to central London (Paddington). Just outside the city, the international airport has connections to other UK cities and to continental Europe. The cities of Bath Spa, Cardiff, and Exeter are nearby, and many areas of outstanding natural beauty are within a few hours drive: the Cotswolds, the Brecon Beacons, Exmoor and Dartmoor, and the New Forest.

Bristol is a wonderful place to live, and this is just a brief summary: you should come and visit!

**Accommodation.** It is usual for students to find accommodation within about two kilometres of the university. There are a number of modern, well-equipped halls of residence (of which Dean's Court, Unite House, Chantry Court and Woodland Court are the biggest) fully or partly allocated to postgraduate students. It is the students' responsibility to find their own accommodation, but the University's Accommodation Office provides assistance, and should be the first point of contact when booking a room in a postgraduate hall of residence.

There are also a limited number of places for postgraduate students at favourable rates if they are willing to be 'in charge' of student houses, or to be in similar positions of responsibility within undergraduate halls of residence. Extra help is given to students from abroad by the International Centre. More details are sent to students when they are accepted for courses or with the details of registration before they arrive.

Further useful information is sent to international students. For more details see <http://www.bris.ac.uk/accom/>.