Further Particulars for the post of College Associate Lectureship and Fellowship in Pure Mathematics

July 2024
**Requirement**

St John’s College is looking to appoint a College Associate Lecturer and Fellow in Pure Mathematics from 1 October 2024. This is an early career development post and is offered for a fixed-term period of five years.

The successful candidate will be expected to teach on average nine hours of small group teaching a week during the twenty teaching weeks of the year (amounting to 180 hours of contact time) and to cover the Direction of Studies in Pure Mathematics if required.

**St John’s College**

For over 500 years, St John’s College has flourished as an independent and self-determining academic community, whose purposes are education, religion, learning and research, and which approaches its mission with an unwavering commitment to academic freedom, excellence, and integrity. We are committed to sustaining and enhancing the College’s global renown for scholarship, and we aspire to be regarded as a beacon of academic excellence.

This is a friendly, warm, and welcoming place with a cheerful and optimistic spirit. The College is held in deep affection by its members, who include around 150 Fellows, about 550 undergraduate and 300+ postgraduate students, some 13000 alumni worldwide, and by our 250 staff. We cherish the diversity of experience, culture, and perspective each member of the College contributes to our community, and the way this enriches our learning and our lives.

As one of the biggest colleges in the University, St John’s offers our students countless opportunities to expand their horizons intellectually and personally. At the heart of this is excellent teaching in a supportive learning environment. This focus, and our commitment to creating an exceptional and distinctively Johnian collegiate experience, helps us to attract the brightest minds as undergraduates, postgraduates and Fellows, and makes it easier for each of them to realise their academic ambitions here.

Further information on the College can be found on the College website [www.joh.cam.ac.uk](http://www.joh.cam.ac.uk).
Mathematics at St John’s College

Each year the College admits around 15 Mathematics undergraduates, chosen from about 120-150 applicants, many of whom are drawn from outside the United Kingdom. Students are admitted to the College strictly on merit.

Currently the college has 4 Teaching Fellows in Pure Mathematics and 3 Teaching Fellows in Applied Mathematics.

The main teaching duties of the successful applicant will be to provide supervisions to undergraduates reading for the Mathematical Tripos. The appointee’s teaching load will be nine hours per week consisting of supervisions and example classes. Undergraduates are normally supervised in groups of two, while example classes are held for the cohort of 15-20 students in their first or second year of study.

Details about the papers offered on the Mathematical Tripos may be accessed at https://www.maths.cam.ac.uk/undergrad.

The appointee may be expected to assume the role of Director of Studies in Pure Mathematics. The main purpose of this role is to oversee and to arrange the teaching of undergraduates and ensure that the college maintains its high standards for instruction and student support. The duties of this role include coordinating supervisions for the pure maths courses, meeting the students individually several times per year, and participating in College open days, orientation sessions, admissions activities and interviews.

The appointee will be expected to take a special role in developing the academic abilities of the first-year Mathematics undergraduates, and in supporting the general intellectual culture among the Mathematics students in the College. The College has an active Mathematics Society, the Adams Society, and the appointee would be expected to contribute to its activities: https://www.joh.cam.ac.uk/adams-society

The College Library has a well-stocked Mathematics collection which contains most of the textbooks required for undergraduate study. Access to online material is available through the University network and the Faculty of Mathematics.

The Faculty of Mathematics

The Cambridge Faculty of Mathematics is strongly committed to involving its College Lecturer members in its intellectual and social life. Many of the current tenured University Teaching Officers in the Faculty began their careers as College Lecturers in Mathematics before being appointed to a University post. The Cambridge Faculty provides a supportive environment for developing the research abilities of its younger members. It hosts many visiting speakers and arranges a programme of research seminars.

The Mathematics Faculty consists of the Department of Pure Mathematics and Mathematical Statistics (DPMMS) and the Department of Applied Mathematics and Theoretical Physics (DAMTP). DPMMS currently has about 40 University Teaching Officers and a number of College teaching or research fellows in Mathematics. There are around 700 undergraduates in Part I or Part II and around 250 students reading for Part III of the Mathematical Tripos and about 100 research students within DPMMS.
The Betty and Gordon Moore Library is one of the largest university mathematics libraries in the United Kingdom, housing Cambridge University Library's working collections in mathematics, physics, astronomy, computer science, materials science, and engineering, including relevant material received under Legal Deposit legislation.

Further information about the Faculty may be found at http://www.maths.cam.ac.uk/ and about the University of Cambridge at http://www.cam.ac.uk. The appointee may be invited to deliver a limited number of lectures or seminars in the Faculty, to present research seminars to Faculty colleagues, and participate in the setting and marking of University examinations.

Principle Responsibilities and Duties

**Job Title:** College Associate Lecturer in Mathematics

**Job purpose:** A fixed-term early career stage appointment in which the College Associate Lecturer will: (a) Work under the direction of the overall Director of Studies for Mathematics and the Senior Tutor at St John’s College to provide excellent supervisions in Pure Mathematics in courses from the Mathematical Tripos at the University of Cambridge; (b) Undertake scholarly research within his/her specialist field and build a high quality publication record; (c) Undertake other academic activities, all with a view to developing an academic career in Mathematics.

**Department:** Teaching

**Responsible to:** Directors of Studies in Mathematics and the Senior Tutor

Main Responsibilities

**Teaching**

- To organise and teach on average 9 hours of supervisions (individual/small-group teaching) per week (excluding preparation and marking time) to undergraduate students within the College, and potentially at other colleges pursuant to reciprocal teaching arrangements, during the twenty teaching weeks of the Cambridge academic year (equivalent to 180 hours of contact time per academic year). The number and frequency of supervisions to be given, and the size of the supervision group, must be agreed with the relevant Director of Studies (or other designated person in the case of departmentally arranged supervisions).

- To provide clear guidance to students at the start of a set of supervisions about what is expected of them in terms of preparation, participation in supervision discussions, deadlines for submission of work and the arrangement of supervision times.

- To ensure that students receive timely feedback on their supervision work during term, both week by week in supervisions and through CAMCORS, the undergraduate supervision reporting system.

- To respond effectively to feedback from students on the quality of the supervisions provided.
• To liaise regularly with the relevant Director of Studies on student progress, in particular reporting any problems in student academic performance. When appropriate, to work with the Tutor for Mathematics on matters of student well-being and academic progress.
• To liaise regularly with other Mathematics Fellows on the organisation and progress of teaching in the subject and on library provision for the subject.
• To maintain good relations with the Department of Pure Mathematics and Mathematical Statistics keeping up-to-date with changes in Faculty courses and policy and participating, if the opportunity arises, in the teaching and examining activities of the Faculty (which would be remunerated at the appropriate Faculty rate).

Research & publication

• To pursue scholarly research within their specialist field and to keep abreast of developments in research and scholarship in that field.
• To present and publish the results of their research with a view to building up a high quality publication record.
• To participate in Faculty submissions in the Research Excellence Framework (REF) and, where feasible, to publish research at intervals consistent with the requirements of the REF.
• To participate in the activities of national and international organisations, publications and conferences concerned with research and scholarship in their specialism.
• Where appropriate and necessary, to seek external support for their research and scholarship activities, either individually or in collaboration with others.

Direction of Studies

• To act, if requested to do so, as Director of Studies, organising and overseeing the undergraduate teaching programme.
• Any such work would be separately remunerated and a separate job description would be issued.

Admissions

• To assist in responding to admissions related enquiries through the academic year.
• To attend Open Days and other visits of prospective candidates and school teachers and, if requested to do so, to help organise such events.
• To assist in producing and updating admissions information in Mathematics.
• To participate in admissions assessments and interviews, if asked to do so (admissions interviews would be separately remunerated).

Examining

• To participate in the organisation, setting, invigilating and marking of College Examinations and Progress Tests (for which additional remuneration is paid).

Mentoring and training
• To attend the induction course entitled ‘Pathways in Higher Education Practice’ organised by the University.

• To attend regular informal meetings with an assigned mentor who is a Fellow of the College which may cover publication strategies, the balance of research, publication and teaching, when and how to apply for University posts and advice on such applications, and connections with the Department of Pure Mathematics and Mathematical Statistics, or equivalent faculties elsewhere and opportunities for undertaking teaching and/or examining duties there.

• To participate in Professional Development Reviews.

Additional responsibilities

• To attend and when required, contribute to, induction events for new students.
• To provide references for students if requested.
• To contribute to the academic life of the College, fostering and promoting excellence in the study environment for Mathematics and engaging in societies, seminars and other events and activities relating to Mathematics.
• To assist in assessing applications for Research Fellowships, when requested to do so.
• To serve on a small number of College committees, if requested to do so.

The above description is not exhaustive and the individual would undertake other responsibilities appropriate to an early-career appointment if reasonable and asked to do so.

Person Specification

Candidates will have an exceptional academic record with a doctorate or postgraduate degree in Pure Mathematics.

Candidates will have the communication skills necessary for successful small group teaching, including the ability to explain problems and ideas lucidly, to listen to students’ questions and views sympathetically, to enthuse and inspire them and to provide timely feedback to students. Previous teaching experience would be an advantage.

Candidates must also have good interpersonal and organisational skills, and must be able and ready to fulfil the administrative and pastoral functions required of the post.

Terms and Conditions

Length of contract:

This post is offered for a period of five years and is non-renewable.

Stipend and Pension:

• The stipend offered will be in the range of £40,521 and £45,585 per annum (placement on the scale will be dependent on experience). This stipend is based on an average of nine hours teaching a week for twenty weeks per year (equivalent to 180 hours of contact time per academic year). The actual stipend paid will be adjusted to reflect the actual number of supervisions delivered.
• The stipend is pensionable under the Universities Superannuation Scheme (USS).
• Additional remuneration will, if applicable, be paid for acting as Director of Studies and for examining and interviewing of candidates for admissions (see below).

Additional payment for Director of Studies role:

<table>
<thead>
<tr>
<th>Basic</th>
<th>£911</th>
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<tr>
<td>Plus per pupil (sole direction)</td>
<td>£182.36</td>
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<tr>
<td>Plus per pupil (direction shared)</td>
<td>£91.17</td>
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Additional payment for Interviews:

Payments for each interview of an applicant for admission as an undergraduate shall be made equal to one half of the hourly intercollegiate supervision rate for classes of one (currently £17.86 per interview).

Additional payment for Examinations:

Payments for College examinations shall be made at the rates specified in the University Statutes and Ordinances under ‘Payments to Examiners and Assessors 3(a)’ which are currently:

<table>
<thead>
<tr>
<th>For acting as an Examiner</th>
<th>£110</th>
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<tr>
<td>For marking answers to a complete written paper of at least three hours</td>
<td>£9</td>
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<tr>
<td>For marking answers to a complete written paper of two hours</td>
<td>£5</td>
</tr>
<tr>
<td>For marking answers to a complete written paper of less than two hours</td>
<td>£4</td>
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**Benefits for Fellows of the College**

St John’s College provides a range of benefits to Fellows of the College as set out below. These are non-contractual and may be changed or withdrawn by the College.

**Accommodation**

The College currently provides its Fellows with a number of alternative types of assistance with housing as summarised below.

**Living in College**

A Fellow who wishes to reside in the College may apply for single residential accommodation (a
‘residential set’). This is provided free of rent but is subject to the payment of a service charge to the College to cover the provision of utilities and furniture. This is a taxable benefit.

**Housing allowance**

Any Fellow who cannot take-up the opportunity to live in College as they have a partner/family with whom they wish to reside, may apply during the first four years of their Fellowship for a non-pensionable housing allowance to assist with renting a flat or house. The allowance is currently the lower of £725 per month and 50% of the rent the Fellow is actually paying. The housing allowance is taxable and the property must be within 20 miles of the College. The payment of the allowance can start up to one month before entry into the Fellowship and terminates on the fourth anniversary of commencement of the Fellowship.

**House Purchase Scheme**

The College currently runs a House Purchase Scheme to assist Fellows with the purchase of a flat or house in the Cambridge region. This is a co-ownership scheme, with the College and the Fellow co-owning a property selected by the Fellow. The College’s contribution is a maximum of £200,000. Rent is payable by the Fellow to the College each year at 1.25% of the value of the College’s contribution, with the rent indexed annually by CPI. The Fellow is responsible for the maintenance and insurance of the property. When the property is eventually sold, the value of the College’s share is the College’s original contribution indexed by two recognised East Anglia house price indices. The Fellow can increase his/her share of the property at any time through purchasing some or all of the College’s share.

The above is a brief summary and further details of the housing assistance provided by the College are available on request.

Separately from the College, the University has created subsidised accommodation at Eddington (a development in North West Cambridge) for which College employees may be eligible, subject to availability and in accordance with the rules of their scheme. Eddington is a new district situated between Huntingdon Road and Madingley Road and is a purpose-built new neighbourhood for the University and wider community with a primary school, state-of-the-art community and performing arts centre, Sainsbury’s supermarket, parkland and sporting facilities. For more information visit nwcambridge.co.uk. To make an application please follow the link on the University’s Accommodation Service website at https://www.accommodation.cam.ac.uk/.

**Dining**

Fellows are able to dine and lunch at the Fellows’ Table as often as desired, with ninety meals per quarter (either lunch or dinner) being at College expense. A guest may also be brought to dinner or lunch at the Fellow’s expense (though the entertainment allowance described below can be used to cover the cost of academic or ‘business’ guests).

**Fellows Grants and allowances**

- Fellows can apply for Teaching and Research Grants to provide assistance with research activities, attending conferences and purchasing books, and for obtaining secretarial assistance if required. The normal monetary limit for Fellows for such grants is currently £1,900 per year (with an ability to carry forward unspent allowance from one year to the next, within limits).
- Fellows can also obtain assistance of up to £1,000 every four years for the purchase of computer equipment.
- Fellows may apply for a grant from the College to support a seminar or conference they are organising in the College under the Research Enterprises and Conferences scheme.
- Fellows may claim reimbursement of expenses of entertainment on behalf of the College (up to a specified monetary limit, currently £420 p.a.).
Healthcare and well-being schemes

Fellows are eligible to join two healthcare schemes following 3 months’ service:

- A BUPA medical insurance scheme, which is non-contributory for single cover up to the retirement age and contributory for family cover. Non-contributory or contributory BUPA membership is a taxable benefit; and
- A Simplyhealth cash-plan scheme, to provide support for day-to-day expenses, which is non-contributory for cover for the Fellow and dependent children under 18 years and provides cover up to the state pension age. Fellows are assumed to want to be included in the scheme unless they exercise the right to ‘opt-out’. This is a taxable benefit.

Sporting Facilities

Fellows are welcome to utilise the College sporting facilities and the Fitness Centre.

Childcare

Nomination to the College Nursery (please note that Fellows are advised to apply as early as possible as there is no guarantee that a place will be available).

This note is intended as a summary and additional information can be found in the Fellows’ Handbook which is sent to new Fellows on joining the College and in the Standing Orders which are made available via the College’s website.

Recruitment Process

The deadline to apply is 9am on Monday 5 August 2024. Interviews are expected to be held on Wednesday 14 August 2024.

Please include in your application:

- A brief covering letter summarising why you believe yourself to be suitable for the role and why the role appeals to you;
- A list of publications and working papers;
- A statement of current research interests and any teaching experience (maximum 2 pages);
- A full Curriculum Vitae;
- A brief application form;
- The names and contact details of three referees who are prepared to recommend you. Applicants are asked to arrange for these three references to be submitted to the HR Department by the closing date.

Applications should be sent:
by email to: recruitment@joh.cam.ac.uk
or by post to: HR Department, St John’s College, Cambridge, CB2 1TP
In applying for this role, you will provide personal data which the College will process in accordance with its data protection obligations and its Data Protection Policy. Further information is available on the College website (https://www.joh.cam.ac.uk/data-protection)