Head of the School of Mathematical and Physical Sciences
## Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Introduction by the Vice-Chancellor</td>
</tr>
<tr>
<td>03</td>
<td>About Sussex</td>
</tr>
<tr>
<td>04</td>
<td>Working at Sussex</td>
</tr>
<tr>
<td>05</td>
<td>Core job description</td>
</tr>
<tr>
<td>08</td>
<td>Person specification</td>
</tr>
<tr>
<td>09</td>
<td>The School of Mathematical and Physical Sciences</td>
</tr>
<tr>
<td>12</td>
<td>Academic structure</td>
</tr>
<tr>
<td>13</td>
<td>Business and the community</td>
</tr>
<tr>
<td>14</td>
<td>The Sussex campus</td>
</tr>
<tr>
<td>15</td>
<td>Brighton and the local area</td>
</tr>
<tr>
<td>16</td>
<td>The appointment process and how to apply</td>
</tr>
</tbody>
</table>
Dear candidate,

The University of Sussex is a remarkable institution. The distinctive ethos on which it was established more than 50 years ago is still very much at the heart of the University.

The traditions of creativity, interdisciplinarity, innovation and intellectual rigour – in both education and research – play an important part in who we are. Building on this and against a backdrop in which English universities will be facing a period of political and economic change, Sussex is forging ahead and creating a new destiny.

We are in strong health. With a reputation for inspirational teaching, we are turning out graduates who are well-rounded global citizens – contributing to the worlds of business, sciences, the arts, academia, government and the third sector.

The quality of our research continues to underpin our entire academic endeavour. We are delivering internationally recognised research which is genuinely benefitting people and communities around the world, influencing policy and driving change in industry.

The University is ranked 7th in the UK for graduate employability and in the top 20 for all major UK league tables. Applications and acceptances for study are at an all-time record.

Set on the edge of beautiful parkland, a short distance from the city of Brighton, the University has a vibrant campus community. We continue to invest in our facilities to support the breadth of our teaching and research activities, as well as staff and student life.

This is an exciting time in the University’s history as we look to build on the past and redefine Sussex’s distinctiveness for the 21st century.

I hope you will join us in playing a part in shaping the future of a thriving University, with strong values that we believe make Sussex a very special place.

PROFESSOR ADAM TICKELL
VICE-CHANCELLOR
Since our foundation in 1961, Sussex has valued – and encourages – a pioneering spirit. We’ve pushed for change, and demanded more, creating a better future for individuals and communities all over the world.

Our teachers deliver programmes of study that inspire students to develop the skills that make their education count, and that give them the confidence to make their mark in their chosen field.

Our staff conduct original research to explore the great questions of our age. Their findings impact policy and practice for businesses, NGOs and governments, ensuring that Sussex students are also at the forefront of knowledge in their subject.

Creative thinking, pedagogic diversity, intellectual challenge and interdisciplinarity have always been fundamental to a Sussex education. The University’s goal is to deliver teaching and learning programmes that are informed by current research, are attractive to students from all socioeconomic and cultural backgrounds, and which deliver skills for life.

The University is committed to widening access for candidates from lower-income families, and awards a high number of scholarships and other types of financial support.

A FEW FACTS AND FIGURES

- In the 2014 Research Excellence Framework, over 75 per cent of research activity at Sussex was judged as world leading or internationally excellent.
- In the Times and Sunday Times Good University Guide 2016, Sussex was ranked 19th in the UK, 8th in the UK for investment in services and facilities, and 9th overall for graduate prospects.
- In the 2015 National Student Survey rankings, over 87% of Sussex students were satisfied or very satisfied with their experience at Sussex.
- In Complete University Guide 2016, Sussex was placed 18th overall.
- Sussex has 12 schools of study across the arts and humanities, sciences and social sciences. Sussex is one of the broadest based curricula of any university, with over 200 undergraduate degree courses and over 1,000 modules.
- We have counted three Nobel Prize winners, 23 Fellows of the Royal Society, 14 Fellows of the British Academy, 23 Academicians of the Social Sciences, 11 Fellows of the Academy of Medical Sciences and a winner of the prestigious Crafoord Prize on our faculty.
- The University attracts staff and students to its campus from over 120 different countries across the world. Nearly a third of staff come from outside the UK.

STRATEGIC GOALS

Our priorities in teaching and learning include:

- securing a top 10 position for overall satisfaction in the National Student Survey (NSS)
- growing undergraduate student numbers by 50 per cent in targeted academic areas
- growing our postgraduate student numbers to ensure that the proportion of postgraduate students is at least 20 per cent
- ensuring all undergraduate students have the opportunity to broaden their studies by engaging with some combination of study abroad, placement, a minor pathway and volunteering
- maintaining our top 20 league table placing

Our goals in research and knowledge exchange include: an increase in research income up to £54 million; the creation of several major new university research centres; and enhancing our research scope and impact.

For more information visit: www.sussex.ac.uk/aboutus/ourstrategy
## Childcare

There is a nursery on campus for children aged three months to five years, operated by The Cooperative Childcare. It is open daily from 7.30am–6.30pm.

## Library

Library facilities are available to all members of staff. The library is open around the clock during term-time. The Library’s special collections, now housed at The Keep, include the papers of Rudyard Kipling, the New Statesman Archive, Virginia Woolf’s Monks House Papers, many of Lord Richard Attenborough’s scripts and papers, and the Mass Observations Archive.

## Retail

There is a supermarket and post office, an academic bookshop, the Students’ Union shop, a pharmacy and a bank on campus. In term time, there is also a weekly outdoor market.

## Sport

Sports facilities include sports halls, fitness rooms, a dance studio, squash courts and outdoor pitches. There is an extensive drop-in group exercise and courses programme including yoga, dance, Pilates, trapeze, circuit training and aerobics.

Sussexsport holds an annual boundary walk and boundary run for staff and students around the Sussex campus. It also offers children’s birthday and sports parties from age two upwards and a full programme of sports camps and activities in the school holidays for children aged 5–16.

## Sussex Centre for Language Studies

The Sussex Centre for Language Studies provides a range of courses throughout the calendar year in English Language and Modern Languages that are open to staff as well as students. You can also use the Language Learning Centre to study over 50 world languages.

## Catering and Conferences

Sussexfood offers extensive catering facilities in Bramber House as well as cafés across campus. There are also conference and hospitality services. You can also use the Students’ Union bars and shop.

## Sussex Lectures

All staff are welcome to attend professorial lectures by Sussex academics and other talks by visiting lecturers and speakers.

## Attenborough Centre for the Creative Arts

The Attenborough Centre is a state-of-the-art performance and display space that reopened in 2016 after extensive refurbishment. The Attenborough Centre has a growing programme of performances and events and is a Brighton Festival venue.
Core job description

**JOB TITLE**
Head of the School of Mathematical and Physical Sciences

**SCHOOL**
School of Mathematical and Physical Sciences

**LOCATION**
University of Sussex Campus, Falmer

**RESPONSIBLE TO**
Pro-Vice-Chancellor

**RESPONSIBLE FOR**
All members of academic, tutoring staff and professional services staff within the School.

The Head of School will be a member of the University’s Leadership Team.

**KEY ACCOUNTABILITIES**

**STRATEGY AND PLANNING**
- Contribute to the strategic planning of the University
- Develop and ensure the delivery of academic strategy and operational plans for the School in line with University strategy, key performance indicators and operational targets (e.g. student recruitment, student retention, research grant and contract income).
- Ensure the identification and management of key strategic and operational risk.

**TEACHING AND LEARNING**
- Plan and ensure the highest quality delivery of teaching, learning, assessment and feedback within the School, in line with academic standards, quality assurance and other enhancement measures (e.g. e-learning), in accordance with the teaching and learning strategy.
- Ensure the development, innovation, promotion and delivery of the School’s curriculum, in line with the teaching and learning strategy.
RESEARCH AND ENTERPRISE

• Ensure the conduct of the highest-quality research by all levels of academic faculty, to the required volume, in accordance with the research strategy and University policy, e.g. on research ethics

• Ensure the delivery of a high standard of research student supervision

• Grow research, contract and knowledge transfer income for the School, across all levels of academic faculty, in accordance with University aims and budgetary requirements

• Develop the School’s enterprise initiatives and productive links/partnerships with businesses and the community, in accordance with the enterprise strategy.

STUDENT EXPERIENCE

Ensure the delivery of a high-quality student experience to all students within the School, seeking and achieving enhancement on a continuous basis, in line with University strategies.

MANAGEMENT TEAM

Lead the School management team to ensure optimal performance of the School, liaising with other Schools and with senior management colleagues, as necessary.

STAFF PLANNING AND RECRUITMENT

• Ensure the appropriate planning for and deployment of staff across the School in accordance with strategic and operational plans

• Ensure the recruitment and appointment of high calibre staff in accordance with University appointment procedures.
PERFORMANCE MANAGEMENT

Ensure the effective, consistent and fair management and development of individual staff and teams within the School in order to achieve high levels of School and University performance, implementing relevant University policies and procedures for induction, probation, performance and development review, career development, reward and capability management.

FINANCIAL CONTROL

Plan, manage and control the School’s finances, within allocated budgetary resource, ensuring the effective and efficient allocation of resource and to ensure that funds are assigned and used for the purpose for which they are intended.

INTERNAL AND EXTERNAL COMMUNICATIONS AND LIAISON

Promote a positive image of the School internally and externally and foster positive working relationships for the School within the faculty and across the University.

EQUAL OPPORTUNITIES, HEALTH AND SAFETY, DATA PROTECTION

Ensure the School’s compliance with, and promotion of good practice in relation to, University policy, procedure and guidance on equal opportunities, health and safety, and data protection in respect of students, staff and other relevant parties and any other legislative or regulatory obligation.
ESSENTIAL CRITERIA

1. Demonstrates substantial evidence of leadership and achievement within the relevant field

2. Of professorial standing with a sustained track record of achievement gained within higher education

3. An established and active international research profile and a track record of personal excellence in teaching

4. A strong sense of strategic, academic direction linked to success in implementing and managing change and driving organisational achievement

5. Sound understanding of the current HE environment, the student experience and demands of the future

6. Results oriented, with the ability to foster a culture of delivery, responsibility and accountability

7. A personable and professional manner and credibility that commands confidence

8. An inclusive management style, with ability to foster partnerships, build relationships, work collaboratively across boundaries and achieve results

9. Personally committed to ensuring that the University’s policies are reflected in all aspects of work, in particular, those relating to people management, academic standards, equal opportunities and health and safety.
The School of Mathematical and Physical Sciences

The School brings together two outstanding and progressive departments: the Department of Mathematics and the Department of Physics and Astronomy.

The synergy of these two subjects enables the School to deliver new and challenging opportunities for faculty and students.

The School has experienced very substantial growth over the past decade, with faculty and student numbers almost tripling. Projected gross expenditure for the School in 2016–17 is £13.6 million (including research income of £2.6 million).

DEPARTMENT OF PHYSICS AND ASTRONOMY

The Department has for many years ranked highly among UK Physics departments in the National Student Survey, coming top in 2011 and 2013 with 100% overall student satisfaction.

We were ranked 9th in the UK in The Guardian University Guide 2016. The last Research Assessment Exercise rated 93% of our research as world leading or internationally excellent. We consistently appear near the top of the UK rankings for research impact in both Physics and Space Science, and we are one of the top departments nationally for citation impact.

The Department is a member of the South-East Physics network (SEPnet), an alliance of Physics departments in the South-East region who work together to advance both teaching and research.

Undergraduate programmes include (BSc and MPhys) degrees in Astrophysics, Physics and Theoretical Physics. Taught postgraduate programmes (MSc and Postgraduate Diplomas) include Physics, Particle Physics, Astronomy/Cosmology and Frontiers of Quantum Technology.

Our innovative Research Placement programme incorporates our brightest undergraduates directly into our frontier research groups.
Current research in the department is organised into five groups:

- **The Astronomy Centre** (galaxy formation and evolution, clusters, numerical simulations and structure formation, testing cosmological models and physics of the early universe)

- **Atomic, Molecular and Optical Physics** (Quantum Field Theory in AMO, Electrons in Quantum Circuits, Trapped Ultracold Atoms, Theoretical Quantum Optics, Molecular Physics Laboratory, Single-Ion Cavity-QED, Ion Quantum Technology)

- **Experimental Particle Physics** (the ATLAS Experiment, the nEDM Experiment, and the SNO+ and NOvA neutrino experiments)

- **Theoretical Particle Physics** (Particle Cosmology, Superstrings and Quantum Gravity, Beyond the Standard Model, Quantum Field Theory LHC and flavour physics phenomenology)

- **Materials physics** (Structure-property relationships in 1D and 2D structures such as carbon nanotubes and graphene)
DEPARTMENT OF MATHEMATICS

The Department of Mathematics is a highly research-active department with internationally renowned experts in different fields of applied mathematics.

The research profile of the department has recently been remodelled as part of an overall strategy to develop the existing strong parts of applied mathematics with the result that we can now boast international excellence and leadership in all research areas that we now cover.

Mathematics achieved a strong result in the 2014 Research Excellence Framework (REF) for output, within which 95.7% of our research activity was rated as world-leading, internationally excellent or internationally recognised.

The Department of Mathematics currently has 22 faculty divided into seven research areas: Analysis and PDEs including Financial Mathematics, Mathematics Applied to Biology, Mathematical Physics, Numerical Analysis and Scientific Computing, Geometry and Topology, and Probability and Statistics.

Research in Mathematics at Sussex is currently funded by international and national grants. The Department coordinates an H2020 Innovative Training Network and is partner of another Innovative Training Network. The Leverhulme Trust funds two research projects. EPSRC funds several PhD positions as well as a first grant. The Icelandic Research Fund also contributes to the activities of some of our researchers. We have recently organised a number of specialised meetings and conferences hosting distinguished researchers supported by ITNs, the Newton Institute and the London Mathematical Society.

Undergraduate programmes include (BSc and MMath) degrees in Mathematics, Mathematics with Finance, Mathematics with Economics and Mathematical Physics. Taught postgraduate programmes (MSc and Postgraduate Diplomas) include Financial Mathematics, Mathematics, and Data Science.

In 2015–16, the Department had more than 350 undergraduate students, 64 MSc students, more than 50 PhD students and 2 research fellows.

Mathematics at Sussex was ranked 21st in the UK in The Guardian 2017 league table. It also repeatedly scores well in the UK National Student Survey.
Academic structure

Science
- School of Mathematical and Physical Sciences
  - Mathematics
  - Physics and Astronomy
- School of Engineering and Informatics
  - Engineering and Design
  - Informatics
- School of Psychology
- School of Life Sciences*
- Brighton and Sussex Medical School
  (Joint with University of Brighton)

Social sciences
- School of Business, Management and Economics
  - Business and Management
  - Economics
  - SPRU – Science Policy Research Unit
  - International Summer School
- School of Global Studies
  - Anthropology
  - Geography
  - International Development
  - International Relations
- School of Education and Social Work
  - Education
  - Social Work

Arts and humanities
- School of Media, Film and Music
  - Media and Film
  - Music
- School of English
- School of History, Art History and Philosophy
  - American Studies
  - Art History
  - History
  - Philosophy
- Sussex Centre for Language Studies

*No formal department structure
The University has a long tradition of engaging with business and the community, through work in the Sussex Innovation Centre, public lectures and service to the community.

The School has a number of partnerships with local businesses and provides advice to government agencies, as well as operating an extensive public outreach programme through public events and schools programmes.

Through our well-established professional placements scheme, we have developed connections with a wide variety of organisations and governmental departments all over the world.

On campus, the Sussex Innovation Centre is a recognised centre of excellence in business incubation, with over 40,000 square feet of flexible accommodation providing a thriving business environment for over 70 high-growth companies. Its wholly owned subsidiary, University of Sussex IP, was established in 2001 with the aim of identifying, protecting and exploiting inventions and ideas arising from its research activities.

Research and Enterprise at Sussex embraces the emerging needs of businesses and other organisations, both regionally and internationally.

For more information, visit www.sussex.ac.uk/business
The Sussex campus

Sussex has one of the most beautiful campus locations in Britain. Situated in rolling parkland on the edge of the lively city of Brighton & Hove, the campus combines award-winning architecture with green open spaces.

Designed by Sir Basil Spence, the buildings that make up the heart of the campus were given listed-building status in 1993. Falmer House is one of only two post-war educational buildings in the UK to be Grade I listed in recognition of its exceptional interest.

The campus is undergoing sustained investment and development to support Sussex’s academic mission with new teaching buildings, new student residences, refurbishment of several teaching buildings and the library, and the reopening of the Attenborough Centre for the Creative Arts.

Detailed planning of a transformative Life Sciences building is well under way.

Take a virtual campus tour at www.sussex.ac.uk/aboutus/campus
THE UNIVERSITY’S LOCATION

The University campus is located at Falmer, on the outskirts of Brighton & Hove, and is just 55 miles/90 kilometres from London. Frequent trains from central London take as little as 50 minutes to Brighton & Hove, with a quick nine-minute connection to Falmer to reach campus. London Gatwick airport is only 30 minutes from Brighton, and London Heathrow is just over an hour’s drive away.

BRIGHTON AND THE WIDER REGION

The city of Brighton & Hove has much to offer students, and also offers a quality of life for young families that is hard to match. As well as a fabulous variety of shops, restaurants and pubs, the city also has a range of good schools and a very relaxed and tolerant atmosphere.

Brighton has a truly diverse cultural scene with a wealth of theatres, cinemas and galleries. From pre-West End premieres at the Theatre Royal to the variety of experimental fringe productions staged throughout the year, and of course the famous Brighton Festival every May, there is plenty on offer.

The historic market town of Lewes is also close to campus, and many members of staff choose to live there because of its wide choice of housing and excellent schools.
The appointment process and how to apply

**PROCESS OF APPOINTMENT**

This appointment is open to internal applicants only, from senior members of the academic staff, normally at professorial level.

Applications should consist of a covering letter, full CV detailing relevant academic qualifications, employment history and achievements relative to the role. Applicants are also asked to complete the equal opportunities monitoring form which will only be used for statistical monitoring purposes. Where candidates have particular requirements if invited to interview, this should be stated in their covering letter. Applications should be addressed to Professor Adam Tickell, Vice-Chancellor and either emailed to Ms Jane Summerville, the Director of Human Resources at j.summerville@sussex.ac.uk or delivered to the Human Resources Office, Room 338, Sussex House.

The closing date for applications is Tuesday 25th October 2016 at midday.

Shortlisted candidates will be invited to an interview, to be held on Monday 21st November with an Appointing Committee chaired by the Vice-Chancellor.

The University values diversity and is committed to promoting equality and diversity, providing an inclusive and supportive environment for all. The University aims to ensure that job applicants and members of staff are treated solely on the basis of abilities and potential, regardless of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, sexual orientation, trade union membership or non-membership, socio-economic background or any other inappropriate distinction.

The University of Sussex has been awarded an Athena Swan Bronze award in recognition of its commitment to advancing the careers of women in science, technology, engineering, maths and medicine (STEMM) employment.

**TERMS OF APPOINTMENT**

The successful applicant will be expected to hold a senior academic post. The appointment as Head of School will be for an initial term of five years, renewable to a maximum of ten years.

The role will be based at Sussex and the remuneration package will be commensurate with the significance of the appointment and the calibre of the successful applicant.