Candidate Information Pack

Appointment of:

Professor / Reader of Pure Mathematics

The Faculty of Science, Agriculture and Engineering
The Post

The School of Mathematics, Statistics and Physics is seeking to appoint a high calibre scholar with an outstanding, internationally recognised research record and demonstrable commitment to providing an excellent educational experience. The post is open to areas of pure mathematics that complement or extend existing expertise in the School, and in particular to the areas of algebra and/or geometry, broadly construed. Applicants should have a vision for the future of pure mathematics within the School of Mathematics, Statistics and Physics. In line with our strategy to build cohesion across our broad disciplinary base, candidates who can promote links with other disciplines, the School’s interdisciplinary themes or Newcastle University Centres of Research Excellence (NUCores) are particularly encouraged to apply.

Successful applicants will be involved in undergraduate teaching on the BSc and MMath programs offered by the School. They are expected to deliver an excellent student experience through innovative teaching and assessment methods, and play a key role in the continual evolution of our curriculum and programme portfolio to meet the needs of students and employers.

Candidates should have a proven capability to attract and manage substantial research funding awards and be particularly familiar with the UK and European funding landscape. They should moreover have significant experience in the supervision of PhD students and postdoctoral researchers.

Newcastle University is committed to equality, diversity and inclusion and dedicated to building a diverse community. We particularly encourage applications from under-represented groups in Pure Mathematics and those who can act as role models for our values of equality, diversity and inclusion.

Specific responsibilities:

Research: The successful applicant will enhance the scientific reputation of the School and University by:

- pursuing a vigorous program of high quality research in an area of pure mathematics.
- promoting collaborations within the pure mathematics group and/or with other academics within the School and/or University.
- publishing in highly-regarded international mathematical journals, books or other appropriate outlets.
- presenting research results at relevant conferences and at departmental seminars/colloquia in the UK and abroad.
- seeking out funding opportunities and apply for and secure substantial research income.
- supervision of postgraduate research students and seeking to attract research assistants and fellows to the School.
- contributing to the academic life of the pure mathematics group and the School in general by participating in and organising research events and activities.
- Contributing to a positive and inclusive research culture.
In addition to the above, appointments a professorial level will be expected to:

- take an active interest in the work of other academics in the pure mathematics group, and to mentor, support or collaborate as appropriate.
- contribute significantly to the leadership, management and strategy of the School.

Teaching: The successful candidate will contribute to the delivery of a high-quality educational program by:

- the preparation and delivery of lecture courses, including lectures, problem classes and tutorials.
- developing teaching materials with appropriate regard to new technologies and time-tested teaching methods.
- the setting and marking of examination papers in accordance with the School’s agreed procedures.
- supervising undergraduate projects in pure mathematics.
- supervising postgraduate students, including scientific guidance and advice on the preparation of dissertations.
- acting as a personal tutor to provide academic guidance to undergraduate students.
- pro-actively seeking to improve the student experience and opportunities from entry through to graduate outcomes.
- contributing to the continual development of the taught curriculum and programme portfolio.

Administration: The successful applicant will carry out administrative or managerial tasks related to their responsibilities in teaching and research, and any others as assigned by the Head of School or the School Executive Board.

**Person Specification**

<table>
<thead>
<tr>
<th>Knowledge, Skills and Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>
Candidate Information Pack
17761 – Professor / Reader of Pure Mathematics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>A strong track record of leading research projects, including the successful supervision of PhD students and postdoctoral researchers;</td>
</tr>
<tr>
<td>5</td>
<td>Evidence of making a significant contribution to an academic unit, for example, through leadership, management or citizenship activities (Desirable).</td>
</tr>
<tr>
<td>6</td>
<td>The capacity to lead or contribute to innovative research and teaching programmes, either within mathematics or beyond;</td>
</tr>
</tbody>
</table>

**Attributes/Behaviours**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ability to take on a leadership role within the School;</td>
</tr>
<tr>
<td>2</td>
<td>A demonstrated commitment to fostering a positive research culture, including supporting early career colleagues and promoting equality, diversity and inclusivity;</td>
</tr>
<tr>
<td>3</td>
<td>Excellent collaborative, interpersonal and team-working skills;</td>
</tr>
<tr>
<td>4</td>
<td>A clear, ambitious yet realistic vision for their academic activities which represent a good fit with the aims of the School;</td>
</tr>
<tr>
<td>5</td>
<td>Ability to engage with and respond enthusiastically and positively to students and to engage pastoral skills when appropriate.</td>
</tr>
</tbody>
</table>

**Qualifications**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A Phd in mathematics or a closely related field;</td>
</tr>
<tr>
<td>2</td>
<td>A higher education teaching qualification or equivalent experience.</td>
</tr>
</tbody>
</table>
The key areas of activity of all academic staff, including professors, at Newcastle University are summarised in the Academic Job Summary http://www.ncl.ac.uk/hr/recruitment/role-profiles.php. The information below is designed to build upon the Academic Job Summary and specify the levels of expertise and contribution expected of professors. Progression to professorial status at Newcastle is governed by the Procedure and Criteria for Promotion to a Personal Chair.

Professors at Newcastle University are leaders within the academic community. They have a national and international reputation in their academic field and demonstrate leadership both within the University and externally, with recognition often extending beyond academia into relevant policy and practice communities. Like all academic members of staff, unless explicitly specified to the contrary, professors are expected to do research, and expected to do teaching. Engagement is not normally a separate third activity, but in the main derives from research and teaching activities. The University engages with civil society as an educational and research institution, and therefore the expectation is that engagement activities will be carried out not just in the sense of good citizenship, but specifically based on academic expertise and experience.

Professors may or may not have line management responsibilities such as those carried out by the Head of an Academic Unit. However, it is expected that all professors should provide leadership within their academic discipline and make an appropriate contribution to the management of their academic unit, faculty and/or to the University.

Depending on the academic focus of the particular role performed by an individual, the following activities and achievements, viewed within the context of their academic discipline, are illustrative of the normal level of expectations for those holding a professorship at Newcastle University:

**Research and Innovation**
- Achieve regular outputs, of high impact, in top media for the relevant discipline; this is likely to include publications in top-tier, high-impact journals and in some disciplines research monographs, but may also include exhibitions, performances, commissioned research reports, and a range of other outputs.
- Achieve consistently high levels of research income from peer-reviewed funding sources.
- Lead and direct a substantial programme of research (which may include research groups and/or facilities) often including responsibility for the mentoring and development of academic colleagues.
- Achieve and maintain an international reputation in the discipline and, where appropriate, contribute to societal challenge themes.

**Teaching and Learning**
- Publish highly regarded text-books and other teaching materials.
• Lead in the design and implementation of programme, curricular and related innovations that make a major positive contribution to the student learning experience and the academic and financial success of the academic unit.
• Establish and maintain national or international eminence through the exercise of leadership within professional bodies and participation in policy circles. Create and/or lead substantial, multi-institutional, regional, national or international educational programmes or facilities.
• Make a sustained, high-quality contribution to pedagogic research.

Engagement

• Make a major contribution to intellectual, cultural, social or economic life at regional, national, or international level.
• Lead and direct substantial and financially positive commercial activities and collaborations.
• Play a leading role in the development and/or application of public or professional policy or practice at national, European or international levels.
• Develop and maintain innovative and/or creative partnerships with external bodies (public, private or voluntary), to address societal challenges in line with University strategy.

Professorial Band Profiles

In order to determine professorial pay in a transparent and equitable manner, the University references a three band pay structure within the professorial grade. This structure is designed to appropriately reflect and reward continuing scholarly attainment and achievements, the exercise of academic leadership, and contributions made to the life, work and sustainability of the University community.

The band profile descriptions below are used in assigning all Newcastle professors to an appropriate point on the professorial scale.

Band 1

Band 1 is the normal entry band for newly promoted Newcastle professors. It is also sufficiently broad to allow progression within the band as professors develop their career and standing.

For appointment or promotion to this level, a professor will have a national and international reputation in the relevant discipline with established evidence of academic excellence. The detailed criteria are set out in the University’s professorial promotions criteria.

Professors who achieve movement to a higher point within Band 1 will be demonstrating continued development in the role as measured against the generic activities expected of professors (described above) and the particular requirements of the role in question.
Band 2

Professors who reach this band are working at a level significantly higher than the entry level for a Newcastle professor. Individuals have a sustained, distinguished record of internationally-recognised achievement in their field; their expertise is in significant demand from partners within or beyond academia and/or they are asked to fulfill major international roles within the discipline.

They will be national leaders in their field and have established themselves as an acknowledged international authority. Their academic work is likely to have made a significant and lasting mark.

Some professors may progress from Band 1, their role and contribution having grown sufficiently to be recognised in this way. Senior lecturers or readers are not normally promoted directly to Band 2. External appointments are only made to Band 2 where the professor is already well established at another institution or working at a comparable level outside academia.

Band 3

This band is reserved for the small number of professors who bring great prestige to the University through their sustained record of academic achievement at the highest international level. This may take the form of leadership of world-leading research, election to the most prestigious learned societies, a leading role in high-impact interdisciplinary collaborations with a broad range of academic, industrial or governmental partners, or a position of unequivocal international authority. Their work will be recognized internationally as outstanding and they will have made a formative and lasting contribution to their field of study.

Band 3 professors may have progressed from Band 2, or in exceptional circumstances may have been appointed directly to this band. External appointments are only made to Band 3 where the professor has achieved international status of the highest level. Authority from the Vice Chancellor is required to appoint to Band 3.

Pay Ranges

Ranges are based on professorial pay scale effective from 1 August 2021)

Band 1: £67,585 - £74,225
Band 2: £75,932 - £100,924
Band 3: £103,080 +
**Readership Pay scale** (effective from 1 August 2021):

**Grade IA**

<table>
<thead>
<tr>
<th></th>
<th>£</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>£61,818</td>
<td></td>
<td>Main scale points</td>
</tr>
<tr>
<td>51</td>
<td>£63,668</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>£65,933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>£67,585</td>
<td></td>
<td>Discretionary points</td>
</tr>
<tr>
<td>54</td>
<td>£69,275</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>£70,913</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>£72,589</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Annual Pay Review Process**

Cases for pay progression will be considered through the Professorial Pay Review process, which commences in February each year, with decisions taking effect the following 1 August.
The School of Mathematics, Statistics and Physics

The School of Mathematics, Statistics and Physics has a long and distinguished history which can be dated back to the 1871 opening of the Newcastle College of Physical Sciences, one of the foundling subjects that evolved into the current Newcastle University. The School is based in the Herschel Building and Herschel Annex located on the city-centre campus. Since 2017 the School has amalgamated mathematics and statistics with physics, with the latter having been restarted since its closure in 2005. The School is undergoing an ambitious phase of growth and diversification, having grown from around 50 FTE academic staff in 2017 to 67 at present.

The mission statement of the School is two-fold:

- To conduct world-leading research in mathematics, statistics and physics, and seek opportunities to use our research expertise in support of business, industry and policy-makers.
- To deliver a portfolio of undergraduate and postgraduate degree programmes in mathematics, statistics and physics that address the needs of local, national and international student populations, and which provide an outstanding educational experience for all.

We have a vibrant, diverse and relatively young demographic of academic staff. Most of our staff are in the first half of their career, as we have expanded the School rapidly by appointing rising stars over the last 10 years. This investment is ongoing; indeed, in the next year we expect to be joined by thirteen new academic recruits. Promoting equality, inclusivity, diversity and collegiality is at the centre of our School’s culture, and our recent award of Athena SWAN Bronze award demonstrates our commitment to embedding good practice and developing an inclusive culture that values all staff.

The school delivers a portfolio of BSc and integrated Masters programmes centred around mathematics, statistics and physics, with around 800 students on these programmes. We are highly collaborative in our teaching, with shared and service teaching across computing and data science, business studies, engineering and medical sciences. We are developing plans to expand our mathematical sciences curriculum around data science, quantum computing and biological/medical applications. Through our world-renowned e-Learning Unit we integrate innovative technologies for e-assessment and digital content, most notably the open-source e-assessment software Numbas which is used around the world in academia, schools and companies. We have a thriving multi-national community of almost 100 postgraduate research students across our PhD, MPhil and MRes programmes.

We have strong disciplinary expertise in our four academic groups — applied mathematics, physics, pure mathematics and statistics — and our groups contribute to interdisciplinary activities in areas such as data science, quantum science and the life sciences. We performed strongly in the UK Research Exercise Framework 2014, being rated 11th out of 53 on GPA ranking and 10th out of 53 for 4* quality in mathematical sciences. Our research is enhanced by our strong involvement with the Joint Quantum Centre Durham-Newcastle, the National Innovation Centre for Data and the Alan Turing Institute, and powerful experimental and computational research facilities. We also have a dedicated business engagement unit NU Solve within the School, through which we engage with industry and government partners on knowledge transfer and training activities.
The Pure Mathematics Group

The pure mathematics group consists of 15 permanent academic colleagues including two professors, three readers, five senior lecturers and five lecturers. Most research of the group falls into the broad areas of algebra and analysis.

The group has a long-standing reputation for outstanding research in analysis. The main research topics in analysis are operator theory, operator algebras, complex function theory and the interplay between these areas. This includes C*-algebras and Banach algebras, moment problems and connections to real algebraic geometry, and applications of operator theory to complex analysis.

Research in algebra is focused on geometric and combinatorial group theory and on representation theory. In group theory this includes questions of theoretical complexity, decision problems, the study of automorphism groups, surface groups, buildings and knot theory and also extends into differential and algebraic geometry as well as the K-theory of C*-algebras. Research in representation theory includes Lie theory, algebraic groups, modular representation theory, pseudo-reductive groups, Kac-Moody algebras, quantum groups in particular quantum symmetric pairs, Hecke algebras and Yangians.

The group hopes to grow research in differential or algebraic geometry in the future.

Members of the pure mathematics group actively seek out applications and collaborations outside of pure mathematics, including chemistry, physics, computing, quantum information and engineering.

In recent years, research of the group has been supported by Engineering and Physical Sciences Research Council, The Leverhulme Trust, The Royal Society and the London Mathematical Society.

At present the group includes about 10 PhD students who are funded by the EPSRC Doctoral Training Partnership (DTP), the School, the University, or external sources. The group is a member of the MAGIC consortium for doctoral training.

The group has an active seminar culture with two local seminar series, one in Algebra & Geometry and the other on in Analysis. Additionally, members of the group are actively involved in the regional seminar series ARTIN (Algebra and Representation Theory in the North), NBGTT (North British Geometric Group Theory) and NBFAS (North British Functional Analysis). The School greatly values the exchange of ideas and external collaborations and supports this with funds for research visits to and from Newcastle. Colleagues are encouraged to be active within the professional community. Several members of the group have editorial roles, or have acted as officers or volunteers for the LMS, EPSRC or other organisations.
The Faculty of Science, Agriculture and Engineering (SAgE)

The Faculty of Science, Agriculture and Engineering’s (SAgE) has more than 8,000 students, 1,200 staff and an annual turnover of £150M, making us one of the biggest Faculties in the UK working across science and engineering. We have strong international links and lead the University’s Singapore presence.

SAgE undertook a major re-organisation in August 2017 moving from ten to five academic units; bringing together hubs of disciplinary excellence at our Newcastle campus in key areas; Computing, Mathematics, Statistics and Physics, Natural and Environmental Sciences, and Engineering, which is also the mainstay of our Singapore campus operation. We have grown our footprint in Singapore over the last four years with the addition of the Newcastle Research and Innovation Institute (NewRIIS) - a >1000 m² space for postgraduate and staff researchers, CPD training and a base to work with industry alongside an existing operation run jointly with the Singapore Institute of Technology, teaching more than 800 undergraduate students.

We have a strong research presence with national and global leaders in key areas including: The Future of Energy (discovering and developing efficient and sustainable generation, storage and delivery of clean, secure and affordable energy for all), and Industry & Society (using data to revolutionise the way we live); Future Mobility (changing the way we move: from prosthetics to propulsion); Environmental Sustainability & Resilience (understanding our relationship with the environment to enable a secure future for all); Bio-Systems (understanding and manipulating biological systems for the benefit of society and the environment). The existing success of SAgE in these areas is currently demonstrated through our leading role in key components of the UK’s research infrastructure such as the National Centre for Energy Systems Integration, the National Centre for Subsea and Offshore Engineering the National Innovation Centre for Data, National Centre for Innovation in Rural Economy, and the UK National Gear Metrology Laboratory. The £18m GCRF Water Security and Sustainable Development Hub highlights our interdisciplinary work – led from the SAgE Faculty, working with colleagues in the Faculty of Humanities and Social Sciences.

We are members of major consortia such as the £65M Faraday Battery Institution, the UK Energy Network Supergen, the Centre of Excellence for Sustainable Advanced Manufacturing and the Alan Turning Institute and have been designated an Academic Centre of Excellence for Cyber Security Research. Our standing in driving electrification and decarbonisation is recognized through our leadership of the recently announced Driving the Electric Revolution initiative with 4 regional industrialization centres and more than 30 partner research and technology organisations.

We host the National Green Infrastructure Facility and the Newcastle Urban Observatory, the largest open real-time urban environmental monitoring network in the world with over 2 billion data points collected and processed to date. We offer unrivalled opportunities for deploying findings from our research at scale with two experimental farms allowing us to tackle the most pressing problems in food security and land management. The deepest research borehole in the country, located on Newcastle helix is driving innovations in low carbon geothermal energy research and jointly with our
strategic partner, Northumbrian Water, we operate the unique BEWISE facility which allows us to test novel biotreatment technologies in fully instrumented test beds on an operating wastewater treatment plant. This is key to translating innovations from our fundamental research to field-proven real world solutions.

Our discipline-based discovery-led research tackles some of the biggest challenges faced by the environment, economy and society. The Faculty has significant industry and policy links facilitating our impact; for example we have ‘Principal Partner Status’ with Siemens, a longstanding partnership with Northumbria Water Group as well as strong partnerships with Procter and Gamble, multinational software company Red Hat, domestic appliance giant Dyson and global engineering consultancy Arup. We are also the strategic science partner of the Food and Environmental Research Agency and provide the Chief Scientific Advisor to the Department for Transport. Our researchers work closely with significant international bodies including the IPCC and the IUCN, driving policy to mitigate climate change and biodiversity loss. We also enjoy EPSRC Tier 1 Partnership Framework status.

The Faculty’s continued success and planned growth builds on the region’s and University’s history of world leading innovation. We aim to further develop our research strength in our identified key areas and integrate critical aspects of the latest research in these areas into our taught offering in close partnership with industry leaders and colleagues in the Faculties of Medical Sciences, and Humanities & Social Science. The re-organisation of SAgE opened opportunities for integrated strategic investment allowing notable strides forward in delivering our vision. We have, for example, committed significant strategic investment in a £68M re-development of our Stephenson Building. The project will create a fresh focus for Engineering at Newcastle offering flexible accommodation for research, engagement and education in a way that is mutually supportive and enhancing. This represents an underlying ethos of our vision, unusual amongst our peers, to fully integrate key functions across the Faculty. Our established Singapore presence also represents an exciting opportunity to further grow our international presence and activity from South East Asia.
Introduction to Newcastle University

Newcastle University is a thriving international community of 29,600 undergraduate and postgraduate students from over 140 countries worldwide, studying at our main campus in Newcastle and at Newcastle University in Singapore and Newcastle University Medicine Malaysia.

Ranked in the top 150 of world universities (134th in the QS World University Rankings 2022 and 146th in the Times Higher Education World University Rankings 2022), we aspire to be a people-focused university that harnesses academic excellence, innovation and creativity to provide benefits to individuals, to organisations and to society as a whole. As a member of the Russell Group of research-intensive universities in the UK, we have a world-class reputation in the following thematic areas: ageing and health, cities and place, culture and creative arts, data, and One Planet.

The University traces its origins to 1834 and the need to address the economic, health and social demands of an industrial city. We are located in, and have contributed to, a region with a tradition of invention and innovation spanning more than 200 years, from the opening of the first permanent public railway line in 1825, through the birth of Pop Art in the 1940s to obtaining, in 2017, the world’s first licence for a pioneering technique to eradicate inherited mitochondrial disease.

The University’s main campus is located in the centre of Newcastle upon Tyne, the cosmopolitan capital of the North East of England. The city enjoys a worldwide reputation for the quality of its cultural and social life.

Academic Excellence

In 2022 we rank in the top 200 for Education in the Times Higher Education World University Rankings by Subject. A ringing endorsement of our long tradition of excellence in teaching.

The 2014 Research Excellence Framework (REF) placed Newcastle University 16th in the UK for Research Power and the vast majority of our research (78 per cent) was assessed to be world-leading or internationally excellent. We also ranked:

- 4th amongst UK medical schools for Clinical Medicine Research Intensity.
- 3rd in the UK for English (1st for impact), and in the top 12 for Geography, Architecture and Planning, and Cultural and Media Studies research quality.
- 1st in the UK for Computing Science research impact, 3rd in the UK for Civil Engineering research power and 11th in the UK for Mathematical Sciences research.

Our education, outreach, stewardship and research is dedicated to tackling some of the most complex and pressing issues we face. In 2021 we were ranked 15th in the world for our
‘university impact’ in *The Times Higher Education* Impact Rankings, highlighting our global influence towards achieving the UN’s sustainable development goals (SGDs).

Our ‘triple-crown’ accreditation status also places us among the top business schools in the world.

There are a number of characteristics that have defined us over the years and which continue to be prominent features of our Vision. These include our clear focus on education and research that is of direct relevance to our city and region (we are a member of the Civic University Network), a culture of openness and transparency and longstanding commitments to equality, diversity and inclusion and academic freedom. We are a signatory of the Magna Charta Observatory and are a contributing institution in their Living Values project which includes a focus on inclusive education. We hold an institutional Athena Swan Silver award and are working towards Race Equality Charter accreditation. We are also proud members of the Business Disability Forum and a Stonewall Global Champion. In 2020 we were the first University to become a member of the Employer with Heart charter. Also in 2021 we were recognised in the *Times Higher Education* Global Impact rankings as 15th in the world for our activities in relation to the Sustainable Development Goals, were 11th in the world for our work on Sustainable Cities and Communities, and 2nd for responsible consumption. We have a proud history of championing social and environmental justice now embodied in our flagship Education building, the Frederick Douglass Centre, and we are dedicated to embedding it in our research, education and engagement activities.

**Globally Ambitious**

We have extended our reach beyond the UK by establishing a presence in Singapore and Malaysia. Newcastle University in Singapore, in partnership with the Singapore Institute for Technology, has a particular focus in Engineering and is actively exploring online education.

Newcastle University Medicine Malaysia (NUMed), opened in 2011, made Newcastle the only UK University with fully owned medical campus overseas. NUMed delivers degrees in medicine and biomedical sciences to 800 students.
Investment in People

The University has a strong record of accomplishment and is proud of our achievements to date in our investment in people. As a people-centric organisation we have and continue to invest in our colleagues:

- Our Culture & Values work aims to bring the university values and guiding principles to life through a range of activities. 2021 saw the launch of our Leading through values programme which will be rolled out to all leaders over the next 3 years. Equally, Managers Essentials provides a range of knowledge and skill workshops for those new to management and leadership.

- A growing focus on Research Culture which following the appointment of a Dean of Research Culture in 20XX and extensive consultation has a Roadmap for further action. Our full commitment to the Concordat and the NUAct Fellowship Scheme (Newcastle University Academic Track) - Investing £30 million to build diverse community of 100 NUAcT fellows over 5 years;

- NUCoRES - We deliver important research missions through a growing portfolio of Newcastle University Centres of Research Excellence (NUCoRES). Our Research Strategy sets our ambition for the growth of people and resources. NUCoRES represent priority areas where this growth will occur.

- We undertake a range of accreditations to continually enhance and improve our practice, in particular Athena Swan and Race Equality Charter. We are members of Stonewall and Disability Forum and we have a range of active colleague networks to support and engage colleague across the University.

- February 2021 saw the introduction of Inclusive Futures, a new leadership programme offering colleagues from ethnically minoritised groups the opportunity to develop their leadership skills and challenge their thinking about what it is to be a leader from an underrepresented group in the University, in the sector and in the city. 2022 will see the second cohort of the programme and plans for the future include extending the programme to other protected characteristics.

- The University is committed to our Apprenticeship scheme, supporting both newly recruited apprenticeship roles and existing colleagues undertaking apprenticeship programmes. The University engages with a range of local colleges and providers to deliver the programmes and we currently have over 100 colleagues working on apprenticeships across the institution;

- We have invested in significant resources in training and development across a range of teams. We offer a comprehensive suite of development programmes covering technical, soft skills, coaching and mentoring and management skills available online and face to face.
Investing in world-class facilities

The University’s financial position is strong: over the past few years we have invested heavily in our city centre campus and will continue to do so over the coming years. Our investments include:

- The phased refurbishment of the Armstrong and Henry Daysh Buildings (for Humanities and Social Sciences Schools as well as the heart of our graduation ceremonies and events);
- The development of our flagship, £58m Urban Sciences Building (housing our School of Computing);
- The development of a 1,277 bed Park View Student Village;
- Significant investment in IT systems to support People Management: outstanding investment (£20m) in our infrastructure for digital connectivity ('the network') that, over the next 3 years, will build a secure, agile, extensible foundation for all the digital services consumed by the 40,000 people who routinely connect to our network. For Newcastle University, this will connect everything and everyone everywhere all the time.
- A ground-breaking investment in a new digital admissions system, delivered using agile methods, Cloud-first, using Low-code/No-code technology. This is a model and ‘pipe-cleaner’ for digital deliveries of the future.
- A solid and dependable set of up-to-date Core Digital Services, including key administrative systems like our World-first upgraded SAP ERP, our cloud-based HR, Virtual Learning Environment and Research Management systems and the sector-leading adoption of Microsoft 365, Teams, Yammer, and OneDrive services within a single cloud-based Directory Service for all staff and students (globally) that removes barriers to collaboration and connectivity within our community for both education and research.
- An industry-leading investment in cyber-security to keep everyone and our intellectual property safe, secure and resilient in an increasingly uncertain world.

- A new medical sciences education building;
- The refurbishment of the Claremont Complex;
- We are also working with partners in health and social care to develop a master plan for the Campus for Ageing and Vitality, on the site of the former Newcastle General Hospital;
- Our £25m Sports Centre enables students to participate in sport during their time at university and plays a vital role across the entire student lifecycle;
- In partnership with Newcastle City Council and Legal & General, we are creating Newcastle Helix, a £350m urban regeneration project which is the largest of its kind in the UK;
• The investment of £34m in the Frederick Douglass Centre – a flagship educational building with student experience at its heart, named in honour of the 19th century social reformer and abolitionist who was associated with the Summerhill area of the city next to the Helix site;

• The Catalyst Building – a £44m bespoke headquarters for our National Innovation Centres for Ageing and Data and the National Institute for Health Research Innovation Observatory – opened in Autumn 2019;

• In 2020 we also received approval for the National Innovation Centre in the Rural Economy. Together with the Urban Sciences Building, these innovation centres will create a full-scale demonstration site or “living laboratory” in the heart of Newcastle that will provide real-world solutions to the issues facing modern and growing cities that businesses and communities can get involved with and help to shape;

• Investment in cultural venues linked to our academic excellence including The Hatton Gallery is part of our world-class School of Arts and Cultures;

• The Great North Museum: Hancock (GNM) is home to extensive natural history, archaeology and ethnography collections;

• We also have many cultural partners in the region and nationally, including Northern Stage (an award-winning theatre based on our city centre campus), Seven Stories (the National Centre for Children’s Literature), and the National Trust.
University Organisation & Structure

Led by the Vice-Chancellor and President, Professor Chris Day, the other senior leaders of the University include our Deputy Vice-Chancellor and Provost, Professor Julie Sanders, and four cross-cutting Pro-Vice-Chancellors (PVCs). They provide strategic leadership on a University-wide basis for each of our core academic functions: Education (Professor Tom Ward); Research Strategy & Resources (Professor Brian Walker); Engagement & Place (Professor Jane Robinson); Global (Professor Richard Davies).

Delivery of the core academic functions occurs in our three faculties, each of which is led and managed by a PVC: Faculty of Humanities and Social Sciences (HaSS; Professor Nigel Harkness); Faculty of Medical Sciences (FMS; Professor David Burn); Faculty of Science, Agriculture and Engineering (SAgE; Professor Stephanie Glendinning). The three Faculty PVCs report to the Deputy Vice-Chancellor and Provost.

The Professional Service functions are led and managed by the three Professional Service budget-holders: the Chief Operating Officer (Adrienne McFarland); the Executive Director of Finance (Nick Collins); and the Registrar (Dr Colin Campbell), all of whom are members of the Executive Board. Executive Director of External Relations (Justin Cole) is also a member of Executive Board. The Faculty professional service functions are led and managed by the three Directors of Faculty Operations (DoFOs) who report directly to the Faculty PVC.

Each Faculty consists of a number of academic units, typically schools or research institutes, each led and managed by a Head. Currently, there are 21 academic schools (including Malaysia and Singapore), 12 research institutes and a further 39 research centres.

The University’s Vision and Strategy, launched in October 2018, comprises four core strategies: Education, Research, Engagement and Place, and Global. Each of these is supported by a series of strategic enablers that provide a focus for a range of underpinning activities.

Distribution of Academic Schools and line-managed Institutes

<table>
<thead>
<tr>
<th>Humanities and Social Sciences</th>
<th>Medical Sciences</th>
<th>Science, Agriculture and Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture, Planning &amp; Landscape</td>
<td>Biosciences Institute</td>
<td>School of Computing</td>
</tr>
<tr>
<td>School of Arts &amp; Cultures</td>
<td>Translational and Clinical Research Institute</td>
<td>School of Engineering</td>
</tr>
<tr>
<td>Newcastle University Business School</td>
<td>Population Health Sciences Institute</td>
<td>School of Mathematics, Statistics &amp; Physics</td>
</tr>
<tr>
<td>Combined Honours and Philosophy</td>
<td>School of Biomedical, Nutritional and Sport Sciences</td>
<td>School of Natural &amp; Environmental Sciences</td>
</tr>
<tr>
<td>Education, Communication &amp; Language Sciences</td>
<td>School of Dental Sciences</td>
<td>Newcastle University in Singapore (NUIS)</td>
</tr>
</tbody>
</table>
School of English Literature, Language & Linguistics
Geography, Politics & Sociology
History, Classics & Archaeology
Newcastle Law School
School of Modern Languages
Humanities Research Institute
Institute for Social Science
Institute for Creative Arts Practice

School of Medical Education
School of Pharmacy
School of Psychology
NUMed (Newcastle University Medicine Malaysia)
National Innovation Centre for Ageing (NICA)

National Innovation Centre for Data (NICD)
National Innovation Centre for Rural Enterprise (NICRE)

Professional Services

The University’s central Professional Services are organised into three major budget areas as listed below. These work closely with the Faculty Professional Services as part of the ‘One University’ approach.

<table>
<thead>
<tr>
<th>Chief Operating Officer</th>
<th>Registrar</th>
<th>Executive Director of Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations Hub: NUIT</td>
<td>Academic Services Hub: Governance and Executive Office</td>
<td>Finance Hub: Corporate Finance</td>
</tr>
<tr>
<td>Estates and Facilities</td>
<td>Business Development and Enterprise</td>
<td>Financial Performance</td>
</tr>
<tr>
<td>People Services</td>
<td>Legal Services</td>
<td>Financial Services</td>
</tr>
<tr>
<td>NU Advancement</td>
<td>Research Strategy and Development</td>
<td>Procurement and Purchasing</td>
</tr>
<tr>
<td></td>
<td>Strategic Planning and Change</td>
<td>Internal Audit</td>
</tr>
<tr>
<td></td>
<td>External Relations</td>
<td>Funding Assurance</td>
</tr>
<tr>
<td></td>
<td>Academic Services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>International Office</td>
<td></td>
</tr>
</tbody>
</table>
Living and Working in Newcastle

Newcastle is a modern, vibrant city in the North East of England, rich in culture with a stunning cityscape and strong identity. It is a special place that rewards people who choose to visit, live, work and study here. Newcastle is also a leading city in tackling the climate emergency with a dedicated Net Zero Task Force and is one of only 4 cities in the UK to receive the top “A” grade from international climate research provider CDP, one of only 88 globally. Newcastle City Council and Newcastle University were amongst the first local authorities and universities to declare a climate emergency and commit to Net Zero carbon emissions, alongside Newcastle Upon Tyne Hospitals Trust who were the first healthcare organisation in the world to do the same.

Getting around
The city centre is easier to get around than many other urban centres as it is compact and quite flat, and most major landmarks are within a 20-minute walking distance. The modern, integrated transport system includes an extensive bus network, designated cycle lanes and the North East’s own underground train system, the Metro, to get around the city and region.

Newcastle is also well connected with the rest of the UK and beyond. The East Coast mainline provides direct access to London by train in less than three hours and Edinburgh in just over an hour, with trains running approximately every 30 minutes. The A1(M) motorway links the area to London, Edinburgh and other major UK cities, and there is an International Airport less than 15 minutes from the city centre.

Attractions
The city offers excellent shopping facilities including the Grainger Market, a unique indoor market which is home to local businesses and produce, as well as local shopping centres and high street chains. There are also plenty of restaurants, museums, galleries and cinemas.

Newcastle is a very green city, with swathes of open green space in Exhibition Park just north of the University campus, as well as the Town Moor, Nun’s Moor and Jesmond Dene. The city also lies in close proximity to the North East coastline and countryside, including the Northumberland coast and its historic castles, designated as an Area of Outstanding Natural Beauty, which are only 30 minutes’ drive to the north. To the west lies Hadrian’s Wall world heritage site, and south of the city is County Durham, where the ancient City of Durham is complemented by a heritage coastline and rural towns and villages.

The city centre is renowned for its stunning architecture with many fine buildings and streets including Grey Street, described by renowned architectural historian, Nikolaus Pevsner, as
‘one of the finest streets in England’. Once a busy industrial and commercial dockside, Newcastle’s Quayside is now packed with cafés, bars and restaurants from which to enjoy views of the River Tyne and its bridges.

Neighbouring Gateshead, on the south bank of the Tyne, is famed for its contemporary culture and iconic structures, including BALTIC, converted from a landmark industrial building in the 1990s and now a major international centre for contemporary art, the Sage Gateshead concert venue occupying a curved glass and steel building designed by Norman Foster, the Stirling Prize-winning Gateshead Millennium Bridge and Antony Gormley’s Angel of the North.

Sports fans are spoilt for choice in Newcastle, with regular top-flight football, rugby and basketball fixtures taking place in the city. Gateshead Stadium brings international athletics to the region, while the world-class Durham International Cricket Ground plays host to county, one-day international, Twenty20 and Test matches. Every year, the world’s largest half marathon, the Great North Run, attracts some 57,000 participants and many thousands more spectators.

**Living in the region**

Our region is one of the best-value places to live in the UK based on the average cost of living, and property is significantly more affordable than in many other parts of the country. From carefully restored Victorian terraces to contemporary city-centre apartments, semi-rural locations to seafront homes, the region offers a wealth of choice in accommodation.

Newcastle’s hospitals have an international reputation for excellence in health care, and the University works in close partnership with the Newcastle Hospitals NHS Foundation Trust. Our National Health services are some of the best in the country, and our hospitals – including the Royal Victoria Infirmary and the Freeman and Queen Elizabeth hospitals – are also significant employers. Education here also has a strong reputation, with a choice of excellent state and private schools, several FE colleges and of course world-class higher education provision.
How to Apply

Newcastle University now invites applications for the position of Professor / Reader of Pure Mathematics.

Applications should consist of:

- a full academic CV
- a cover letter outlining how you fit the person specification and the role (up to 2 sides).
- a 5-year personal plan (up to 2 sides) which is accessible to a STEM academic. This should articulate your vision and objectives in the role, and your plan for achieving these.

For further information and to apply for this position please visit: http://www.ncl.ac.uk/vacancies/

Informal enquiries may be made to the Head of School, Dr Nick Parker - nick.parker@newcastle.ac.uk or to the Director of Mathematics, Dr Stefan Kolb - stefan.kolb@newcastle.ac.uk

Appointment Timetable

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Date:</td>
<td>21.03.2022</td>
</tr>
<tr>
<td>Closing Date:</td>
<td>21.06.2022</td>
</tr>
<tr>
<td>Formal Interviews</td>
<td>06.09.2022</td>
</tr>
</tbody>
</table>

An artist impression of the planned Stephenson Building

Credit: NORR & PBlaging