

Job description

Post title and post number	Lecturer/Senior Lecturer/Reader - 52822
Organisation advertising Description	School of Physics & Astronomy, College of Engineering & Physical Sciences
Post number	52822
Full-time/Part-time	Full-time
Duration of post	Permanent
Post is open to:	Internal and external candidates
Grade	Grade 8 Lecturer / Grade 9 Senior Lecturer/ Reader <i>The level of appointment will depend on the skills/experience of the successful candidate</i>
Salary	Grade 8 - Starting salary £38,511 a year, in the range up to £45,954 a year, with potential progression to £51,702 a year. Grade 9 - Starting salary £47,328 a year, in the range up to £54,841 a year, with potential progression to £71,509 a year.
Additional information	For informal enquiries please contact Professor Paul Newman on email paul.newman@cern.ch or Professor Phil Allport on email allport@cern.ch , telephone: +44-1214144717
Terms and conditions	Academic Teaching Staff (non-clinical)
Closing date	29 th May 2015

Job summary

To create and disseminate knowledge at a senior level through initiating and conducting significant original research in semiconductor detector development for particle physics and its applications and through developing and delivering undergraduate and postgraduate programmes in physics.

Main duties

Research

To plan and carry out research, using appropriate methodology and techniques. This may include, where appropriate to the discipline:

- Pursue personal research including developing research ideas and winning support, including financial support.
- Plan, publish and/or execute high quality research
- Project manage research activities, and/or supervise other research staff
- Present findings in high quality publications and conference proceedings
- Develop novel methodologies and techniques appropriate to the type of research being pursued
- Supervise and examine PhD students, both within the institution and externally
- Provide expert advice to staff and students within the discipline
- Apply knowledge in a way which develops new intellectual understanding
- Lead sustained high value impact activity in knowledge transfer and enterprise (including business engagement, public engagement) that is of manifest benefit to the College and University. This should make a significant contribution to policy development at a national and international level; and, where possible, involve development of industrial links as well as links to other academic and international laboratory partners.

Appointment to Senior Lecturer level, in addition to specific duties from Lecturer Level:

- Make a major contribution to the management of research activities in detector development at Birmingham
- Lead successful funding bids which develop and sustain research support for instrumentation in particle physics and applications in other disciplines
- Publish leading research that results in a sustained, highly respected reputation of international quality in particle physics instrumentation through developing innovative underpinning technologies
- Provide leadership of research that contributes to progress in particle physics detector development
- Referee and peer review articles for peer reviewed academic journals and grant applications by research councils and/or other major funding bodies

Learning and Teaching

To use a variety of methods in teaching and advising individuals and groups of undergraduates, postgraduates, or CPD students, including:

- Teach and examine courses at a range of levels
- Plan and review own teaching approaches and act as a mentor to encourage others to do the same
- Develop programme proposals and make substantial contributions to the design of teaching programmes more widely in the Department or School, as appropriate
- Where appropriate, undertake and develop the full range of responsibilities in relation to supervision, marking and examining (including summative assessment, assessed work, contributing to the final award – as a mark or as credit – such as unseen examinations, essays, dissertations or presentations.
- Use appropriate approaches to learning and teaching in their field
- Disseminate appropriate practices through suitable media
- Develop and advise others on learning and teaching tasks and methods

- Lead substantial and sustained high value impact activity in knowledge transfer and enterprise (including business engagement, public engagement) that enhances the student experience and/or employability and is of manifest benefit to learning and teaching in the College and the University. This should include the development of industrial links and comparable networks and initiatives.
- Devise and supervise projects, student dissertations and practical work

Appointment to Senior Lecturer level, in addition to specific duties from Lecturer Level:

- Help lead the development of new and appropriate approaches to learning and teaching. This may be underpinned by research and evaluation of teaching methods and systems.
- Act as adviser for teaching and learning methods through excellent practice and mentoring other colleagues
- Contribute to the design and co-ordination of programmes across the School
- Contribute to the development of teaching and learning policy, methods and standards, more widely than the School
- Contribute to debate nationally about policy, methods and practices through publications, conference activity and roles that advance quality in the discipline
- Help with the development and management of assessment strategies within the School

Management/Administration

To contribute to Departmental/School administration or have a high level of responsibility for others. This may include:

- Contribute to the administration/management of research and/or teaching across the Department/School
- Lead and manage a team to devise and implement a new and/or revised process (e.g. new programme or a recruitment drive)
- Advise on personal development of colleagues and students
- Make a major contribution to some administrative activities within the University (e.g. appeals panels, working groups)
- Manage enterprise, business development, and public engagement activities of manifest benefit to the College and University
- Contribute significantly to the development and delivery of knowledge transfer, enterprise, business engagement and public engagement activities with a sustained high value impact of manifest benefit to the College and the University.

Appointment to Senior Lecturer level, in addition to specific duties from Lecturer Level:

- Making an important contribution to the development and running of the School, for example, leading activity on teaching assessment and on research
- Developing and managing staff and resources in support of major research and teaching activities
- Making important contributions to the development of the School research strategy and learning and teaching strategy

Scope of the Role

Contributing to the whole range of research, teaching and administration.

Research will involve initiating, conducting and disseminating original research that must be relevant to the University initiative in particle physics and the development of novel

instrumentation and have a clear record of impact, and designing and developing significant innovative underpinning technologies.

Carry out research with a national and developing international reputation through significant original research work and

Development of teaching programmes and enhancement of the student experience or employability that is of manifest benefit to the College and University.

Management and administration including School leadership and management activity with University wide involvement and sustained high value impact knowledge transfer and public engagement that are of manifest benefit to the College and University.

Teaching is likely to include programme/module review and development as well as delivery and assessment at all levels. The role will typically also involve developing and advising others, including: (a) providing expert advice to staff and students, (b) supervising and examining PhD students, and (c) developing and advising others on learning and teaching tasks and methods.

Management and administration is likely to involve significant contributions at School level, and/or making an important contribution to some managerial/administrative activities within the University (e.g. working groups).

Person specification

- PHD in Physics, or closely related discipline
- Extensive and successful research/teaching experience and scholarship within subject specialism.
- Proven ability to devise, advise on and manage learning/ research.
- Skills in managing, motivating & counselling others successfully at all levels.

Research

- Experience and achievement reflected in a growing reputation
- Extensive experience and demonstrated success in planning, undertaking and project managing research to deliver high quality results
- Extensive experience of applying and/or developing and devising successful models, techniques and methods
- Experience and achievement in knowledge transfer, enterprise and similar activity

Teaching

- Ability to design, deliver, assess and revise teaching programmes
- Extensive experience and demonstrated success in developing appropriate approaches to learning and teaching, and advising colleagues
- Experience and success in knowledge transfer, enterprise and similar activity that enhances the student experience or employability

Management Administration

- Ability to contribute to School/Departmental management processes
- Ability to assess and organise resources effectively

- Understanding of and ability to contribute to broader management/administration processes

For appointment to Senior Lecturer level, the holder should demonstrate excellence in at least two of the areas of Research, Learning and Teaching, and Management and Administration and competence in the third. Examples of excellence include:

Research requirements

An excellent national reputation and a developing international profile through significant original research work and a clear record of impact. Evidence of success under the following headings:

- High level peer esteem as evidenced by
 - Excellent international reputation, reflected in sustained high quality output, level of innovation, impact on detector development and recognition
 - An excellent and sustained record of peer reviewed research publications
- Successful and sustained supervision of doctoral students to completion
- Evidence of research income generation, e.g. through research grants, contracts, research consultancy or other external funding
- Evidence of high value impact knowledge transfer and enterprise that is of manifest benefit to the College and University

Learning and teaching requirements

An excellent teaching profile and performance in terms of both impact and quality. The teaching quality demonstrated to be informed by an appropriate level of scholarship. Evidence of success under the following headings:

- High national reputation for the development of teaching and learning excellence within the discipline
- Successful and sustained use of a range of appropriate teaching methods, and assessment strategies that promote high quality learning, including learning that is flexible, distinctive and current and stimulates learners' natural curiosity
- Evidence of contribution to one or more of the following: strategic development of new programmes; approaches to learning; the development of learning resources
- High quality and sustained contributions to fostering excellence in teaching activities more widely Track record of high value impact on the enhancement of the student experience
- Mentoring and expert advice which develops the skills of colleagues in teaching and in fostering learning

Management and administration-related requirements

Demonstrated significant achievement in management and administration-related activities, with evidence of the following:

- performance in significant administrative/managerial role
 - high quality innovative contributions to management/administration
- Successful and sustained contribution to corporate life, displaying willingness to contribute actively to committees, collaborative teaching and administrative tasks.

To be considered for appointment at Reader level you will also need to fulfil the criteria as set out in the document available [here](#)

Planning and Organising

- Plan for and set teaching programme objectives over a number of years
- Plan and manage own teaching courses at a range of levels (including design, delivery, assessment) as agreed with the Head of School
- Plan and deliver high quality research
- Manage research activities and/or supervise other research staff
- Organise meetings/conferences/symposia
- Contribute to the administration/management of research and/or teaching across the Department/School
- Lead/manage a team to devise and implement a new and/or revised process (e.g. new programme or a recruitment drive)

If the post is at Senior Lecturer level the post holder would also be expected to: -

- Involved in strategic planning that impacts over a number of years and contributes to the institution's planning process
- Lead on significant areas of research activity
- Project Management

Decision Making

- Develop learning and teaching approaches, including approach to mentoring
- Develop programme proposals and decide what contributions to make to the design of teaching programmes
- Develop research ideas
- Decide how to develop and undertake the research
- Decide where and when to present research findings and what publications and conferences to target for this purpose (with guidance, if required)
- Advise, supervise and examine PhD students
- Develop knowledge in specialist area
- Contribute to School/Departmental management processes

If the post is at Senior Lecturer level the post holder would also be expected to: -

- Develop and manage staff and resources in support of major research projects
- Significant contribution to the development of research strategy Contribute significantly to the development and running of research activities
- Decide whether possible research proposals are of sufficient quality to generate research funding and whether the research will lead to high quality research publications

Internal/External Relationships

- Contribute to recruitment of students
- Act as external examiner
- Develop links with external contacts (such as businesses , other educational bodies, public sector organisations, organisations with public engagement opportunities), to facilitate knowledge transfer, enterprise, business engagement, public engagement, enhancement of the student experience or employability that is of manifest benefit to the College and University
- Provide expert advice internally and externally in specialist area

- Referee and peer review of articles for peer reviewed academic journals and grant applications by research councils and/or other major funding bodies
- Maintain contact (including membership of) appropriate professional bodies
- Liaise with the relevant external research community via seminars and conferences

If the post is at Senior Lecturer level the post holder would also be expected to: -

- Contribute to national debates through publications, conference activity and roles that advance quality in particle physics
- Play an active role in appropriate professional bodies