NEWCASTLE UNIVERSITY

SCHOOL OF MATHEMATICS, STATISTICS & PHYSICS

Lecturer/Senior Lecturer (Assistant/Associate Professor) in Statistics

Three Open-Ended Positions

Further Particulars

I

The School

The School currently has 64 full-time and 6 part-time academic staff and ten post-doctoral researchers. There are 84 PhD students and an efficient support staff, including three IT support officers.

The School has four sections: Applied Mathematics, Pure Mathematics, Physics and Statistics. The School also incorporates the Industrial Statistics Research Unit and the Newcastle Mathematical E-Learning Unit. In the 2014 Research Excellence Framework exercise, 29% of the School's research was rated as world leading, placing the School 10th of the 53 UK institutions that submitted. A further 59% of the research was rated as internationally leading. Research in the Applied and Physics sections have themes of astrophysics, cosmology, and classical and quantum fluids. In Pure, research concentrates on functional analysis, algebra, especially homological algebra, and group theory. Statistics research is elaborated on below.

The School offers numerous degree schemes at the levels of 4-year MMath/MMathStat and 3-year BSc Honours. There are many combined degree schemes and some service teaching. The School currently teaches around 900 full-time-equivalent undergraduate students of which about 500 are on Single Honours programmes in mathematical sciences and 160 in physics.

Facilities are good. The School is housed in the Herschel building, which incorporates a range of large and small lecture theatres and a large undergraduate computer cluster. Staff members have individual offices, access to technical computing support and individual travel and research support allowances. Finances are strong, which has allowed the School to grow: there has been an approximately 50% increase in academic staff numbers over recent years, and a commensurate increase in support staff. The School uses some of its resource to support 6-8 full-time PhD studentships each year on internal studentships, which together with other funding sources mean there is a large PhD student population and ample opportunities for staff to have PhD students in their research areas.

Research in Statistics

Statistics forms the largest of the four sections in the School. The Statistics section currently has 19 academic staff, including five professors, one reader, six senior lecturers and seven lecturers. There is a wide variety of research interests, including (but not limited to) analysis of high dimensional and high volume data, inference for intractable stochastic processes with applications to systems biology, methodology for big data in genomics, Bayes linear methods, calibration of complex models, causal inference, climate modelling, clinical trials, computationally intensive Bayesian methods, event history analysis, extreme value analysis, experimental design, inference for partially observed stochastic processes, functional data analysis, longitudinal data analysis, meta-analyses, missing data methods, phylogenetics, population dynamics, and time series analysis. Research is generally at the interface of theory and practice, whereby original methodology is both developed and applied. There are many collaborations with colleagues in other disciplines, especially in computing science, medicine, biology and related subjects. Research has been supported in recent years by, inter alia, BBSRC, CRUK, EPSRC, EU, Leverhulme, ESRC, MRC, NIHR and Wellcome.

Major recent developments at Newcastle include a £30M award for the National Innovation Centre for Data (NICD) and the university joining the Alan Turing Institute, with several statistics staff engaged as Fellows and/or working on ATI projects, supported by postdoctoral researchers.

This year the first cohort of students started the new MSc in Data Science, run jointly with the School of Computing, and evolving from our collaboration with Computing in the EPSRC Centre for Doctoral Training in Cloud Computing for Big Data.

The section hosts a variety of seminar programmes. During term time there is a programme of invited talks by external speakers together with a weekly internal seminar series, where colleagues share their recent research ideas. These meetings also provide postgraduate training. Also the North East Local Group of the Royal Statistical Society meets approximately monthly, either in Newcastle or Durham.

Colleagues are encouraged to be active within the professional community of statisticians. Many members of the section have editorial roles for major journals, or have acted as officers or volunteers for RSS and other professional organisations, as well as MRC, BBSRC, EPSRC and other funding bodies. There are regular workshops and one-day meetings, and funds are available to support research visits to or from Newcastle.