Postgraduate Newsletter
February 2022
Welcome

Hello and welcome to the second Postgraduate Newsletter, designed to introduce you to your new faculty, department and programme.

This month’s newsletter will introduce you to Lancaster Medical School’s newest postgraduate programme, Health Data Science.

Find out more

You can find out more about the Faculty of Health and Medicine and your new division on our website.

Fees and funding information is available on the University website.

If you have any questions, please do not hesitate to get in touch with us.

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Hello, I am Emanuele Giorgi, Senior Lecturer in Biostatistics, and Director of Lancaster’s MSc in Health Data Science.

I first came to Lancaster University in 2012 when I did my PhD in Statistics and Epidemiology in the Centre of Health Informatics Computing and Statistics (CHICAS), located in Lancaster Medical School. During my years as a student, I have found Lancaster University to be a vibrant research environment and I have had the opportunity to work with world leaders in the field of global health and statistics. As a result, I decided to build my entire career in Lancaster which culminated in recent years with the creation of the new MSc Health Data Science programme and with my leadership of the CHICAS group.

My research area is geospatial statistics for global health and I develop novel statistical methods to map disease risk. Over the years, I have worked with researchers from various backgrounds, especially epidemiologists and medical scientists. An additional motivating factor of my research has been supporting the career development of younger researcher, especially those based in low-resource settings. I have previously held the role of Royal Statistical Society coordinator for the partnership with the African Institute for Mathematical Sciences and have joined several capacity-building initiatives of statistical expertise in the developing world.

In joining Lancaster’s MSc in Health Data Science, you will also have the opportunity join research events, including seminars and workshops, organized by the CHICAS and you will have the opportunity to meet and interact with other researchers at all levels, including PhD students, postdocs and lecturers.
I label myself as an infectious disease epidemiologist – a term that people seem to now understand, compared to a couple of years ago.

My role on the Health Data Science programme is convening and teaching the modules ‘Introduction to Applied Epidemiology’ and ‘Infectious Disease Modelling’, the latter with Dr Christopher Jewell (Senior Lecturer in Epidemiology. The modules are designed to give you experience of working with real epidemiological data and the knowledge and ability to tackle scientific questions that have public health or policy relevance. While technical ‘data science’ skills are taught within these modules, we also emphasise the need to learn to interpret your results in a wider context, and to appreciate the limitations of collecting real epidemiological data.

My research interests are focussed on better understanding transmission of pathogens (respiratory or gastroenteric viruses or drug-resistant bacteria): where transmission happens, and between whom, and what the consequences are when scaled up to a population. Part of this interest is in the application of transmission models to epidemics (including the Covid-19 pandemic), and part is quantifying social mixing and measuring contact networks to improve those models.
Catherine joined Lancaster’s first Health Data Science cohort as she wanted to change her career path. Her goal is to transition from a background in mathematics and control systems engineering into a career in developing health technology and mathematics based health solutions. We caught up with her to ask how she’s finding the programme so far.

Hi Catherine. Please tell us about you...what were you doing before you joined the Health Data Science programme and what motivated you to undertake a postgraduate degree in this subject?

I have a background in pure & applied mathematics, and control systems engineering. Additionally, a doctoral degree focused on human brain spectroscopy. These studies occurred years ago, since then I have spent years in different industries. The focus now is a career change targeted at developing health technology & mathematics based health solutions; the direct & indirect aim being healthy citizens and life health costs reduction. In order to switch successfully, and productively, to a new field, it is rather important to gain an understanding of the problems therein, and to acquire any missing/critical skills. Health Data Science exposes students to problems that can be addressed analytically, via statistics, applied mathematics, or artificial intelligence.

Why did you choose Lancaster for your studies?

The renowned expertise of Lancaster Medical School's CHICAS (centre for health informatics, computing, and statistics) team.

Do you feel that the programme will actually benefit your future career?

The course will definitely benefit my future career because it has exposed me to the challenges in the field, to a variety of experts, and helped me to identify where and how I can effectively contribute solutions.