

### **MiSoC MAKING A DIFFERENCE IN...**

# Building social science expertise across disciplines

As a multi-disciplinary research centre that uses cutting-edge quantitative methods to examine the most pressing questions in social science research, MiSoC is uniquely positioned to build capacity in the social sciences in the UK and beyond

For the first time, we are now devoting 25 days of Co-Investigator time in the current iteration of MiSoC (2019-2024), ensuring the rapid dissemination of our methodological work.

To deliver this training and ensure our expertise reaches the broadest audience possible, we have partnered with the <u>ESRC</u> <u>National Centre for Research Methods</u> (NCRM) to advertise, administer and evaluate our courses. MiSoC provides the staff time for free, enabling NCRM to deliver the training at very low cost. In addition to these formal activities, we have also invested significant time and resource to more general capacity building events such as seminar series, colloquia and workshops. Our new training programme makes a difference by:

- Introducing new and promising tools for social science research
- Serving as a bridge to make methods from one discipline accessible to another
- Adapting and delivering academic courses for nonacademic audiences, extending the reach of our expertise in research methods
- Bringing our expertise and training to those working directly with communities

In this document, we summarise four case studies from our current training portfolio.



## **1** Translating machine learning for applied social scientists



Machine learning methods drawn from data science show exceptional promise as tools for

estimating causal relationships in social science settings. These models use statistical theory and software packages that are less commonly taught in traditional quantitative methods classes.

MiSoC Co-Investigators Paul Clarke (Social Statistics) and <u>Spyros Samothrakis</u> (Computer Science) join forces to bring these methods to a wider audience in two short courses. The first course, delivered through NCRM in June 2021, introduced causal modelling using basic machine learning techniques, and through the use of laboratory exercises provides hands-on learning with Python on real data sets. Participant evaluations of the course were excellent, with all participants rating the speakers' knowledge as 'very good' and all participants planning to use the methods in their theses or published journal articles. The second course is planned for summer 2022 and will extend coverage to more advanced machine learning topics.

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#### 2 Extending the reach of the 'state of the art'

**MiSoC Co-Investigator Adeline Delavande** (University of Technology Sydney) works at the frontier of research on probabilistic expectations

and preferences, a growing area of interest in **Economics and Psychology that combines** conceptual insights into the role of uncertainty in decision making with methodological developments in capturing subjective uncertainty in survey data.

MiSoC has supported Professor Delavande in reaching a wide range of potential users of her research, making sure that the best practices she has developed reach the scientific community as quickly as possible. Our efforts in this have been multi-pronged and sustained. MiSoC provided funding and administrative support for the activities of the international Network on Preferences and Expectations including four conferences (Essex, 2014; Federal Reserve Board of New York, 2016; University of Munich, 2018, Sydney-Laval-Michigan 2020) which allowed scholars of all levels of seniority access to discussion and a venue to present their new work on this topic.

In March 2021, Professors Delavande and MiSoC Principal Investigator Emilia Del Bono delivered a short-course via NCRM to introduce participants to new research and survey methods on probabilistic expectations and preferences. They also organised a special session for the NCRM's Methods e-Festival in late October 2021, with the participation of Professor Pamela Giustinelli from Bocconi University.

#### **3** Bridging understanding across disciplinary divides



Bringing together economists, demographers, sociologists, and heath scholars, MiSoC facilitates the flow of methodological expertise across disciplinary silos.

After nearly a decade in MiSoC, sociologist and Assistant Director Renee Luthra has benefited from consistent exposure to econometric techniques, and from the resulting cross-disciplinary exchanges, conversations and collaborations has developed a four-day intense course to make the econometric toolkit accessible to non-economists. In the other direction, long-standing MiSoC researcher and economist Angus Holford has also learned to speak across disciplinary divides, and even further to a range of non-academic stakeholders using his evidence-based policy evaluation work. Building on his experiences he has also adapted econometric learning materials specifically for non-academics, in an NCRM course on impact evaluation geared towards a policy maker and stakeholder audience.

These courses have each been delivered twice via NCRM to participants ranging from new postgraduate researchers to full professors interested in expanding their expertise beyond their fields, which have ranged from linguistics to medicine, as well as civil servants and private sector data scientists. Course evaluations indicate that participants are now planning to use these methods in their thesis, for journal articles, and for research commissioned by government, non-government bodies, and for publication in the open domain.



#### **4** Building capacity in the community

MiSoC also builds capacity beyond academia. In May 2021, MiSoC researcher Neli Demireva (Sociology), a community cohesion expert, developed and delivered a unique full day course targeted to charities and non-governmental organisations on designing surveys to evaluate need and assess the value of their work. The course included essential elements of survey design, the use of existing datasets, the presentation of different indicators for cohesion, volunteering, and economic need, and practical information on survey design software. This highly rated course is being currently developed into an online resource, including course materials and a video lecture to allow wider dissemination through MiSoC's established networks. The workshop was attended by organisations as diverse as Age UK, Help Musicians; Nottingham University Hospital Charity, Caritas Sofia Migration and Integration Department, Volunteer Centre Sutton, Healthwatch Essex, O'Keeffe Social Research, Abbey People, IIT Kharagpur, Halstead 21st Century Group, Consumer Council for Water and the Hungarian Irish Theatre.

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