

CCACE Scientific Themes Discussion Days
“Added value: links between CCACE and Informatics”

3rd February 2014, 9.00am-4.30pm

Informatics Forum, University of Edinburgh

Led by Professor David Porteous (CCACE) and Professor Dave Robertson (Informatics)

0900: Registration

0915: Welcome and introduction to the day: David Porteous and Dave Robertson

0930 Theme 1: What datasets are currently accessible through CCACE?

Chair: David Porteous

1. Ian Deary: CCACE Director, Edinburgh. *Scottish Mental Surveys and national and international consortia linked to CCACE.*
2. John Starr: CCACE Co-Director and Director Alzheimers Scotland Dementia Research Centre, Edinburgh. *Alzheimers Research Scotland and cognitive pathology cohorts.*
3. Pamela Linksted: Centre for Genomic and Experimental Medicine, Edinburgh. *Generation Scotland.*
4. Cathie Sudlow: Centre for Clinical Brain Sciences, Edinburgh. *UK Biobank.*

1050 Tea/coffee break

1110: Theme 2: What national data sources are available that could enrich cognitive ageing research?

Chair: Cathie Sudlow

1. Steve Pavis: NHS Scotland Information Services Division, Edinburgh. *ISD, MRC Farr and the NHS/Academic interface – how to make it work.*
2. Chris Dibben: Institute of Geography and the Lived Environment, Edinburgh. *ESRC and non-medical data for health – how to make it work.*
3. Claudia Pagliari: Centre for Population Health Sciences, Edinburgh. *Exploration and evaluation of eHealth interventions.*

1230 Lunch break

1310 Theme 3: Digital data, annotation and digital health

Chair: Dave Robertson

1. Mark Parsons: Edinburgh Parallel Computing Centre, Edinburgh. *Secure data store, safe havening and processing.*
2. Stuart Anderson: School of Informatics, Edinburgh and Scottish Enterprise / SHEFC Innovation Centre in Digital Health PI. *What is data intensive computing and why do we need it? / Informatics solutions to health management in an ageing population.*
3. Peter Buneman: School of Informatics, Edinburgh. *How and when is data annotated and how can we integrate across diverse and dynamic data sets?*
4. Maria Wolters: School of Informatics, Edinburgh. *The challenge of obtaining meaningful digital health data.*

1430 Tea/coffee break

1450 Theme 4: Data annotation and informatics analysis

Chair: Ian Deary

1. Amos Storkey: School of Informatics, Edinburgh. *Machine learning methods for medical data.*
2. Paul McKeigue Centre for Population Health Science, Edinburgh. *Similarity matching in populations – identifying Mendelian forms of disease.*
3. Kristen Nicodemus: Trinity College Dublin. *Machine learning approaches for multidimensional data integration and epistatic interaction – application to mental health.*
4. Douglas Armstrong: School of Informatics, Edinburgh. *Comparative neuroinformatics – fly, mouse and man – what each can tell us about brain biology and disease.*

1610: Wrap up and final discussion

Chairs: David Porteous, Dave Robertson, Cathie Sudlow & Ian Deary

1630: Meeting ends and drinks reception

Speakers and Organisers

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Delegates

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Summary

CCACE Group Leader, Professor David Porteous, and Head of Informatics, Professor Dave Robertson, hosted the first of a new series of CCACE Scientific Themed Discussion Days on the 3rd February 2014. The title of the day was "Added value: links between CCACE and Informatics". It attracted just over 40 delegates from a range of staff levels from PhD student to full Professor, and included many academic disciplines, the NHS and also industry.

The idea of introducing Themed Discussion Days arose during a recent CCACE Executive Committee Meeting. After discussing suggestions from the CCACE quinquennium review from 2013, the committee agreed that the second term of CCACE should focus on enhancing collaboration and encouraging new research ideas. From this, the format of the new CCACE Themed Discussion Days emerged. CCACE hope to host one or two meetings of this type per year. The CCACE membership has been invited to submit ideas for the next Discussion Day.

The CCACE/Informatics Discussion Day was opened by David Porteous who gave a short welcome speech to all delegates. He introduced the four themes for the day which included: 1. What datasets are currently available through CCACE?; 2. What national data sources are available that could enrich cognitive ageing research?; 3. Digital data, annotation and digital health; and 4. Data annotation and informatics analysis. Each theme consisted of four speakers giving a 15 minute talk each with additional time for discussion. The aim of this format was to encourage discussion and collaboration between two groups (CCACE and Informatics) who had not previously overlapped a great deal in their research work. The two morning themes (1 and 2) provided summaries of the data that is currently available for secondary data analysis. Theme 1 covered the datasets which CCACE already has links with, such as the Scottish Mental Surveys, Alzheimer's Research Scotland datasets, Generation Scotland and UK Biobank. Theme 2 introduced datasets which could benefit cognitive ageing research and enhance the work at CCACE such as the MRC Farr Institute. After lunch, themes 3 and 4 focussed on the actual data itself and how new technologies and advancements in analysis can help researchers work with extremely large datasets such as UK Biobank. Theme 3 gave a summary of the methods of secure data storage and data intensive computing, while theme 4 concentrated on data annotation and the actual processes for informatics analysis of such large amounts of data, e.g. genetic data. At the end of the four short themes, David Porteous led an extended discussion and wrap up session and the delegates were invited to discuss their ideas further over some soft drinks refreshments.

The day proved to be extremely successful. The small group size of 40 delegates was a useful in generating genuine discussion and thoughts on future collaboration. For CCACE members, it gave a good introduction to the work of the Informatics Department and how they can help in working with the large datasets which CCACE is now linked with. This is a format which CCACE hopes to repeat in the near future.