PROGRAMME

Statistical Signal Processing Workshop
12-13 April 2018

Workshop Venue

The talks will be held in the lecture theatre on the ground floor in the Postgraduate Statistics Centre (building PSC [South Campus] on campus map), which is located approx. 5 minute walking from Lancaster House Hotel (building LCC [South West Campus] on campus map).

Day 1: Thursday 12 April 2018

Lecture Theatre, Postgraduate Statistics Centre (building PSC [South Campus] on campus map)

10:30–10:50	Registration (with tea & coffee)
10:50–11:00	Welcome
11:00–11:45	**Josiane Zerubia** (INRIA, France) Marked point processes for object detection and tracking in high resolution images: Applications to remote sensing and biology
11.45–12:00	**Julian Newman** (Lancaster University, UK) MODA: A new numerical toolbox for analysing oscillatory dynamics of open systems
12:00–12:15	**Sam Tickle** (STOR-i student, Lancaster University, UK) On the properties of a common changepoint detection method
12:15–12:30	**Youssef Taleb** (Imperial College London, UK) First-order multiresolution analysis of point processes based on wavelet expansions of the intensity
12:30–13:30	Lunch
13:30–14:15	**Andrew Walden** (Imperial College London, UK) Time series graphical modelling for brain connectivity
14:15–14:30	**Alireza Ahrebian** (University of Surrey, UK) Segment parameter labelling in MCMC mean-shift change detection
14:30–14:45	**Jamie-Leigh Chapman** (STOR-i student, Lancaster University, UK) Nonparametric change in variance detection in telematics data
14:45–15:00	**Matt Moores** (University of Warwick, UK) An errors-in-variables model for batch effects in spectroscopy
15:00–15:30	Tea & Coffee Break
15:30–15:45	**Alex Gibberd** (Imperial College London, UK) Wavelet coherence for multivariate point-processes
15:45–16:00	**Alex Fisch** (STOR-i student, Lancaster University, UK) A linear time algorithm for the detection of collective anomalies in data streams
16:00–16:15	**Ana Fernandez Vidal** (Heriot-Watt University, Edinburgh, UK) Maximum likelihood estimation of regularization parameters
16:15–17:00	**Peter Craigmile** (Ohio State University, USA) Wavelet-based estimation for spatio-temporal processes
19:00	Conference Dinner, Lancaster House Hotel

Day 2: Friday 13 April 2018

Lecture Theatre, Postgraduate Statistics Centre [building PSC (South Campus) on campus map]

09:00–09:45 **David Simpson** (University of Southampton, UK)
Blood flow control in the brain: The challenge of diversity

09:45–10:00 **Swati Chandna** (Birkbeck, University of London, UK)
Network modeling using covariates with application to brain data

10:00–10:15 **Harjit Hullait** (STOR-i student, Lancaster University, UK)
Classification of manoeuvres performed in a Pass-Off test

10:15–10:30 **Mansoor Sheikh** (King's College London, UK)
High-dimensional statistical inference applied to Terahertz Pulsed imaging signals

10:30–11:00 Tea & Coffee Break

11:00–11:30 **Ed Cohen** (Imperial College London, UK)
Algorithmic resolution: A spatial statistical approach to defining resolution in modern optical imaging

11:30–11:45 **Yordan Raykov** (Aston University, UK)
Automated quality control for sensor based symptom measurement performed outside the lab

11:45–12:00 **Sean Ryan** (STOR-i student, Lancaster University, UK)
Computationally efficient detection of subset multivariate changepoints

12:00–12:30 **Tony Lawrance** (University of Warwick, UK)
Synchronized laser-chaos communication: Statistical analysis of an experimental system

12:30–13:30 Lunch

13:30–13:45 **Maarten Jansen** (Université libre de Bruxelles, Belgium)
Multiscale local polynomial transforms for use in density estimation and exponential models

13:45–14:00 **Tobias Siems** (Visiting STOR-i student, Greifswald University, Germany)
Simultaneous credible regions for multiple changepoint locations

14:00–14:15 **Lekha Patel** (Imperial College London, UK)
A hidden Markov model approach to characterising the behaviour of molecules imaged in fluorescence microscopy

14:15–15:00 **Peter Schreier** (Universität Paderborn, Germany)
Correlation analysis with small sample sizes

15:00–15:10 Closing and farewell

Wifi

The **eduroam** network should work automatically everywhere on campus and at Lancaster House Hotel. Another network is **LUvisitor**, for which you can register using your web browser (connect and try to browse the web, the registration page should appear).

Lancaster and Lancaster University

There are **two universities** in Lancaster, please make sure you arrive to Lancaster University, whose campus is actually located in Bailrigg, approx 3 miles southwards from Lancaster. The Lancaster House Hotel and Lancaster University Visitor Rooms are located on campus.

How to arrive/depart

On campus: All buses drop off and collect passengers in the Underpass, situated underneath Alexandra Square (in between North and South Campus on campus map). From there it is a 10 minute walk to Lancaster House Hotel (building LCC [South West Campus] on campus map).

From Lancaster railway station you need to take a taxi or bus to get to the campus. Local taxi services (cost approx £10 and take approx 10 mins) can be contacted on +44 (0)1524 32090; +44 (0)1524 35666 and +44 (0)1524 848848. The U3 bus service operates between the railway station and the University approx. every 30 minutes Monday to Saturday daytimes. From the railway station it takes approx 10 mins to walk to the city centre.

From the city centre you can take frequent buses **U2, U3, U4, 41, 42** at the main bus station or at Common Garden Street bus stop. For a downloadable map please see
https://tiscon-maps-stagecoachbus.s3.amazonaws.com/ZoneMaps/Cumbria/CNL_Lancaster_Guide_Map_Greyhound_Bridge.pdf

From Manchester airport you can get a direct train (1:20hrs) to Lancaster railway station, see http://www.nationalrail.co.uk.
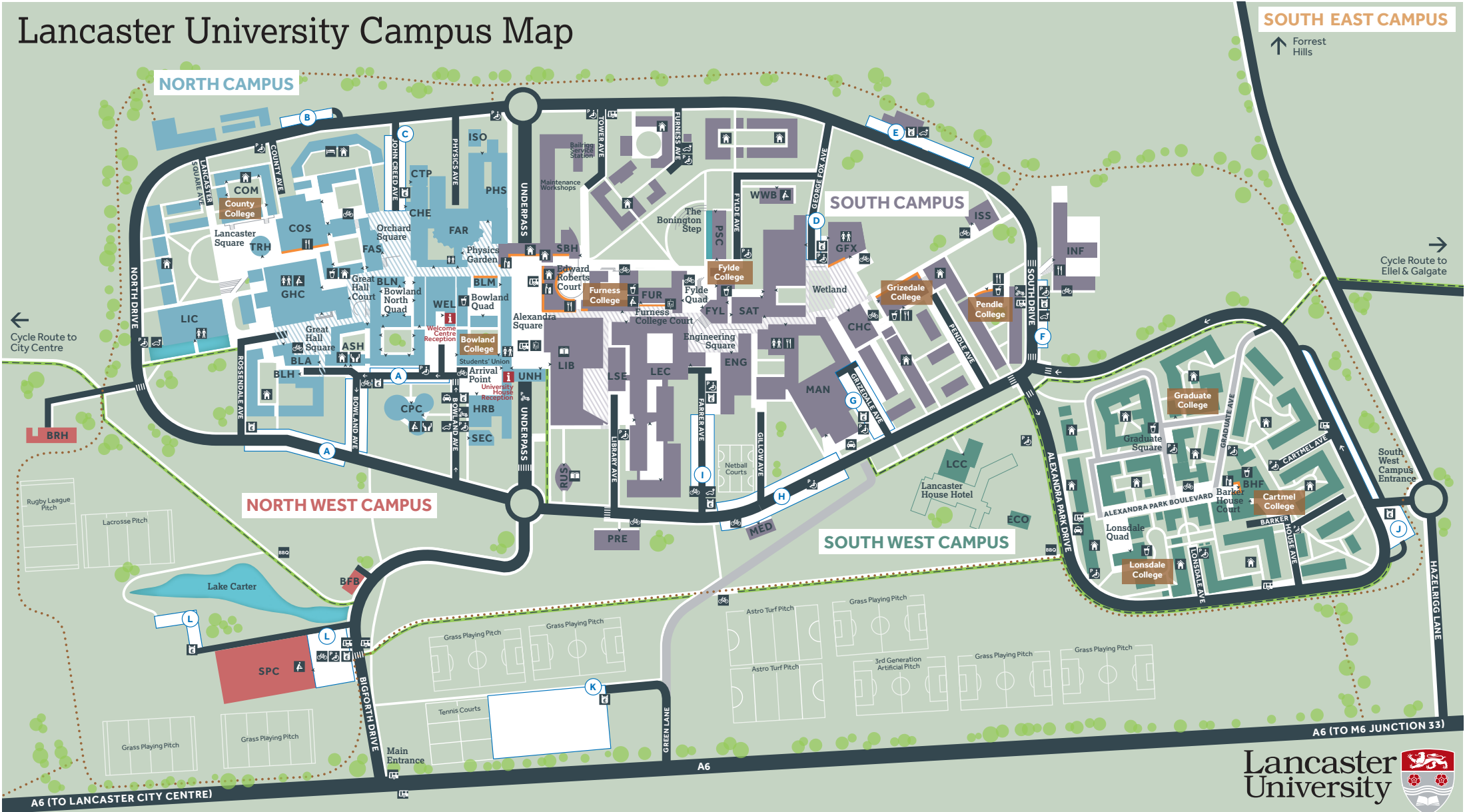We recommend getting an **Offpeak return ticket** (outward time is flexible on the chosen date, return data and time are flexible within 30 days). To get a prearranged taxi from the airport for a better price, see http://www.lancasterairporttransfers.co.uk.

By car: Postcode for route planning is LA1 4YF. For more info on arriving and visitor car parking see http://www.lancaster.ac.uk/contact-and-getting-here/maps-and-travel/.

What to do in any spare time

If you come earlier or stay longer in Lancaster, you can visit Lancaster Castle, Lancaster Brewery, several churches and museums, walk in Williamson Park or along Lancaster Canal and the Lune aquaduct, or enjoy a performance at The Dukes or the Grand Theatre. You will find excellent food and atmosphere in The Borough, Merchants 1688, and The White Cross; get the typical English breakfast in The Sun Bar. Further away, visit Morecambe beach, the Yorkshire Dales, or the Lake District.

Lancaster University Campus Map

SOUTH EAST CAMPUS

↑ Forrest Hills

NORTH CAMPUS

NORTH WEST CAMPUS

SOUTH CAMPUS

SOUTH WEST CAMPUS

← Cycle Route to City Centre

← Cycle Route to City Centre

→ Cycle Route to Ellel & Galgate

South West Campus Entrance

A6 (TO M6 JUNCTION 33)

A6 (TO LANCASTER CITY CENTRE)

Lancaster University

N ←⊙

ALEXANDRA SQUARE

NORTH CAMPUS
- **ASH** Ash House
  - Islamic Prayer Room
- **BLA** Bowland Annexe
  - **Bowland College**
- **BLH** Bowland Hall
  - Accommodation Services
  - Commercial Services
  - Conference & Events
  - Guest Room Reception
  - Hospitality
- **BLM** Bowland Main
  - **Bowland Lecture Theatre (Cinema)**
  - History
  - Learning Zone
  - Pharmacy
  - Research & Enterprise Services
  - Students' Union
- **BLN** Bowland North
  - Department of Languages & Cultures
  - **Elizabeth Livingston Lecture Theatre**
  - **Marcus Merriman Lecture Theatre**
  - Law School
  - Sociology
- **CPC** Chaplaincy
- **CHE** Chemistry Building
  - Chemistry
  - Natural Sciences
  - **County College**
- **COM** County Main
  - Design, Photography & Print
  - English Literature & Creative Writing
  - UPP Residential Services
- **COS** County South
  - **County South Lecture Theatre**
  - Educational Research
  - Linguistics & English Language
  - Politics, Philosophy & Religion
  - Private Dining Room (PDR)
  - Marketplace
- **CTP** cTAP Building
- **FAR** Faraday Complex
  - **Cavendish Lecture Theatre**

- Colloquium Rooms
- **Faraday Lecture Theatre**
- **Frankland Lecture Theatre**
- **FAS** FASS Building
  - Faculty of Arts & Social Sciences
  - Faculty Offices
- **GHC** Great Hall Complex
  - Nuffield Theatre
  - Peter Scott Gallery
- **HRB** Human Resources Building
- **ISO** IsoLab
- **LIC** LICA Building
  - ImaginationLancaster
  - Lancaster Institute for the Contemporary Arts
- **PHS** Physics Building
- **SEC** Security Lodge
- **TRH** The Round House
  - Confucius Institute
- **UNH** University House
  - University House Reception
  - Professional Services
  - Careers
  - The Base
  - Counselling Service
  - Disabilities Service
- **WEL** Welcome Centre
  - Welcome Centre Reception

NORTH WEST CAMPUS
- **BFB** Bigforth Barn
- **BRH** Bailrigg House
  - Dentist
- **SPC** Sports Centre

SOUTH CAMPUS
Bailrigg Service Station
- Ann Helme Car Sales
- **CHC** Charles Carter
  - Leadership & Management
  - Marketing
  - Organisation, Work & Technology
  - **Charles Carter Lecture Theatre**
- **ENG** Engineering Building
- **FUR** Furness Building

- Biomedical & Life Sciences
- **Furness Lecture Theatres 1-3**
- Health Research
- Lancaster Medical School
- **Furness College**
- **FYL** Fylde Building
  - **Fylde Lecture Theatres 1-3**
  - Mathematics & Statistics
  - Psychology
- **Fylde College**
- **GFX** George Fox
  - International Study Centre
  - **George Fox Lecture Theatres 1-6**
- **Grizedale College**
- **INF** InfoLab21
  - Computing & Communications
- **ISS** ISS Building
- **LEC** Lancaster Environment Centre
  - **Biology Lecture Theatre**
  - Biomedical & Life Sciences
  - Centre for Ecology & Hydrology
  - Environmental Science
  - Ecology & Conservation
  - Geography
  - Gordon Manley Building
- **LSE** Life Sciences & Environment Labs
- **LIB** Library
- **MED** Medical Centre
- **MAN** Management School
  - Accounting & Finance
  - Economics
  - Enterprise & Innovation
  - Management School Faculty Offices
  - **Management School Lecture Theatres 1-12**
  - Management Science
- **Pendle College**
- **PRE** Pre-School Centre
- **PSC** Postgraduate Statistics Centre
- **RUS** Ruskin Library
- **SAT** Science & Technology Building
  - Clinical Anatomy Learning Centre
  - Faculty of Science & Technology
  - Faculty of Science & Technology Offices
  - Faculty of Health & Medicine Offices
  - Hannaford Lab

- **SBH** Slaidburn House
- **WWB** Whewell Building
  - Infant & Child Studies

SOUTH EAST CAMPUS
Forrest Hills
- Golf Course
- Resource Centre

SOUTH WEST CAMPUS
- **BHF** Barker House Farm
- **Cartmel College**
- **ECO** EcoHub
- **Graduate College**
- **LCC** Lancaster Conference Centre
  Lancaster House Hotel
- **Lonsdale College**

SYMBOL KEY
- Accessible Parking
- ATM
- Baby Change
- BBQ Area
- Building Entrance Point
- Bus Stops
- CO Colleges
- College Bar
- Cycle Parking
- Electric Vehicle Charging Point
- i Information Point
- John Creed Guest Rooms
- Library
- Lift Access
- Motor Cycle Parking
- Pay & Display Machine
- Prayer Room

- Restaurant
- Shops/ Refreshments
- Student Residence
- Taxi Rank
- Toilets
- Ⓐ-Ⓛ Visitor Parking

WALKS & ROUTES
- Cycle Route
- North Spine - Accessible Route
- South Spine - Accessible Route
- Woodland Walk

CAMPUS ZONES
- North Campus
- North West Campus
- South Campus
- South West Campus
- South East Campus

PLEASE NOTE

We are continuously investing in the campus which can affect access routes, please refer to the website for the most up to date version of the campus map www.lancaster.ac.uk/campus-map

iLancaster

Get our iLancaster app to help and enhance your visit to the University. Available to download for Apple and Android devices or to access on the web. Go to m.lancaster.ac.uk