

Second London Workshop on Signal Processing Theory and Methods *Non-convex Optimisation and Matrix Factorisation*

13 and 14 September 2018

Day 1 Check-in: Rm 611, Talks: Rm 408, Electrical Engineering Bldg, Imperial College London

Speakers

Nigel Birch

Engineering and Physical Sciences Research Council, UK

Helmut Bölcskei

Swiss Federal Institute of Technology, ETH Zurich, Switzerland

Alex Bronstein

Technion - Israel Institute of Technology, Israel

Yuxin Chen

Princeton University, USA

Yuejie Chi

Carnegie Mellon University, USA

Cédric Févotte

Institut de recherche en informatique de Toulouse (IRIT), France

Reinhold Häb-Umbach

Paderborn University, Germany

John Hershey

Google, USA

Yue M. Lu

Harvard University, USA

Gongguo Tang

Colorado School of Mines, USA

John Wright

Columbia University, USA

Full event details:



bit.do/LondonWorkhop2018

Special thanks to...

CSP
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*Melanie Albright for her help
in organising this event.*

Event committee: Wei Dai, Pier-Luigi Dragotti, Christine Evers, Cong Ling and Patrick Naylor.

Thursday 13 September 2018

- 10:00 - 10:30** **Check-in and Welcome Coffee**
Room 611, EEE Building
- 10:30 - 11:00** **Welcome from the Organisers**
Imperial College London
- 11:00 - 11:45** **Yuejie Chi (Carnegie Mellon)**
Geometry and Regularization in Nonconvex Statistical Estimation
- 11:45 - 12:30** **Gongguo Tang (Colorado School of Mines)**
Nonconvex Matrix Optimisation: Centralised and Distributed Geometry
- 12:30 - 14:00** **Lunch Break and Poster Session**
Room 611, EEE Building
- 14:00 - 14:45** **Yue M. Lu (Harvard)**
Spectral Methods for Nonconvex Estimation: A Mean-Field Analysis for Structured Sensing Ensembles
- 14:45 - 15:30** **Reinhold Häb-Umbach (Paderborn University)**
Latent Structure Discovery in Speech using Hidden Markov Model Variational Autoencoders
- 15:30 - 16:00** **Coffee Break**
Room 611, EEE Building
- 16:00 - 16:45** **John Hershey (Google, USA)**
Building a Brain, Starting at the Ears: Machine Hearing in the Integrative Era
- 16:45 - 17:30** **Yuxin Chen (Princeton)**
Gradient Descent with Random Initialisation: Fast Global Convergence for Nonconvex Phase Retrieval
- 17:30 - 19:00** **Rooms available for discussions & networking**
Room 611 & 408, EEE Building
- 19:00 - 21:30** **Dinner (by invitation only)**
Stein's Berlin Restaurant, see map on page 4
Dinner attendees may gather on level 2 of the EEE Building at 18:45 and we will walk to the restaurant Stein's Berlin together.

All activities will take place in EE 408 unless otherwise indicated.

Friday 14 September 2018

09:00 – 09:30

Nigel Birch (EPSRC)

Opportunities in Signal Processing Research

09:30 - 10:15

Cédric Févotte (IRIT)

Estimation with Low-Rank Time-Frequency Synthesis Models

10:15 - 11:00

Helmut Bölcskei (ETH Zurich)

Harmonic Analysis of Deep Convolutional Neural Networks

11:00 - 11:30

Coffee Break

Room 611, EEE Building

11:30 - 12:15

John Wright (Columbia)

TBA

12:15 - 13:00

Alex Bronstein (Technion)

Tradeoffs between Speed and Accuracy in Inverse Problems

13:00 - 14:00

Lunch Break

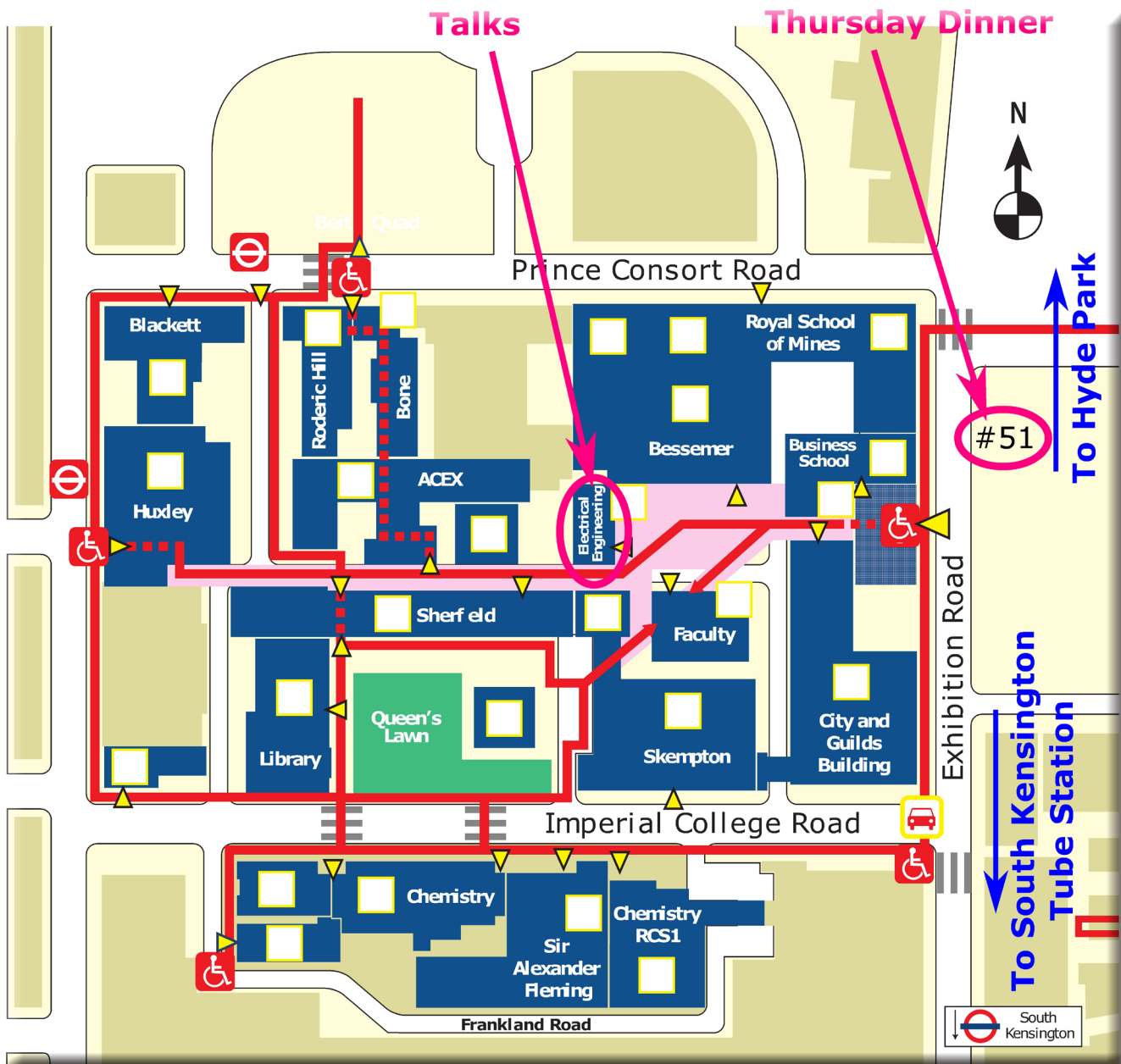
Room 611, EEE Building

14:00 – 15:00

Closing Remarks, Discussions and Networking

All activities will take place in EE 408 unless otherwise indicated.





Wi-Fi Access

If you have access to “Eduroam”, you are highly recommended to use it.

Otherwise, connect to “Imperial”. In your web browser, click on “guest registration”. Enter unique ID **conf60460**. Provide your details (name, email, etc.) and then you will get a unique guest account valid during the entire workshop.

#LondonWorkshop18

If you are on social media, we encourage you to share your experience during the event using the hashtag **#LondonWorkshop18** and tagging [@CSP_ImperialEEE](https://twitter.com/CSP_ImperialEEE).

Tourist Information

If you'd explore London, we recommend visiting wikitravel.org/en/London for relevant information.

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