

4th Workshop on Mathematical Aspects of Network Synthesis

PROGRAMME

Wednesday 21 September 2016

Lectures will be held in Lecture Room 2, Department of Engineering, Trumpington St

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|--------------------------------------|--|---|
| 9:15 | Registration and coffee | Lecture Room 4 |
| | | CHAIR: Keith Glover |
| 10:00 | Malcolm Smith
(University of Cambridge) | <i>A new look at the Ladenheim catalogue
(In Memoriam R. Kalman)</i> |
| 11:00 Coffee (Lecture Room 4) | | |
| | | CHAIR: Rodolphe Sepulchre |
| 11:30 | Arjan Van der Schaft
(University of Groningen) | <i>Towards nonlinear network synthesis</i> |
| 12:00 | Venkat Chandrasekaran
(California Institute of Technology) | <i>Finding Planted Subgraphs using the Schur-Horn Relaxation</i> |
| 12:30 Lunch (Lecture Room 4) | | |
| | | CHAIR: Masaaki Kanno |
| 13:45 | David Limebeer
(University of Oxford) | <i>Passive Networks in the Control of Aeroelastic Phenomena in Long-Span Suspension Bridges</i> |
| 14:15 | Jason Jiang
(University of Bristol) | <i>Mechanical Network Synthesis of Biquadratic and Bicubic Impedances</i> |
| 14:45 | Timothy Hughes
(University of Cambridge) | <i>Behavioral network synthesis. Part I: passivity.</i> |
| 15.15 Tea (Lecture Room 4) | | |
| | | CHAIR: Fulvio Forni |
| 15:45 | Group photograph | |
| 16:00 | Nicos Karcaniias
(City University, London) | <i>Passive Network Redesign and Implicit Network Descriptions</i> |
| 16:30 | Alessandro Morelli
(University of Cambridge) | <i>Group action, equivalence and realisation in electrical networks</i> |
| 17:00 | CLOSE | |

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Thursday 22 September 2016

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9:30 Coffee Lecture Room 4

CHAIR: Malcolm Smith

10:00 **Paul Fuhrmann**
(Ben Gurion University) *Control and Interpolation
(In Memoriam U. Helmke)*

11:00 **Coffee** (Lecture Room 4)

CHAIR: Karl Åström

11:30 **Patrick Dewilde**
(Technical University of Munich) *Between inner-outer and spectral factorization*

12:00 **Rodolphe Sepulchre**
(University of Cambridge) *Localised network behaviours*

12:30 **Lunch** (Lecture Room 4)

CHAIR: Glenn Vinnicombe

13:45 **Fabien Seyfert**
(INRIA, France) *Analytical Techniques for Identification and Design of
Microwave Filters*

14:15 **Michael Chen**
(University of Hong Kong) *Realization of Biquadratic Impedances as Five-Element Bridge
Networks*

14:45 **Paolo Rapisarda**
(University of Southampton) *From data to state model via duality*

15:15 **Tea** (Lecture Room 4)

CHAIR: Malcolm Smith

15:45 **Richard Pates**
(University of Lund) *Decomposing Analysis and Synthesis Problems in Electrical
Networks*

16:15 **Timothy Hughes**
(University of Cambridge) *Behavioral network synthesis. Part II: reciprocity.*

16:45 Close