Workshop
Mathematical Aspects of Network Synthesis

Date: 26th - 27th May 2014

Place: Institute of Mathematics
       University of Würzburg
       Emil-Fischer-Street 40, Room SE40
       97074 Würzburg, Germany
       https://elmut.uni-wuerzburg.de/building/9040

Organizer: Uwe Helmke

Sponsored by DFG-SPP 1305

Speakers: P. Fuhrmann
          T. Hughes
          R. Kalman
          M. Smith
          J. Zheng Jiang
          A. van der Schaft
Program

Monday, 26th May 2014

13:00-13:45
Rudolf Kalman (Zürich)
Classical invariant theory (in the sense of Hilbert) as the tool for the complete solution of the network realization problem (Part I)

14:00-14:45
Malcolm C. Smith, (Cambridge)
A survey of classical and recent results in RLC circuit synthesis

15:00-15:30 coffee break

15:30-16:15
Paul Fuhrmann (Beer-Sheva)
Another look at observer theory

16:30-17:15
Arjan van der Schaft (The Netherlands)
Terminal behavior of RLC circuits

19:00 Dinner at Mainmühle

Tuesday, 27th May 2014

10:00-10:45
Rudolf Kalman (Zürich)
Classical invariant theory (in the sense of Hilbert) as the tool for the complete solution of the network realization problem (Part II)

11:00-11:15 coffee break

11:15-11:45
Timothy H. Hughes, (Cambridge)
Questions of minimality in RLC circuit synthesis

12:00-12:45
Jason Zheng Jiang (Bristol)
Regular Positive-Real Functions and Minimum Realisation of Biquadratic Impedances

13:00 Lunch break

14:15-15:00
Rudolf Kalman (Zürich)
Classical invariant theory (in the sense of Hilbert) as the tool for the complete solution of the network realization problem (Part III)

15:15-15:45 coffee break

15:45-16:15
Timothy H. Hughes, (Cambridge)
On connections between the Cauchy index, the Sylvester matrix, continued fraction expansions, and circuit synthesis