

DIMACS/ECDC workshop:

Spatio-temporal and Network Modelling of Diseases III

Rottenburg/Tübingen 21-25 October 2008

PROGRAMME

The durations of the sessions indicated are intended to allow some time for general discussion. Guidelines are that individual talks should be 15-20 mins, except for the initial review (O'Neill) and the final talk (Keiding) for each of which 40-45 minutes is allocated. Up to 40 minutes is allowed in the timetable for the combined talks (Ball and Sirl, O'Neill and Kypraios).

All events from Tuesday to Thursday will be at the main venue, the Johann Baptist Hirscher Haus, unless otherwise stated.

On Friday, the talks and discussions will be in Tübingen, at the Conference Centre of Tübingen University Clinics.

TUESDAY 21 OCTOBER

16.00 onwards **Registration** at Johann Baptist Hirscher Haus, Rottenburg

18.30 - 20.00 **Welcome, introductions, and drinks** at Johann Baptist Hirscher Haus

20.00 *Dinner at Württemberger Hof, Rottenburg*

WEDNESDAY 22 OCTOBER

9.00 - 12.45 Relating models to data I - *Chair: Denis Mollison*

Welcome and introductory remarks

Philip O'Neill Relating models to data: a review

Nele Goeyvaerts Elucidating age-specific differences in susceptibility and infectiousness for airborne infections from data on social contacts and serological status

Nico Nagelkerke Heterogeneity in host HIV susceptibility as a potential contributor to recent HIV prevalence declines in Africa

11.00 - 11.30 Coffee

Vern Farewell The use of auxiliary information to deal with informatively missing data

Lisa Sattenspiel The potential significance of co-circulating pathogens on patterns of spatial spread

Nelson Onyango Optimal Vaccination Strategies in Periodic Settings

13.00 Lunch

14.00 Brief walking tour of Rottenburg

14.45-17.45 New approaches to modeling - *Chair: Martin Eichner*

Valerie Isham Epidemics and rumours on networks

Pieter Trapman Is R_0 compatible with spatial epidemics? - new results from long-range percolation

Eben Kenah Network-based targeting of interventions

16.00 - 16.30 Coffee

Mirjam Kretzschmar Comparison of network models for STI transmission and intervention: how useful are they for public health?

Malwina Luczak Laws of large numbers for epidemic models with countably many types

Alun Lloyd Novel control strategies for vector borne diseases: new challenges for modellers

**18.00-19.00 Discussion: Future research directions and research challenges -
*Chair: Alun Lloyd***

Tommi Asikainen The top 10 future disease threats

General discussion

20.00 Dinner at Weinstube Stanis, Rottenburg

THURSDAY 23 OCTOBER

08.45-10.00 Relating models to data II - *Chair Tommi Asikainen*

Maroussia Bojkova On age-dependent branching models for surveillance of infectious diseases controlled by additional vaccination

Åke Svensson Non-parametric estimation of transmission functions in emerging epidemics

Jacco Wallinga Who infected whom? Estimation of infection trees, generation intervals and local network structure

10.00 Workshop photo

10.05 - 10.30 Coffee

Mark Handcock Modeling Networks from partially-observed network data

Krista Gile Using link-tracing data to inform epidemiology

Eduardo Massad Scale-Free Network of Dengue in Singapore

Johannes Müller What do data from contact tracing tell us?

12.00 Lunch

13.00-14.30 Integration of modelling scales - *Chair: Denis Mollison*

Frank Ball and David Sirl Network epidemic models with two levels of mixing

Steven Leach European demographic and movement data for modelling

Iain Barrass Modelling world-wide disease spread: a case for using different spatial scales

14.30 Excursion to Tübingen and Bebenhausen Monastery ...

... 18.00 arrive at Grüner Baum Inn in Hagelloch

**18.00-19.30 Discussion: Future research directions and research challenges -
*Chair: Alun Lloyd***

Klaus Dietz Hagelloch Measles

Neil Ferguson Model complexity: holding back the simulation tide

General discussion and pre-dinner drinks.

20.00 Dinner at Grüner Baum

FRIDAY 24 OCTOBER

8.15 - 8.30 By bus to Tübingen

All talks and discussion on Friday will be in the Conference Centre of Tübingen University Clinics

9.00 - 12.00 Public health and policy issues - *Chair: Valerie Isham*

Sheila Bird Public health and policy issues on illegal drugs use

Peter Grove Within Pandemic Forecasting in the UK: Plans for nowcasting, short and long term forecasting in an influenza pandemic and the experience gained from exercises

Tommi Asikainen Modelling as a tool for public health, role and structure of European Union wide networks

10.15 - 10.30 *Coffee*

Philip O'Neill and Theodore Kypraios Modelling and data analysis for antibiotic-resistant pathogens in healthcare settings

Mick Roberts Seasonal influenza in New Zealand

Matt Ferrari Spatial patterns on the edge of dynamic stability: measles in the Sahel

12.15-12.45 Discussion: Future research directions and research challenges - *Chair: Alun Lloyd*

Final discussion

13.00 *Lunch*

13.45-14.30 Niels Keiding Influenza in Denmark 1918: three contrasting analyses

15.00-16.00 *Retirement of Klaus Dietz*

Official talks by Klaus Dietz and others to mark his retirement

16.00-17.00 *Reception and snacks*

18.00 *Tübingen Castle: reception, tour of Castle Museum, and organ concert*

20.00 *Dinner at Rittersaal, Schloss Tübingen, in honour of Klaus Dietz*

SATURDAY 25 OCTOBER: DEPARTURE

PARTICIPANTS

<i>Tommi Asikainen (ECDC)</i>	<i>tommi.asikainen@ecdc.eu.int</i>
<i>Frank Ball (Nottingham)</i>	<i>fgb@maths.nott.ac.uk</i>
<i>Iain Barrass (HPA, Porton Down)</i>	<i>Iain.Barrass@hpa.org.uk</i>
<i>Andrew Barbour (Zurich)</i>	<i>adb@amath.unizh.ch</i>
<i>Sheila Bird (Cambridge)</i>	<i>sheila.bird@mrc-bsu.cam.ac.uk</i>
<i>Maroussia Bojkova (Sofia)</i>	<i>bojkova@fmi.uni-sofia.bg</i>
<i>Martin Bootsma (Utrecht)</i>	<i>m.c.j.bootsma@uu.nl</i>
<i>Jadranka Bozikov (Zagreb)</i>	<i>jbozikov@snz.hr</i>
<i>Tom Britton (Stockholm)</i>	<i>tomb@math.su.se</i>
<i>Chaeshin Chu (Seoul)</i>	<i>cchu@nih.go.kr</i>
<i>Klaus Dietz (Tübingen)</i>	<i>klaus.dietz@uni-tuebingen.de</i>
<i>Hans-Peter Duerr (Tübingen)</i>	<i>hans-peter.duerr@uni-tuebingen.de</i>
<i>Martin Eichner (Tübingen)</i>	<i>martin.eichner@uni-tuebingen.de</i>
<i>Vern Farewell (Cambridge)</i>	<i>vern.farewell@mrc-bsu.cam.ac.uk</i>
<i>Neil Ferguson (Imperial)</i>	<i>neil.ferguson@imperial.ac.uk</i>
<i>Matt Ferrari (Penn State)</i>	<i>mferrari@psu.edu</i>
<i>Krista Gile (Washington)</i>	<i>kgile@stat.washington.edu</i>
<i>Nele Goeyvaerts (Hasselt)</i>	<i>nele.goeyvaerts@uhasselt.be</i>
<i>Ute Griesemann (Tübingen)</i>	<i>ute.griesemann@uni-tuebingen.de</i>
<i>Peter Grove (DH, London)</i>	<i>peter.grove@dh.gsi.gov.uk</i>
<i>Elizabeth Halloran (Seattle)</i>	<i>betz@u.washington.edu</i>
<i>Mark Handcock (Washington)</i>	<i>handcock@u.washington.edu</i>
<i>Dominik Heinzmann (Zurich)</i>	<i>dominik.heinzmann@math.unizh.ch</i>
<i>Valerie Isham (UCL, London)</i>	<i>valerie@stats.ucl.ac.uk</i>
<i>Niels Keiding (Copenhagen)</i>	<i>n.keiding@biostat.ku.dk</i>
<i>Eben Kenah (Washington)</i>	<i>eek4@u.washington.edu</i>
<i>Edward Knock (Nottingham)</i>	<i>pmxek@nottingham.ac.uk</i>
<i>Mirjam Kretzschmar (Bilthoven)</i>	<i>mirjam.kretzschmar@rivm.nl</i>
<i>Klaus Krickeberg</i>	<i>krik@ideenwelt.de</i>
<i>Theodore Kypraios (Nottingham)</i>	<i>theodore.kypraios@nottingham.ac.uk</i>
<i>Steve Leach (HPA, Porton Down)</i>	<i>steve.leach@hpa.org.uk</i>
<i>Alun Lloyd (NCSU, Raleigh)</i>	<i>alun.lloyd@ncsu.edu/j/aj</i>
<i>Malwina Luczak (LSE, London)</i>	<i>m.j.luczak@lse.ac.uk</i>
<i>Eduardo Massad (Sao Paulo)</i>	<i>edmassad@dim.fm.usp.br</i>
<i>Denis Mollison (Heriot-Watt, Edinburgh)</i>	<i>denis@ma.hw.ac.uk</i>
<i>Johannes Muller (Munich)</i>	<i>johannes.mueller@gsf.de</i>
<i>Nico Nagelkerke (Al Ain, UAR)</i>	<i>nico.nagelkerke@uaeu.ac.ae</i>
<i>Philip O'Neill (Nottingham)</i>	<i>pdo@maths.nott.ac.uk</i>
<i>Onyango Nelson (Munich)</i>	<i>nelsonowuor@gmail.com</i>
<i>PR Parthasarathy (IIT Madras)</i>	<i>prp@iitm.ac.in</i>
<i>Mick Roberts (Massey)</i>	<i>m.g.roberts@massey.ac.nz</i>
<i>Kerstin Rosenberger (Heidelberg)</i>	<i>kerstin.rosenberger@uni-heidelberg.de</i>
<i>Lisa Sattenspiel (Missouri)</i>	<i>sattenspiel@missouri.edu</i>
<i>Birgitt Schonfisch (Tübingen)</i>	<i>birgitt.schoenfisch@uni-tuebingen.de</i>
<i>Markus Schwehm (Tübingen)</i>	<i>markus.schwehm@uni-tuebingen.de</i>
<i>David Sirl (Nottingham)</i>	<i>david.sirl@nottingham.ac.uk</i>
<i>Claudio Struchiner (Rio de Janeiro)</i>	<i>stru@procc.fiocruz.br</i>
<i>Ake Svensson (Stockholm University)</i>	<i>akes@math.su.se</i>
<i>Pieter Trapman (Utrecht)</i>	<i>trapman@math.uu.nl</i>
<i>Jacco Wallinga (Bilthoven)</i>	<i>jacco.wallinga@rivm.nl</i>