**Bayes 2019 – Agenda**

**Day 1 – Tuesday, 21st May 2019**

**13:30 - 14:00** Registration & Welcome coffee

**14:00 - 18:00 Course: *How to practically implement adaptive design?***

*Adrian Mander and James Wason, MRC Biostatistics Unit, University of Cambridge*

Including coffee break (15:45 – 16:15)

**Day 2 – Wednesday, 22st May 2019**

**08:00 - 08:40** Registration continued

**08:40 - 09:00** Welcome to the main conference

**Session 1 Session Theme: Decision making in digitalized world**

**Chair: Emmanuel Lesaffre**

**09:00 - 09:45 Invited talk: *Prof. Kerrie Mengersen, Queensland University of Technology, Australia***

**Bayesian Learning for Decision Making in the Big Data Era**

**09:45 - 10:05** *Viktor Jirsa (University of Aix-Marseille)*

Translational Neuroscience: from dynamical systems to personalized medicine

**10:05 - 10:25** *Pantelis Samartsidi (University of Cambridge)*

A Bayesian multivariate factor analysis model for evaluating an intervention using observational time-series data on multiple outcomes

**10:25 - 10:45** *Claire Donnat (Stanford University)*

A Bayesian ICA framework for multimodal imaging integration in Brain Connectomics

**10:45 - 11:15 Coffee Break & Sweeties**

**11:15 - 11:35** *Yingbo Wang (Novartis Pharma AG)*

Bayesian non-inferiority design borrowing strength from historical controls with a meta-analytic-predictive approach

**11:35 - 11:55** *Alice Gosselin (Sanofi)*

Comparison Study for Matching Methodologies for Historical Data Borrowing

**11:55 - 12:15** *F. Chen (Janssen Pharmaceuticals)*

Modeling and Simulation of External Clinical Trial Results to Improve Drug Development Decisions: A Three-Step Process with Case Studies

**12:15** - **12:35**  **180 seconds challenge:**

* *H. Lennon (University of Geneva)*

A Bayesian hierarchical model to integrate dietary exposure and biomarker measurements for the risk of cancer

* *Petra Graham (University of Adelaide, Australia)*

Evidence Synthesis: a comparison of Bayesian and frequentist approaches

* *James A. Thompson (Texas A&M University)*

A Bayesian interaction approach to mediation modeling: a case study into causes of caesarean section among American women.

* *Noel Cressi (University of Wollongong – Australia)*

Bayesian forecasting of infectious diseases with SIRS models

**12:35 – 13:50 Lunch time**

13:50 – 14:00 Serious Game

**Session 2 Session Theme: Bayesian modeling**

**Chair: Laurent Estève**

**14:00 – 14:45** **Invited talk: *Prof. Jean-Michel Marin, University of Montpellier***

**Bayesian model choice**

**14:45 – 15:05** *Fang Chen (SAS institute)*

Introducing the BGLIMM Procedure for Bayesian Generalized Linear Mixed Models

**15:05 – 15:25** *Sophie Ancelet (Institut de Radioprotection et de Sûreté Nucléaire, Paris)*

A Bayesian Poisson mixture model for model selection and dose estimation in biological retrospective dosimetry

**15:25 – 15:45** *Haitao Chu (University of Minnesota)*

A Bayesian Hierarchical Model Estimating CACE in Meta-analysis of Randomized Clinical Trials with Noncompliance

**15:45 – 16:15 Coffee Break**

**Session 3 Session Theme: Non-linear modeling**

**Chair: Astrid Jullion**

**16:15 – 17:00** **Invited talk: *Dr. François Mercier, Roche***

**Bayesian non-linear disease progression models**

**17:00 – 17:20** *Antoine Pissoort (Pharmalex)*

A Bayesian Disease progression model of Parkinson Disease combining RWD and natural history data to evaluate a new treatement

**17:20 – 17:40** *Maud Hennion (Pharmalex)*

Pharmacokinetic Model with SAS - Proc MCMC with applications to preclinical pharmacology

**17:40 – 18:00** *Fabiola La Gamba (Janssen Pharmaceutica)*

Bayesian sequential integration within a preclinical PK/PD modeling framework: Lessons learned

**18:00 – 18:10 Day 2 closure & Social event details**

**19:30 – 23:00 Social Event**

**Day 3 – Thursday, 23rd May 2019**

**08:00 - 08:20 Registration continued**

**08:20 - 08:30** Welcome to Day 3

**Session 4 Session Theme: Designing clinical trials**

**Chair: Heinz Schmidli**

**08:30 - 09:15 Invited talk: *Dr. Kaspar Rufibach, Roche***

**Bayesian Predictive Power: Theory, challenges in implementations and perspectives**

**09:15 – 09:35** *Arnaud Monseur (Pharmalex)*

From Power and Assurance to Bayesian Power: application to probability of success

**09:35 – 09:55** *Astrid Jullion (Novartis)*

Probability of success: a viable concept to inform the early development of a topical drug

**09:55 – 10:15** *Samuel Pawel (University of Zurich)*

Predictive Evaluation of Replication Studies

**10:15 - 10:45 Coffee Break & Sweeties**

**10:45 – 11:05** C*harlotte Micheloud (University of Zurich)*

Sample Size Calculation for Replication Studies

**11:05 – 11:25** *Annette Kopp-Schneider (German Cancer Research Center)*

Use of external information in clinical trials: What can be gained in terms of frequentist power?

**11:25 – 12:10 Invited talk: *Prof. Dr. Eric-Jan Wagenmakers, Amsterdam University, NL***

**Bayesian benefits for the pragmatic biostatistician**

**12:10 – 13:25 Lunch time**

13:25 – 13:35 Serious Game

 **Session 5 Session Theme: Inference in clinical research**

**Chair: Bruno Boulanger**

**13:35 – 13:55** **180 seconds challenge**

* *S. Calderazzo (German cancer research center)*

Bayesian clinical trials design and evaluation: a decision-theoretic view

* *Maha Alsefri (University of Liverpool)*

Bayesian joint modelling of longitudinal and time to event data: A review of methods and issues

* *Audrey Larue-Triolet (BioMérieux)*

Bayesian method to predict the probability to comply to the criteria for a future study or to monitor a new study

**13:55 – 14:40 Invited talk: *Prof. Sara Geneletti, London School of Economics, UK***

**Causal inference in clinical research**

**14:40 – 15:00** *Burak Kürsad Günhan (University Medical Center Göttingen)*

Model-based meta-analysis using arm-based models

**15:00 – 15:20** *Jing Zhang (University of Maryland)*

Bayesian joint meta-regression methods adjusting for post-randomization variables in network meta-analysis?

**15:20 – 15:40** *Kelly R. Moran (Duke University)*

Bayesian hierarchical factor regression models to infer cause of death from verbal autopsy data

**15:40 - 16:10 Coffee Break & Sweeties**

**Session 6 Session Theme: Bayesian Statistics in CMC**

**Chair: Didier Poirault**

**16:10 – 16:55 Invited talk: *Dr. Mike Denham, GSK, UK:***

**Bayesian Statistics in CMC**

**16:55 – 17:15** *Piotr Juszczak (Roche Diagnostics)*

On supporting development of diagnostic assays with Bayesian modelling and simulation

**17:15 – 17:35**  *Bernard G Francq (GSK Vaccines)*

Bayesian Coefficients of Variation in Linear Mixed Models, Random Effects and Precision in Assay Qualification

**17:35 – 17:55** *Xiaolong Luo (Celgene Corporation)*

Comparison of Bayesian Multivariate Models for Detecting Safety Signals in Clinical Trials

**17:55 BAYES2020 Announcement**

**Day 4 – Friday, 24th May 2019**

**08:00 - 08:20 Registration continued**

**08:20 - 08:30** Welcome to Day 4

**Session 7 Session Theme: Bayesian statistics for 21st century cures**

**Chair: Leonhard Held**

**08:30 – 09:10 *J. Jack Lee, Ying Yuan, Department of Biostatistics, University of Texas MD Anderson Cancer Center***

**Bayesian Model-Assisted Designs and Their Applications for Early Phase Clinical Trials – When Simplicity Meets Superiority**

**09:10 – 09:30** *Forrest Williamson (Eli Lilly and Company)*

Bayesian applications in rare disease clinical trial research

**09:30 – 09:50** *Barbara Wendelberger (Berry Consultants, USA)*

Guiding clinical trial design for a rare disease using natural history data and Bayesian disease progression modeling

**09:50 – 10:10** *Angély Loubert (Université de Lyon)*

Combination of prior distributions elicited from expert opinions previous to Bayesian inference. Application to personalized medicine

**10:10 - 10:40 Coffee Break & Sweeties**

**10:40 – 11:00** *Pierre Colin (Sanofi)*

Use of Probability of Success - A way to manage more available information

**11:00 – 11:20** *Anna Pöhlmann (University of Bamberg, Germany)*

An R Shiny App to design and analyse basket trials in Oncology

**11:20 – 11:40** *Oliver Sailer (Boehringer Ingelheim)*

Exploring early interim analyses in basket designs in Oncology

**11:40 – 12:00** *Haiyan Zheng (Newcastle University)*

Bayesian basket trial designs for borrowing of information across similar subpopulations

**12:00 – 12:15 Closing Event**

**& lunch**