

**DAY 1 - Monday 19 September, 2022****08:15 - 09:00 REGISTRATION****Short preconference course (optional)***Lecturer: Thierry ARTIERES, Ecole Centrale Marseille (FR)*

Introduction to neural networks and their properties

**12:30 - 13:30 REGISTRATION.....****13:30 - 13:45 WELCOME by Rodolphe Thiébaud & Frédéric Dubois****Session 1: Big data to the rescue of drug development challenges?**Invited Speakers (2)**13:45 - 14:30 Chris HOLMES, Oxford - Big Data Institute (UK)**  
Big data, prediction, and inference: a Bayesian perspective on data fusion**14:30 - 15:15 Harald BINDER, University of Freiburg (DE)**  
Deep learning and dynamic modeling for rare disease evidence from small data**15:15 - 15:45 COFFEE BREAK, EXHIBITORS & POSTERS SESSION**Contributed Speakers (2)**15:45 - 16:05 Bénédicte COLNET**  
Combining randomized and observational data: toward new clinical evidence?**16:05 - 16:25 Arnaud MONSEUR**  
Leveraging natural history data in one- and two-arm hierarchical bayesian studies of rare disease progression**16:25 - 17:15 5' POSTERS overview****Edouard LHOMME:** COVERAGE France platform: a national multicenter adaptive randomized clinical trial using a multiarm multistage (MAMS) design to evaluate several experimental treatments for covid-19 in the outpatient setting**Vincent BONNEMAINS:** impact of the kidney transplantation moratorium in France because of the COVID-19 pandemic: a cohort-based study**Manel RAKEZ:** Deep-learning and statistical methods for sequential breast density estimation and dynamic breast cancer risk evaluation in women involved in breast cancer screening programs**Corine BAAYEN:** Group sequential trials for repeated measurements with pipeline patients at interim decision points: concepts and case study**Samuel SALVAGGIO:** The net treatment benefit: an intuitive statistical tool involving individual patients in treatment decision-making**Alice GOSSELIN:** A multiple cohort Ph2 study design with decision making based on Bayesian hierarchical modelling**Federico ROTOLO:** Validation of minimal residual disease as surrogate for a time-to-event clinical endpoint**17:15 - 20:30 WINE & POSTERS**

## DAY 2 - Tuesday 20 September, 2022

### Session 2: Statistics and Machine Learning: friends or foes?

#### Invited Speakers (2)

**09:00 – 09:45**     **Ewout STEYERBERG**, *Leiden University Medical Center (NL)*  
Statistics and machine learning: friends or foes?

**09:45– 10:30**     **Gary COLLINS**, *University of Oxford (UK)*

**10:30 – 11:00**     **COFFEE BREAK, EXHIBITORS & POSTERS SESSION**

#### Contributed Speakers (3)

**11:00 – 11:20**     **Michael LEBLANC**  
Subgroup rule induction for patient outcomes: examples and experience with machine learning methods for clinical data

**11:20 – 11:40**     **Jenna CARCIONE**  
Evaluation of machine learning methods in propensity score estimation

**11:40 – 12:00**     **Yohann FOUCHER**  
Super Learner for survival prediction from censored data: a simulation-based study.

**12:00 – 13:30**     **LUNCH BUFFET, EXHIBITORS & POSTERS SESSION**

### Session 3: Getting medicines to patients faster – the role of innovative designs

#### Invited Speakers (2)

**13:30 – 14:15**     **Emilie KAUFMANN**, *University of Lille (FR)*  
On multi-armed bandit algorithms for early stage clinical trials

**14:15 – 15:00**     **Wolfgang JACQUET**, *FAGG - AFMPS (BE)*  
Robust decision making and precise estimation.  
Complex designs, artificial intelligence, and real-world data, how to move forward?

**15:00 – 15:30**     **COFFEE BREAK, EXHIBITORS & POSTERS SESSION**

#### Contributed Speakers (5)

**15:30 – 15:50**     **Alessandra SERRA**  
An order restricted multi-arm multi-stage clinical trial design

**15:50 – 16:10**     **Fulvio DI STEFANO**  
Incorporation of phase I healthy volunteers data on receptor occupancy into a phase II proof-of-concept trial using a Bayesian dynamic borrowing design

**16:10 – 16:30**     **Benjamin DUPUTEL**  
Bayesian seamless master protocols and how to transfer information in Phase II/III binary/survival outcome – Theory and application on Atalante-1 study

- 16:30 – 16:50**     **Pavel MOZGUNOV**  
A dose-finding design for dual-agent trials with patient-specific doses for one agent with application to an opiate detoxification trial
- 16:50 – 17:10**     **Mickaël DE BACKER**  
The use of Generalized Pairwise Comparisons for designing trials that are tailored to patients’ wishes and needs
- 19:30 – 22:30**     **CONFERENCE DINNER**

### DAY 3 - Wednesday 21 September, 2022

#### DEBATE SESSION

Various questions will be discussed with the audience. Each question will be presented by one member of the scientific committee through a short talk and discussed by some invitees and the audience.

We would like some challenging questions from the audience, including real-life, case studies suitable to be discussed by the panel. If you know suitable topics or have a question, then please contact us via [contact@snb2022.paris](mailto:contact@snb2022.paris)

- 12:30 – 14:00**     **LUNCH BUFFET, EXHIBITORS & POSTERS SESSION**

#### Session 4: LESSONS LEARNT FROM THE COVID-19 EXPERIENCE

##### Invited Speakers (2)

- 14:00 – 14:45**     **Marc BUYSE**, *IDDI and Hasselt University (BE)*  
COVID and the need for pragmatism in clinical trials
- 14:45 – 15:30**     **Stephen SENN**, *Statistical Consultant Edinburgh (UK)*  
COVID and concurrent control

##### Contributed Speakers (1)

- 15:30 – 15:50**     **VANDEBOSCH An**  
Modeling and simulation to guide a COVID-19 Vaccine Phase 3 trial: Janssen case study
- 15:50 – 16:00**     **CLOSING WORDS** by **Rodolphe Thiébaud**