

*Biomathematics Seminar 2017*  
*(9th Edition)*

*Marseille, 28-30 June 2017*

----- 28 June -----

***Session 1: Modelling and Inference***

Chair: S. Lemler

14:15 Etienne Claverie

*Combining a soil temperature model with the selection of a thermal time model to improve the prediction of emergence for maize cultivars*

14:40 Pierre Carmier

*Revisiting the regularized particle filter for parameter estimation in hidden Markov models*

15:05 Antonin Della Noce

*Heterogeneous population models: mixed-effects models and mean-field limit*

15:30 Charlotte Baey

*Likelihood ratio test for variance components in nonlinear mixed effects models*

15:55 Gautier Viaud

*Bayesian estimation of hierarchical models for genotypic differentiation of *Arabidopsis thaliana**

16:20-16:45 Break

***Session 2: Statistical Learning***

Chair: B. Bayol

16:45 Mathilde Sautreuil

*Bivariate discrete mixture model for the analysis of RNA-seq data*

17:10 Mahmoud Bentrion

*Statistical analysis of transcriptomics data in oncology for the development of immunotherapy*

17:35 Walid Hammache

*Deep learning methods for crop classification using multi-temporal remote sensing data*

18:00 Chloé Adam  
*Frequent Pattern Mining and Applications to Medical Data*

18:25 Paul-Henry Cournède  
*A Bayesian perspective to Neural Networks (MCMC forever...or not...)*

18:50 End of the session.

----- 29 June -----

### ***Session 3: Practical Session***

8:30 – 12:30: Benoit Bayol et Jean-Christophe Attard  
*Coconut: Collaborative Computation in a Nutshell*

----- 30 June -----

### ***Session 4: Neurosciences***

Chair: P.-H Cournède

9:30 Rosa Cossart (INSERM, Inmed)  
*Organisation fonctionnelle des circuits de la mémoire*

10:15 Arnaud Malvache (INSERM, Inmed)  
*Intégration de l'information spatio-temporelle dans les réseaux neuronaux*

10:50-11:00 break

11:00 Alexandre Richard  
*Dépendances longues dans les séries de décharges neuronales*

11:35 Sarah Lemler  
*Combined model for neuronal potential modelling*

12:10 Conclusion