

A walk through the uses of AI in experimental biology and bio-medicine

Paris and live transmission in 11 cities

- ▶ 8:30 – 8:45 **Welcome**
- ▶ 8:45 – 9:00 **Introduction of the day - Franck Lethimonnier, ITMO TS**

- SESSION 1 - Chair : Isabelle Bloch, Paris & Nathalie Grivel, Paris**
- ▶ 9:00 – 9:30 **AI in experimental research: digital twins and 3R perspectives - Hugues Berry, Lyon**
- ▶ 9:30 – 10:00 **Modelling and predicting the progression of neurodegenerative diseases: application to clinical trial design - Stanley Durrleman, Paris**
- ▶ 10:00 – 10:30 **Focus on the organizational challenges of AI in biomedicine sector - Audrey Vézian, Lyon**

- SESSION 2 - Chair : Pierre Marquet, Limoges & Marie-Josèphe Leroy-Zamia, Paris**
- ▶ 10:30 – 11:00 **Artificial Intelligence for the discovery of localization patterns and morphological signatures - Thomas Walter, Paris**
- ▶ 11:00 – 11:15 **Coffee break**
- ▶ 11:15 – 11:45 **Modelling and extrapolation from multi-species and multi-dimensional preclinical data to human - Sarah Zohar, Paris**
- ▶ 11:45 – 12:15 **Using ML to discover the underlying models of medicine - Mihaela van der Schaar, Cambridge, UK**
- ▶ 12:15 – 12:55 **Key note Lecture Using Machine Learning to Derive New Traits for Cardiovascular Diseases - Patrick Ellinor, Cambridge, US**

- ▶ 12:55 – 14:15 **Lunch break**

A walk through the uses of AI in experimental biology and bio-medicine

SESSION 3 - Chair Marie-Christine Jaulent, Paris & Corinne Sébastiani, Paris

- ▶ 14:15 – 14:45 **Finding is believing: AI reveals the presence of macromolecules in 3D cellular cryogenic electron tomograms** - Emmanuel Moebel, Rennes
- ▶ 14:45 – 15:15 **Cardiovascular digital twins based on biomechanical modeling** - Dominique Chapelle, Paris
- ▶ 15:15 – 15:45 **Natural language processing for data extraction in clinical texts: useful in the context of a pandemic ?** - Antoine Neuraz, Paris
- ▶ 15:45 – 16:15 **The digital twins a means to embedding AI from bench to patient's bedside** - Lotfi Senhadji, Rennes
- ▶ 16:15 – 16:30 **Conclusion** - Christian Boitard, ITMO PMN