

## **Session Program**

**25-27 Sept 2024**

### **From Multiscale Models to Digital Twins**

#### ***Multiscale Models in Cell Biology III (Chair: Franziska Matthäus)***

FIAS, Lecture Hall  
Ruth-Moufang-Str. 1 60438 Frankfurt am Main

# Thursday 26 September

14:30

## Multiscale Models in Cell Biology III (Chair: Franziska Matthäus)

**Session** | **Location:** FIAS, Lecture Hall, Ruth-Moufang-Str. 1 60438 Frankfurt am Main

14:30–15:15

### Multi-resolution simulations of intracellular processes

**Speaker**

Radek Erban

15:15–16:00

### Multiscale modeling of cell regulation and dynamics

**Speaker**

James R. Faeder

16:00–16:30

### Coffee Break

16:30–16:50

### Molecular dynamics simulations shed light on critical events in the early stages of human IRE1 $\alpha$ activation

**Speaker**

Elena Spinetti

16:50–17:10

### Bivariate change detection in absolute movement direction and speed on multiple scales

**Speaker**

Solveig Plomer

17:10–17:30

### AI-powered simulation-based inference of a genuinely spatial-stochastic model of early mouse embryogenesis

**Speaker**

Michael Alexander Ramírez Sierra

17:30–17:50

### Local distributed cellular information processing and cell autonomous feedback control facilitates global tissue-scale properties during development

**Speaker**

Krishnan Iyer

18:00