

# Introduction to Emerging Methods For Integrated Structural Cell Biology at IBS

**Goal** : Provide a basic understanding of emerging methods in structural cell biology, currently in use or under development at IBS/PSB. Get to know the local experts.

**Who** : PhD students, postdocs, engineers, technicians, researchers ... everybody is welcome ! For PhDs, the course can be validated at the Physics and EDCSDV UJF doctorate schools.

**How**: the courses will provide a simplified theoretical framework as well as practical information on how to use the techniques (what kind of question may the technique answer ? how much sample do I need ? How much investment is necessary to process and interpret the data ?).

**Where**: IBS seminar room (1206)

**When**: Every other Wednesday, from 1 to 2 PM; speakers are then available for informal discussions.

**Language** : English

**Persons in charge** : Dominique bourgeois et Michel Vivaudou

# Program

- **Methods for isotopic labeling and NMR of large macromolecular assemblies** :Jérôme Boisbouvier : 10 octobre
- **Non-covalent mass spectrometry** :Elisabetta Boeri : 24 octobre
- **Methods of electrophysiology/ patch clamp**: Michel Vivaudou: 7 novembre
- **Electron Tomography** : Winnie Ling : 5 décembre
- **Analytical Ultracentrifugation**: Christine Ebel: 19 décembre.
- **In crystallo optical spectroscopy** :Antoine Royant : 9 janvier
- **Solid-state NMR** : Paul Schanda : 23 janvier
- **Membrane proteins** : Cécile Breyton: 6 février
- **Nanocrystallography** :Jacques Colletier : 20 février
- **Single-particle electron microscopy and reconstruction** :Christiane Schaffitzel: 6 mars
- **Characterization of intrinsically disordered proteins at atomic resolution using NMR** : Malène Jensen : 20 mars
- **SAXS/SANS/WAXS**: Anne Martel: 3 avril
- **Super-resolution fluorescence microscopy** :Virgile Adam : 17 avril
- **Simulating protein chemistry with reaction path finding with QM/MM hybrid methods** : Martin Field : 22 mai
- **H/D exchange associated with mass spectrometry** :Eric Forest: 5 juin
- **Surface Plasmon Resonance**: Nicole Thielens: 19 juin
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- **Kinetic protein crystallography** :Dominique Bourgeois : 3 juillet
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- **XFEL and femtosecond crystallography** :Martin Weik : 17 juillet