

IBS special lecture series: Introduction to Advanced & Emerging Biophysical Methods for Integrative Biology

Place: Main seminar room at Institut de Biologie Structurale (for directions, www.ibs.fr)

Dates: 2017-2018, Wednesday (unless otherwise specified) 1-2 pm + questions

Language: English

Aim: Learn the theoretical bases and practical applications of methods in use at the IBS from expert users.

Organizers: M Vivaudou, IBS/Channels; D Bourgeois, IBS/Dynamop

Contact: Michel Vivaudou, vivaudou@ibs.fr; D Bourgeois, dominique.bourgeois@ibs.fr

The lectures are public. A pass is required to enter the EPN campus where IBS is located. To obtain a pass for the whole series, send us your details (First & last names, date & place & country of birth, gender, citizenship, employer/university) 3 days in advance, and bring a valid ID.

PhD students: Attendance to each lecture will earn you one credit-hour from your doctoral school provided you are registered and sign up the presence sheet available from the speakers. To register, please contact Michel Vivaudou or Dominique Bourgeois by mail or on site.

Series I

2017 January-June

1. **Membrane proteins**, [Cécile Breyton](#): 18 January
2. **Protein engineering, heterologous expression, purification**, [Eve de Rosny](#): 01 February
3. **CRISPR-cas9**, [Joël Beaudouin](#): 15 February
4. **Two-hybrid and immuno-based approaches to study protein complexes and protein-protein interactions**, [Montse Soler-Lopez](#): 08 March
5. **Single-particle electron microscopy and reconstruction**, [Hélène Malet](#): 22 March
6. **Mass spectrometry: non-covalent, sequencing and H/D exchange**, [Elisabetta Boeri](#): 05 April
7. **Surface Plasmon Resonance**: [Jean-Baptiste Reiser](#): 03 May
8. **Microcalorimetry and SEC-MALS**, [Caroline Mas](#), 17 May
9. **Protein dynamics with RPE and spin labeling**, [Valérie Belle](#): 31 Mai
10. **Analytical Ultracentrifugation**, [Christine Ebel](#): 14 June
11. **Optogenetic approaches**, [Olivier Destaings](#): 28 Juin
12. **Super-resolution fluorescence microscopy**, [Virgile Adam](#): 05 July

Series II

2017 October- 2018 March

13. **Electrophysiological techniques for membrane proteins**, [Michel Vivaudou](#): 18 October
14. **Time-resolved crystallography: from cryo-trapping to femtosecond XFEL studies**, [Martin Weik](#): 08 November
15. **Nanocrystallography**, [Jacques-Philippe Colletier](#): 22 November
16. **Cellular electron cryomicroscopy and tomography**, [Winnie Ling](#): 06 December
17. **Atomic Force Microscopy : imaging, force, and mechanics**, [Jean-Luc Pellequer](#): 20 December
18. **smFRET fluorescence spectroscopy**, [Sigrid Milles](#): 10 January 2018
19. **Solid-state NMR**, [Paul Schanda](#): 24 January
20. **Molecular modeling & dynamics of proteins**, [François Dehez](#) : 07 February
21. **Characterization of intrinsically disordered proteins at atomic resolution using NMR**, [Malène Jensen](#): 28 February
22. **Directed Evolution Approaches**, [Darren Hart](#), 14 March
23. **SAXS/SANS/WAXS**, [Anne Martel](#): 28 March