

| | September 12th | September 13th | September 14th | September 15th | September 16th |
|-----------|---|---------------------------|--|--|--|
| Morning | General presentation / What's hot in Neurophysiology (Casado) | W2 | W2 | Guidelines for project (Gendrel) / Ion channels (Casado) | Thalamus and cerebellum as playfields (Casado) |
| Afternoon | Recalling some notions on electricity (Gendrel) / Electrical properties of excitable membranes (Casado) | W2 | W2 | Methods in electrophysiology (Casado) | Methods in electrophysiology (Casado) |
| | September 19th | September 20th | September 21st | September 22nd | September 23rd |
| Morning | W1 | W1 | Patch-clamp techniques (Lambert) | W1 and protocol writing | Optogenetics (Dugué) |
| Afternoon | W1 | W1 | W5a (in vitro analysis) | W1 and protocol writing | W3 |
| | September 26th | September 27st | September 28nd | September 29rd | September 30th |
| Morning | W4-T1 / W3 | W4-T2 / W3 | W4-T3 / W3 | W5a (in vitro analysis) @SU, salle micro 117. | W5b (in vivo analysis) @SU salle micro 108. |
| Afternoon | W4-T1 / W3 | W4-T2 / W3 | W4-T3 / W3 | W3 | W5b (in vivo analysis) @SU salle micro 108. |
| | October 3rd | October 4th | October 5th | October 6th | October 7th |
| Morning | W5b (in vivo analysis) @SU salle micro 101. | Numerical methods (Ranft) | Linking neuronal activity to behaviour (Faure) | | |
| Afternoon | W5b (in vivo analysis) @SU salle micro 101. | Numerical methods (Ranft) | | | Examination |

•W1. Workshop "Setting up an electrophysiology rig in 3 days" from 9h30.

•W2. Workshop "Analog and digital electronics for electrophysiologists" (2days, B. Barbour) from 9h30

•W3. Workshop "Patch-clamp experiments in slices" (5days) (V-clamp/C-clamp, spontaneous/evoked, I-V, excitation/inhibition, Casado, Gendrel, Lambert). Focus on cerebellum or thalamus. Morning from 9h30 (2-3 students shadowing slice preparation, Casado). Afternoon experiment from 13h30.

•W4. Workshop "In vivo Neurophysiology" (1day x 3 groups) (Bessaih) **from 13h30**

•W5. Workshop "Analyzing electrophysiological data" (3day) from 9h30. W5a. 1 day in vitro data analysis. Synaptic data in V-clamp and C-clamp; V-dep conductances (Lambert). W5b. 2 day in vivo data analysis. Data preprocessing: data filtering, cluster cutting, stimulation time extraction, creation of matrices exploitable by R, Matlab, Python or Igor (Bessaih). Data analysis: PSTH, auto, cross-correlograms, correlating activity and EEG (Léna)

W1, W2, W3: Ens, room 305. W4, W5: SU@Jussieu.

W4: 3 teams of 1-2 students (T1, T2, T3)