

PSL-Qlife Quantitative Biology Winter School 2026, March 23rd – 27th

Quantitative Approaches to DNA Damage and Repair

Monday, March 23rd

8:45 – 9:00 am *Welcome Coffee*
Room 305

9:00 – 9:20 am
Terence Strick & Patrick Charnay
Introduction
Room 306

9:20 - 10:25 am
Following Replication Errors and Mutations in Real Time at the Single-Cell Level
Marina Elez
Room 306

10:30 - 10:55 am *Coffee break – Room 305*

10:55 - 12:00 am
Machine learning for DSB formation and repair
Raphaël Mourad
Room 306

12:00 – 1:15 pm *Lunch - Room 305*

1:15 - 2:00 pm
Student presentations (Flash talks)
Room 306

2:00 - 5:30 pm
Digital workshop
Following Replication Errors and Mutations in Real Time at the Single-Cell Level
Marina Elez
Jean Ollion
Chiara Enrico Bena
Room 321

2:00 - 5:30 pm
Digital workshop
Machine learning for DSB formation and repair
Raphaël Mourad
Alexis Mergez
Room 313

5:30 - 6:00 pm *Coffee break – Room 305*

6:00 - 7:00 pm
Visualizing and quantifying replication using 2D gel and electron microscopy
Dana Branzei
Room 306

Tuesday, March 24th

8:45 - 9:00 am *Morning Coffee*
Room 305

9:00 – 10:15 am
Single molecule tracking of phase separating FUS during early stages of DNA repair
Judith Mine-Hattab
Room 306

10:15 – 10:45 am *Coffee break – Room 305*

10:45 – 12:00 am
Quantitative methods for studying DNA breaks and genomic rearrangements
Nicola Crosetto
Room 306

12:00 - 1:30 pm *Lunch - Room 305*

1:30 – 5:00 pm
Digital workshop
FreeTrace and BI-ADD, SPT software to analyze the molecular properties under fBm in video microscopy
Judith Mine-Hattab
Junwoo Park
Asaki Kobayashi
Room 321

1:30 – 5:00 pm
Digital workshop
BLISS data processing, analysis and integration with other omics data
Nicola Crosetto
Fabio Iannelli
Room 313

5:00 – 5:30 pm *Coffee break – Room 305*

5:30 - 6:30 pm
Homology Search in living cells
Angela Taddei
Favored Room

6:30 pm - 8:30 pm
Poster session I
Wine & Cheese *Room 306*

Wednesday, March 25th

8:45 - 9:00 am *Morning Coffee*
Room 305

9:00 - 10:15 am
Single-Cell Insights into DNA Replication Dynamics and Genome Instability
Chunlong Chen
Room 306

10:15 - 10:45 am *Coffee break – Room 305*

10:45 - 12:00 am
How telomere length determines replicative senescence
Teresa Teixeira/ Marie Doumic
Room 306

12:00 - 1:30 pm *Lunch - Room 305*

1:30 - 5:00 pm
Digital workshop
Single-Cell Insights into DNA Replication Dynamics and Genome Instability
Chunlong Chen
Jane Schadtler-Law
Room 321

1:30 - 5:00 pm
Digital workshop
How telomere length determines replicative senescence
Teresa Teixeira
Marie Doumic
Yann Lustig
Anaïs Rat
Room 313

5:00 - 5:30 pm *Coffee break – Room 305*

5:30 - 6:30 pm
Meiotic Hotspots and Chromosome Axes: Orchestrating Recombination in Early Prophase I
Corinne Grey
Room 306

7:30 pm
Faculty dinner

Thursday, March 26th

8:45 - 9:00 am *Morning Coffee*
Room 305

9:00 - 10:15 am
The mutagenicity of DNA damage tolerance
Martin Taylor
Room 306

10:15 - 10:45 am *Coffee break – Room 305*

10:45 - 12:00 am
Role of SMC complexes in regulating homology search during DNA break repair
Aurèle Piazza
Room 306

12:00 - 1:15 pm *Lunch - Room 305*

1:15 - 4:45 pm
Digital workshop
Mutation clusters and asymmetry in the inference of molecular mechanisms
Martin Taylor
Hana Wasserman
Room 321

1:15 - 4:45 pm
Digital workshop
Analysis of Hi-C data
Aurèle Piazza
Romain Bulteau
Room 313

4:45 - 5:00 pm *Coffee break – Room 305*

5:00 - 6:00 pm
Single-molecule studies of DNA repair pathways: from mechanisms to drug characterization
Terence Strick
Favored Room

6:00 pm – 8:00 pm
Poster session II & Cocktail
Room 306

Friday, March 27th

8:45 - 9:00 am *Morning Coffee*
Room 305

9:00 – 10:15 am
Searching for partners in a crowded nucleus
Leonid Mirny
Room 306

10:15 - 10:45 am *Coffee break – Room 305*

10:45 - 12:00 am
Turning Microscopy Images into Robust and Reliable Quantitative Analysis
Paolo Fagherazzi
Hana Polasek-Sedlackova
Room 306

12:00 - 1:30 pm *Lunch - Room 305*

1:30 - 5:00 pm
Digital workshop
Modeling search: from random walks to polymer dynamics
Leonid Mirny
Tim Foldes
Flavia Corsi
Room 321

1:30 - 5:00 pm
Digital workshop
Turning Microscopy Images into Robust and Reliable Quantitative Analysis
Paolo Fagherazzi
Room 313

5:00 - 5:30 pm *Coffee break – Room 305*

5:30 – 6:00 pm
Closing remarks
Room 306