



# Cryoelectron Microscopy

## November 7 - 20, 2022

### Beckman Laboratory, Middle & Top Floor

#### **INSTRUCTORS:**

Justin Kollman	University of Washington, Seattle, WA
Gabriel Lander	The Scripps Research Institute, La Jolla, CA
Melanie Ohi	University of Michigan, Ann Arbor, MI

#### **CO-INSTRUCTOR:**

Matthijn Vos	Institut Pasteur, Paris, France
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#### **ASSISTANTS:**

Sarah Connolly	University of Michigan, Ann Arbor, MI
Kelli Hvorecny	University of Washington, Seattle, WA
Christopher Zerio	Scripps Research, San Diego, CA

#### **PARTICIPANTS:**

Karolin Berneiser	University of Basel, Basel, Switzerland
Roland Calvert	Monash University, Clayton, Australia
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Clara Kielkopf	University of Rochester School of Medicine, Rochester, NY
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Nadine Samara	National Institutes of Health, Bethesda, MD
Greg Snyder	University of Maryland, Baltimore, MD



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MEETINGS & COURSES PROGRAM

## Cryoelectron Microscopy

October 10 - 25, 2022

Beckman Laboratory, Middle Floor

Lectures held in Plimpton Conference Room

Monday, November 07, 2022		
10:30 am	Single Particle Cryo-EM: A Historical Perspective	<b>Bridget Carragher</b> <i>New York Structural Biology Center</i>
1:30 pm	Introduction to Cryo-EM Sample Preparation and Data Collection	<b>Melanie Ohi</b> <i>University of Michigan</i>
3:00 pm	Intro to Cryo-EM Processing	<b>Justin Kollman</b> <i>University of Washington</i>
4:30 pm	Cloud Computing for cryo-EM	<b>Michael Cianfrocco</b> <i>University of Michigan.</i>
Tuesday, November 08, 2022		
9:00 am	From sample to data collection	<b>Matthijn Vos</b> <i>Institut Pasteur</i>
Wednesday, November 09, 2022		
7:00 pm	Cryo-EM Image processing 3: CistEM	<b>Timothy Grant</b> <i>Morgridge Institute / UW-Madison</i>
Thursday, November 10, 2022		
9:00 am	Reconstruction principles	<b>Gabriel Lander</b> <i>Scripps</i>
10:30 am	Automated Data Acquisition: Successes & Failures	<b>Melanie Ohi</b> <i>University of Michigan</i>
7:00 pm	Cryo-EM validation	<b>Timothy Grant</b> <i>Morgridge Institute / UW-Madison</i>

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**Friday, November 11, 2022**

7:00 pm

Cryo-EM Image processing 5: RELION

**Elizabeth Kellogg**  
*Cornell University*

**Sunday, November 13, 2022**

9:00 am

Electron Detectors: History & Breakthroughs

**Christopher Russo**  
*MRC Laboratory of  
Molecular Biology*

7:00 pm

Electron microscopy at lower energies

**Monday, November 14, 2022**

12:00 pm

How to run an efficient Cryo-EM facility

*New York Structural  
Biology Center,  
New York City*

1:00 pm

Automated Data Acquisition

**Tuesday, November 15, 2022**

9:00 am

Cryo-EM validation

**Oliver Clarke**  
*Columbia University*

10:30 am

Atomic Model Validation

**Pavel Afonine**  
*Lawrence Berkeley  
National Laboratory*

5:00 pm

Intro to cryoDRGN

**Ellen Zhong**  
*Princeton University*

**Wednesday, November 16, 2022**

9:00 am

Introduction to refinement in Phenix

**Pavel Afonine**  
*Lawrence Berkeley  
National Laboratory*