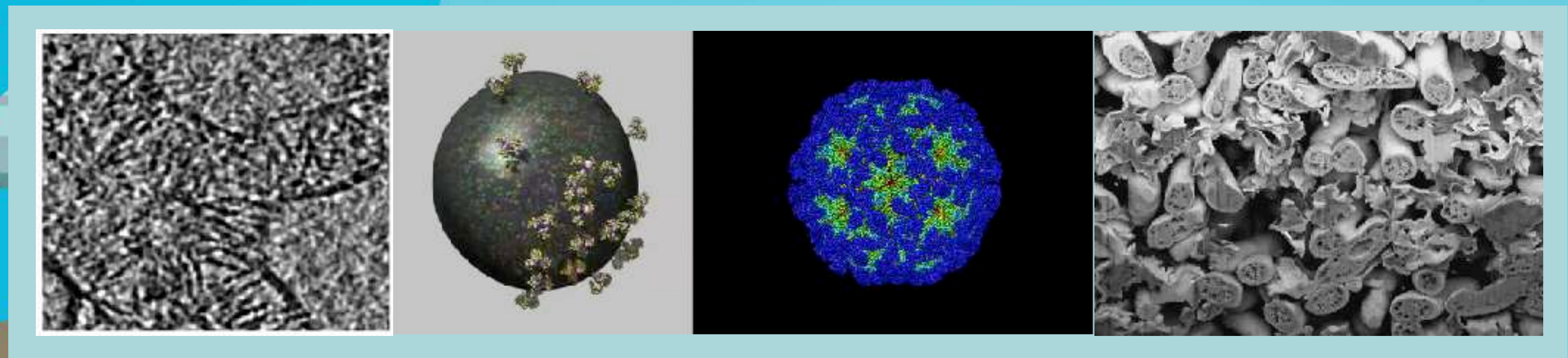


2023 Winter-Spring EM Course



JANUARY 9, 2023

EDWARD T ENG



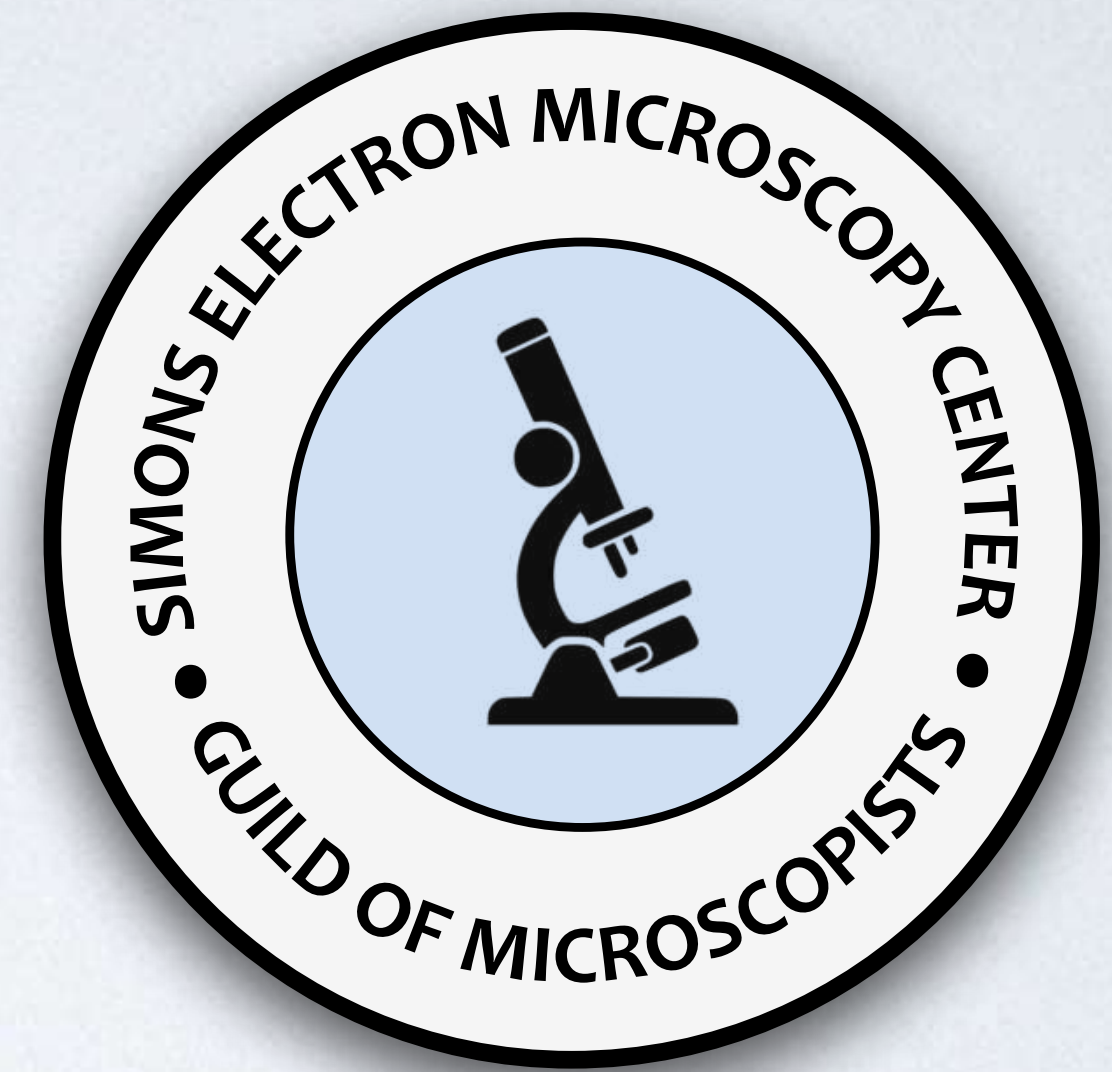
Simons Electron Microscopy Center

NEW YORK STRUCTURAL BIOLOGY CENTER



Welcome to electron microscopy at SEMC

1. Welcome new students
2. Course logistics
3. Poll / Zoom Picture
4. Hybrid classroom





NMR



CoMD/
NMR

X-ray



NYX
@NSLS-II



Protein
Production
COMPPA

NIH P41 - National Biomedical Technology Research Resources (BTRR)

National Synchrotron Light Source II

BROOKHAVEN
NATIONAL LABORATORY

19-ID
NYX



National Center for CryoEM
Access and Training
2019



National Center for In-situ
Tomographic Ultramicroscopy
2020



Simons Machine
Learning Center
2020



Simons Resource for Automated
Molecular Microscopy
2022



NYSBC Member Electron
Microscopy Center
2022





NMR



CoMD/
NMR

X-ray



NYX
@NSLS-II



Protein
Production
COMPPA

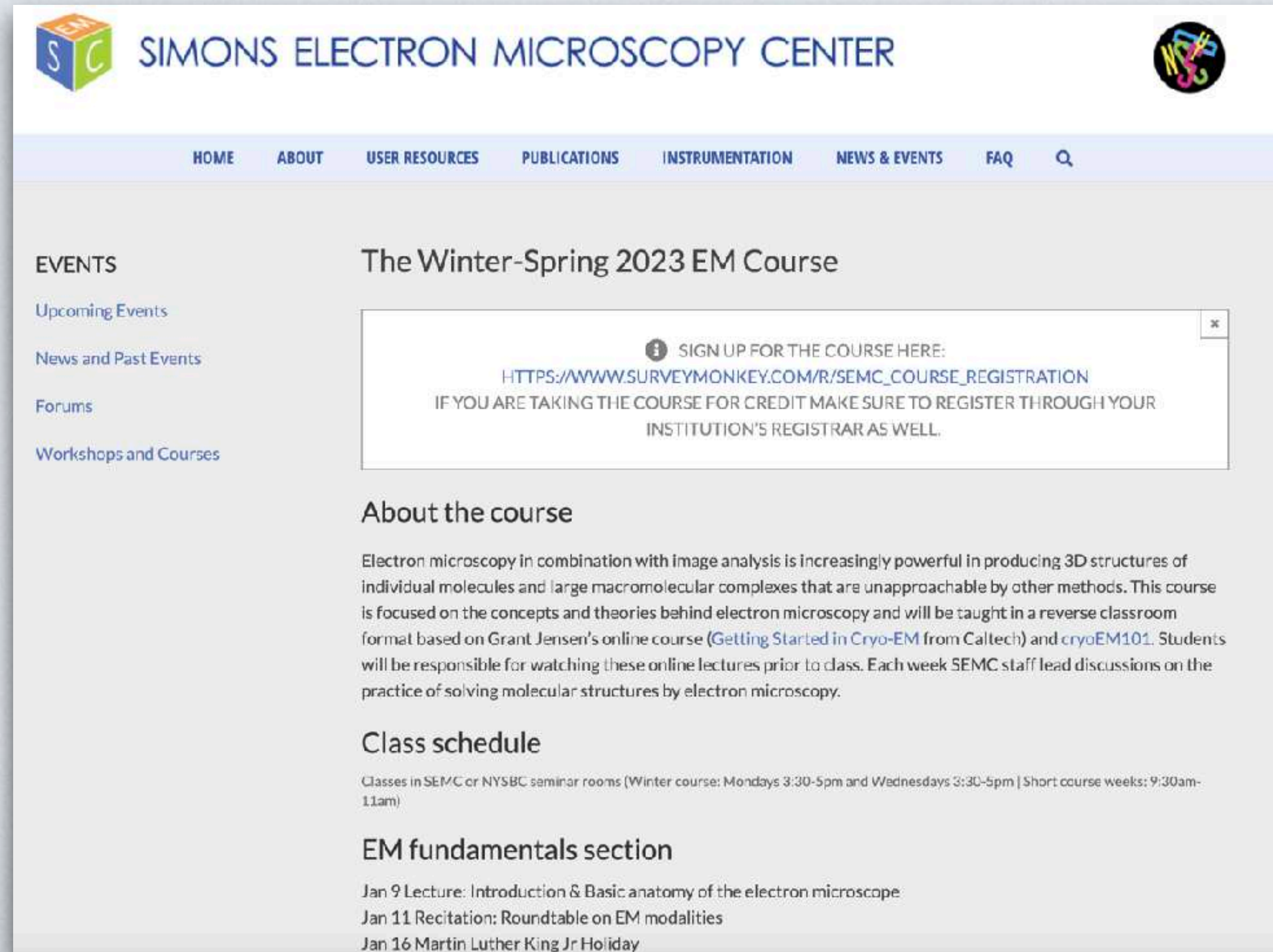
NIH P41 - National Biomedical Technology Research Resources (BTRR)

18th year of the course



Course logistics: main website

semc.nysbc.org/the-winter-spring-2023-em-course/



Course Administrator:

Ed Eng (eeng@nysbc.org)

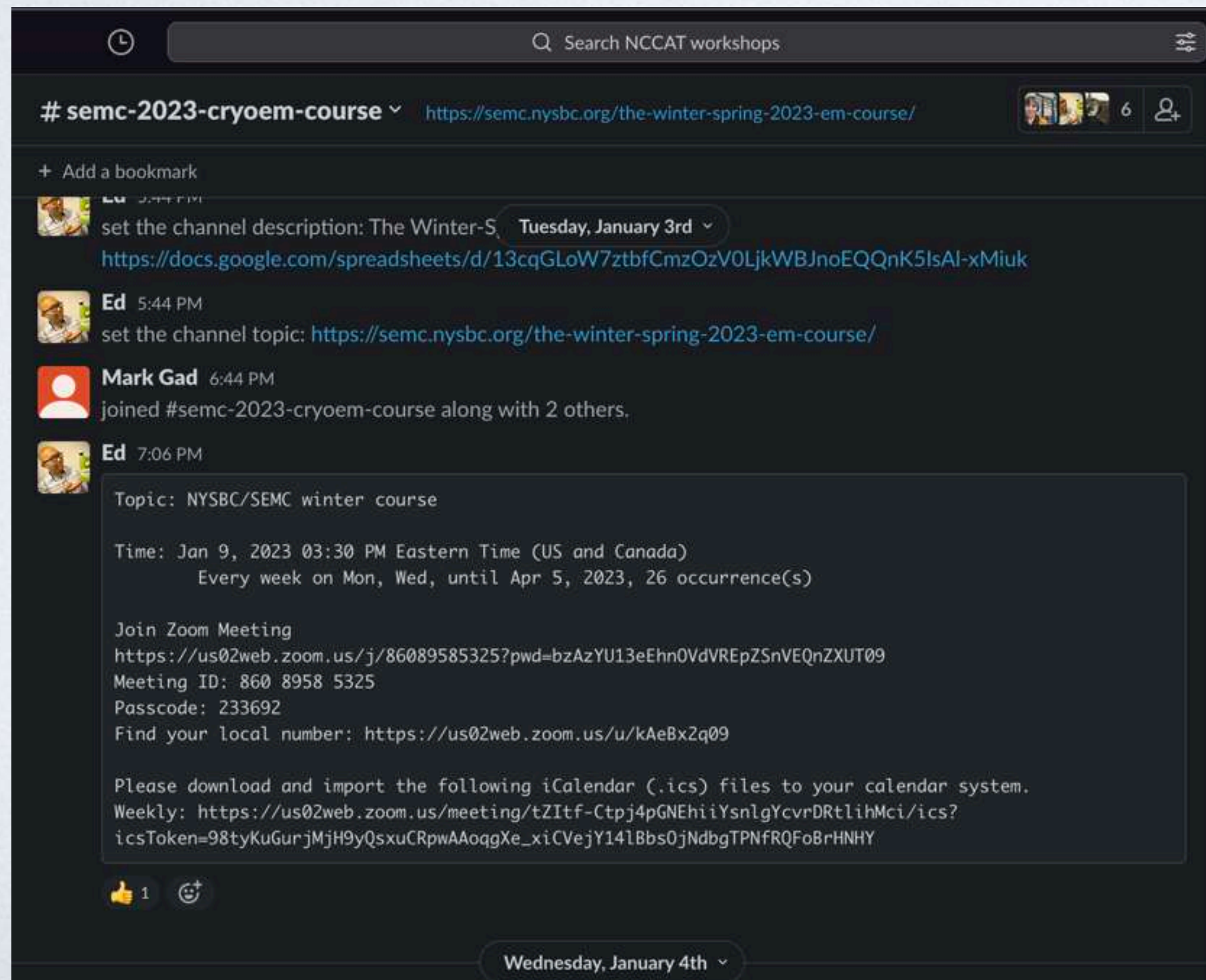
Teaching Assistants:

Mahira Aragon,
Zephan Melville
Christina Zimanyi

Course logistics: main website

Make sure you're on the email list!

Class Slack channel
#semc-2023-cryoem-course



Course Administrator:

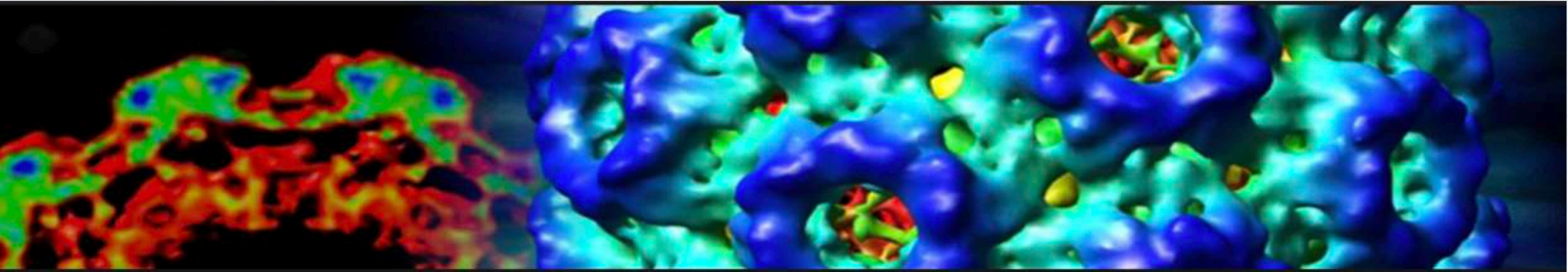
Ed Eng (eeng@nysbc.org)


Teaching Assistants:

Mahira Aragon,
Zephan Melville
Christina Zimanyi

Course logistics: resources

youtube.com/nrammsemc






NRAMM SEMC NCCAT

803 subscribers


SUBSCRIBED



HOMEVIDEOSPLAYLISTSCOMMUNITYCHANNELSABOUT

Created playlists


SORT BY



5

SEMC Training Videos

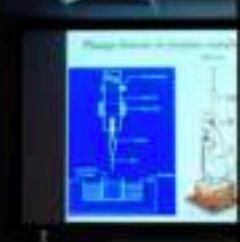
VIEW FULL PLAYLIST



16

SEMC 2021 Cryo EM Course


VIEW FULL PLAYLIST



13

NCCAT SPA Short course 2020

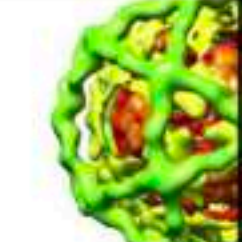
VIEW FULL PLAYLIST



3

CryoEM Facility Workshop - 2017 Control Room


VIEW FULL PLAYLIST



1

Grant Jensen Cryo-EM Lectures

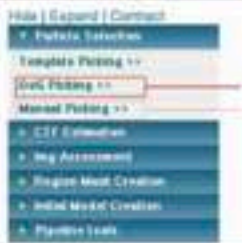
VIEW FULL PLAYLIST



48

Grant Jensen Cryo-EM Lectures


VIEW FULL PLAYLIST



2

Appion

VIEW FULL PLAYLIST



5

Data Processing

VIEW FULL PLAYLIST

cryo-em-course.caltech.edu/videos

Caltech

Getting Started in Cryo-EM

Welcome

Course Overview

Outline

Lecture Videos

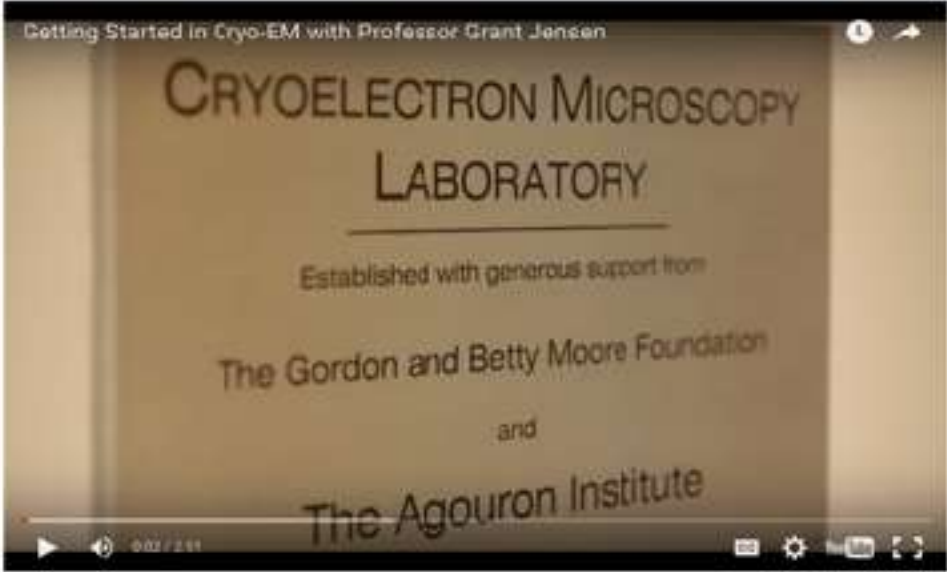
Instructor

Links

WELCOME TO THE COURSE

Before diving into the lecture videos, start by watching the [trailer](#) and reading the course [overview](#) and [outline](#). We hope you enjoy learning about cryo-electron microscopy (cryo-EM)!

Getting Started in Cryo-EM with Professor Grant Jensen



Cryoelec - Getting Started in Cryo-EM

The Jensen Lab

Email: GettingStartedInCryoEM@gmail.com

cryoem101.org

CryoEM 101

HOMECHAPTERSABOUTCONTACT

Cryo EM has emerged as a powerful tool for high-resolution structure determination.

To aid the training efforts of newcomers to the field, we are creating a media-rich curriculum to augment users' own hands-on training. The training material will contain videos, animations, and interactive simulations that cover the major components of the cryo-EM workflow.

Chapter 1

Sample Purification

Chapter 2

Cryo-EM Grid Preparation

Chapter 3

Grid Screening & Evaluation

Chapter 4

Cryo-EM Data Collection

Chapter 5

Image Processing

Now available - Chapter 2: Cryo-EM grid preparation

Course logistics: main topics

Section 1 : EM fundamentals

Section 2 : SPA

Section 3 : EM new frontiers

Section 4 : Tomography short course*
April 10-14



Course logistics: class for credit

Component

Percentage

Recitation/Participation 50%

- *JC/HW/questions*

Practicals 10% × 3

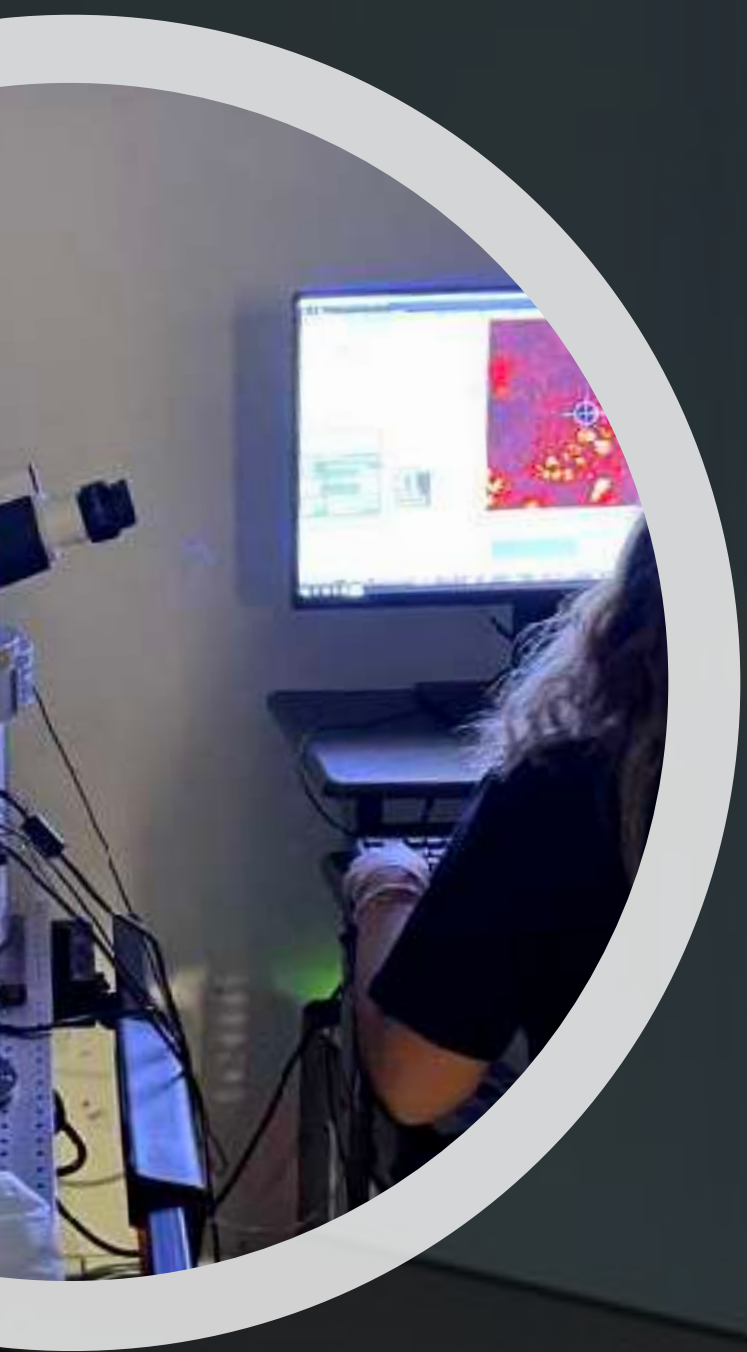
Attendance 20%

Wednesdays

Starts at 4pm - SEMC conference room

Recitation schedule

To be decided upon



NCCAT - NCITU TOMO short course

April 10-14, 2023



1 WEEK
SHORT
COURSE



MORNING
LECTURES &
ROUNDTABLES



AFTERNOON
HANDS-ON
PRACTICALS

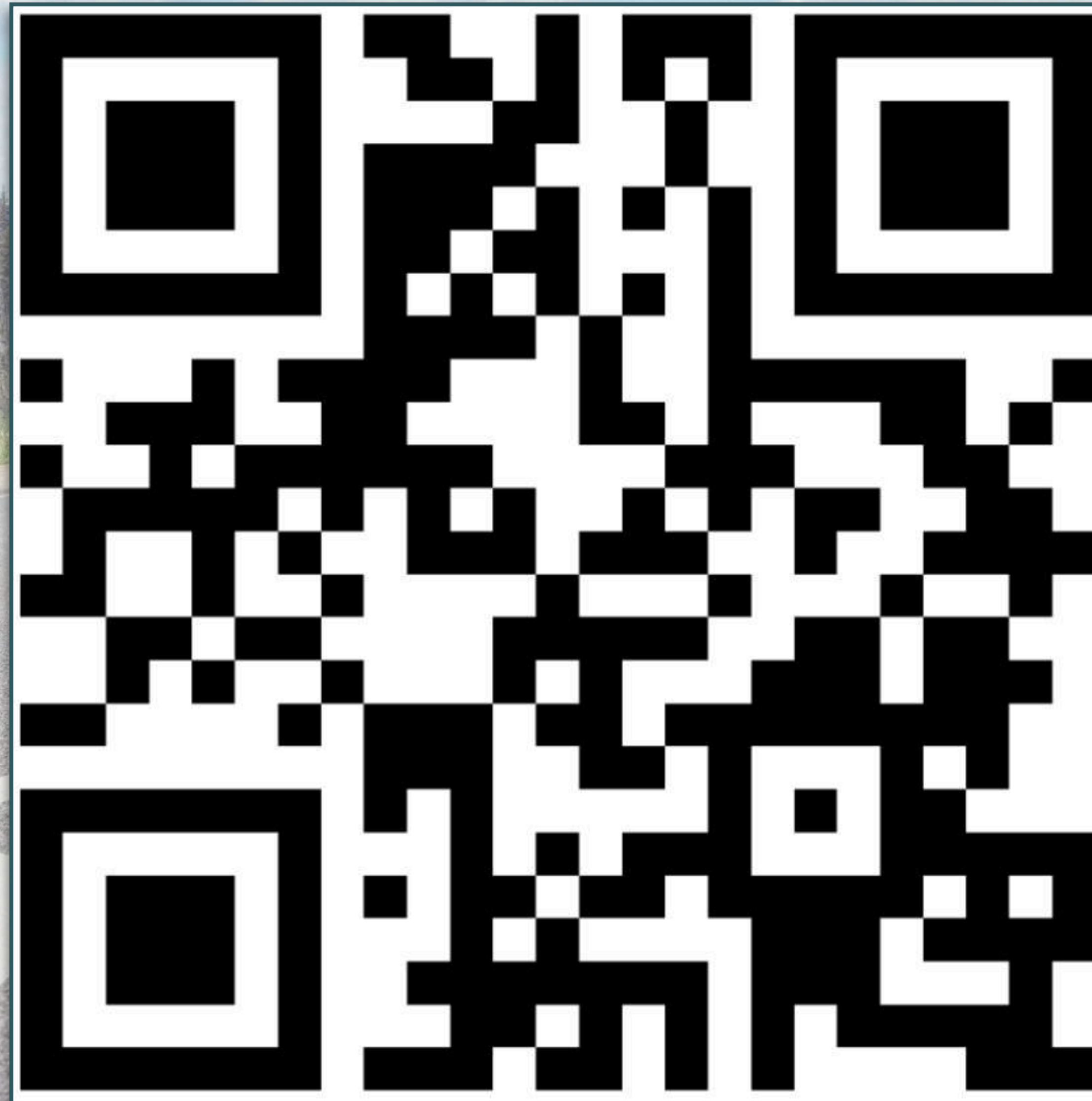


START

<http://etc.ch/JSUj>



<http://etc.ch/JSUj>





THE START

Questions?