

# 2024 Summer School on Electron-Phonon Physics, Many-Body Perturbation Theory, and Computational Workflows



**Spaceman with Floating Pizza**

*1209 Red River St*

Street art by Mike "Truth" Johnston



# Organizers



**Feliciano Giustino**  
University of Texas at Austin



**Roxana Margine**  
Binghamton University



**Zhenglu Li**  
University of Southern California



**Emmanouil Kioupakis**  
University of Michigan, Ann Arbor



**Samuel Ponce'**  
Université Catholique de Louvain



**Annecy Liddell**  
University of Texas at Austin

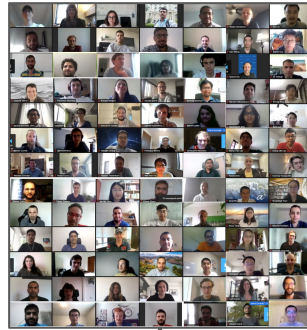
# History



ICTP Trieste



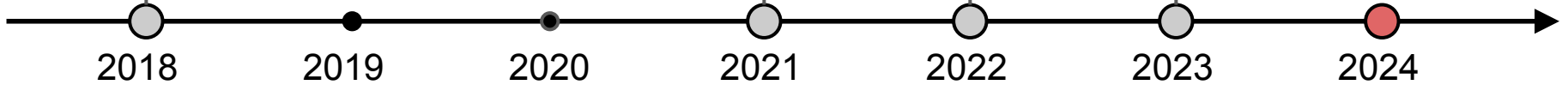
UT Austin



Virtual



Virtual



# Sponsors



Sponsorship of 60 participants  
Instructors & TAs



Instructors & TAs

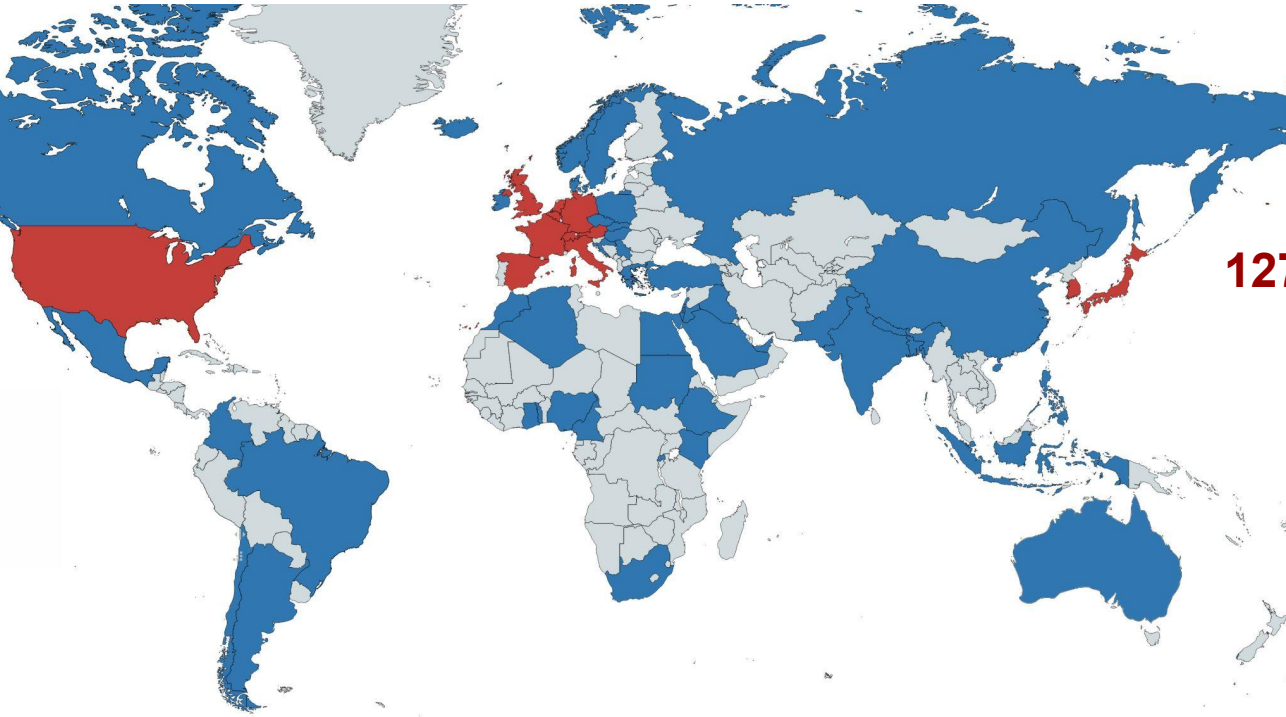


Supercomputers  
& staff support



Admin support  
& entertainment

# Participants



**127 in-person** participants  
from 12 countries

**558 online** participants  
from 67 countries

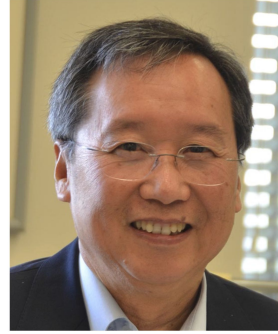
# Instructors & TAs



**Paolo Giannozzi**  
University of Udine



**Nicola Marzari**  
EPFL Lausanne



**Steven Louie**  
University of California at  
Berkeley



**Dan Stanzione**  
Texas Advanced  
Computing Center



**Antimo Marrazzo**  
SISSA Trieste



**Jack Deslippe**  
NERSC



**Roxana Margine**  
University of Binghamton



**Emmanouil Kioupakis**  
U Michigan Ann Arbor

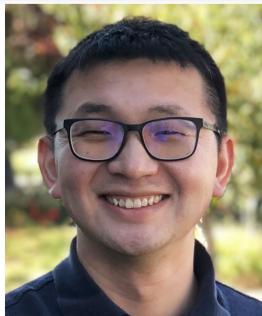


**Samuel Ponce'**  
Universite Catholique de  
Louvain

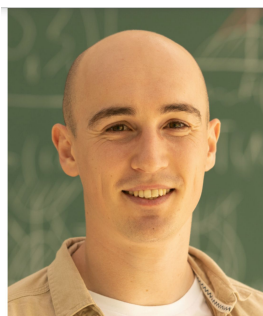


**Feliciano Giustino**  
University of Texas Austin

# Instructors & TAs



**Zhenglun Li**  
University of Southern  
California



**Jon Lafuente-  
Bartolome'**  
University of the Basque  
Country



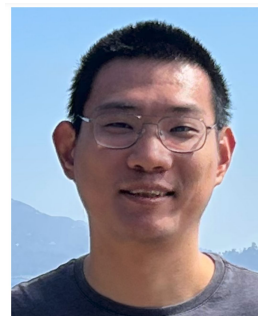
**Mauro Del Ben**  
Lawrence Berkeley  
National Lab



**Marios Zacharias**  
University of Rennes



**Sabyasachi Tiwari**  
University of Texas Austin



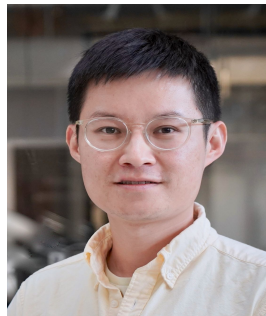
**Xiao Zhang**  
University of Michigan  
Ann Arbor



**Viet-Anh Ha**  
UT Austin



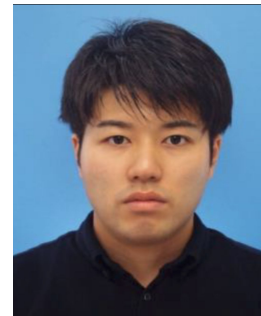
**Bruno Cucco**  
UT Austin



**Zhenbang Dai**  
UT Austin



**Jae-Mo Lihm**  
UCL Louvain



**Hitoshi Mori**  
University of Binghamton



**Junfeng Qiao**  
EPFL Lausanne

# Instructors & TAs



**Brandon Campitelli**  
UT Austin



**Jo-Anne Holley**  
UT Austin

Nick Pant (UT Austin)

Tae Yun Kim (UT Austin)

Kaifa Luo (UT Austin)

Sungyeb Jung (UT Austin)

Eugene Park (UT Austin)

Zhe Liu (U Binghamton)

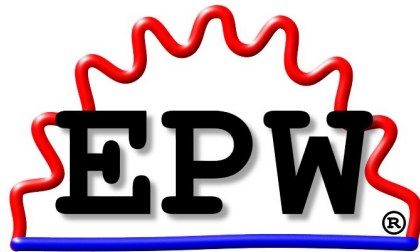
Shashi Mishra (U Binghamton)

Amanda Wang (U Binghamton)

Chih-en Hsu (USC)

Jingyang You (USC)





BerkeleyGW

# Program

[Home](#) [Topics](#) [Organizers](#) [Instructors](#) [Venue](#) [Schedule](#) [Posters](#) [Registration](#) [Create Account](#)

## School schedule

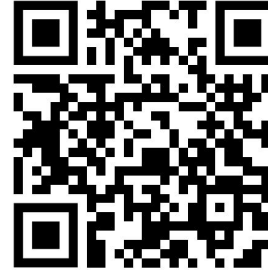
**Duren:** Duren Hall Residence <https://maps.app.goo.gl/k657TLnu7Hefsk627>

**WEL:** Welch Building <https://maps.app.goo.gl/oTGnPmr6fmD4rvCZ9>

**GLT:** Gary L. Thomas Energy Engineering Building <https://maps.app.goo.gl/46KkgHMrRGSzTYhD7>

**POB:** Peter O'Donnell Building <https://maps.app.goo.gl/HXNyD446UfvjUW5r5>

Day	Time	Activity	Location	Instructor	Chair	Zoom Chair
Sunday 9 June	15:00-17:00	Welcome Reception	Duren			
Monday 10 June	08:15-08:45	Breakfast + Registration	WEL 2.306			
	08:50:09:00	Introductory remarks and logistics	GLT 5.104	Giustino		



**Monday** Poster session  
**Tuesday** Workshop: Mentorship and research funding  
**Thursday** Visit to TACC & Social dinner

# Your stay in Austin

## Cf. orientation session by Anney Liddell



**AGENDA**

- Getting Around Campus
- Daily Schedule
- Special Events
- Resources & Safety
- TACC
- Q&A

**1**

**AIRPORT > CAMPUS**

- Bus: Route 28 shuttle to campus, stop 10 Dean Keeton/University Blvd
- Taxi/Ride-sharing located under the Conventional Rental Car Facility, just north or behind the Red Garage
- Duren address: 2024 White Avenue

**2**

**Check-in & Welcome Reception June 9**

- Check-in time is 3:00pm, early check-in is available
- Welcome Reception 3:00-6:00pm
- Bag & badge pick up
- Arriving late

**3**

**Duren Residence Hall (ADH)**

- Amenities
- Shuttling
- Key cards
- Pool

**4**

**Monday - Friday Schedule**

- Breakfast in WEL
- Lectures in GLT
- Elevators & stairs
- Coffee break in GLT
- Short break
- Lunch in WEL
- Afternoon tutorials & coffee break in WEL

**Saturday and Sunday - everything in WEL**

**5**

**Special Events**

- Poster session Monday June 10, 6:00-6:00pm in POB
- Workshop: Mentorship and Research Funding Wednesday June 12 4:15-6:15pm
- TACC Tour Thursday June 13 3:30-5:00pm

**6**

- Dinner at Scholz Garden, Thursday June 13, 6:00-8:00pm
- Return to campus on foot or by bus

Slides

- Almetris Duren Residence Hall (**ADH**)
- Robert A. Welch Hall (**WEL**)
- Gary L. Thomas Energy Engineering Building (**GLT**)
- Peter O'Donnell, Jr Building (**POB**)
- San Jacinto Garage (**SJC**)

Zoom recording

# Locations

breakfast  
lunch  
tutorials



lectures

posters

**Lecture:** Intro to electron-phonon physics and school topics

**Lecture:** Density functional perturbation theory

**Lecture:** Wannier functions

**Hands-on tutorial:** Quantum ESPRESSO

**Poster Session**

# Rules of the school

1. Ask questions
2. Meet new people
3. Learn something
4. Have fun