Welcome to MIT

Participants: 208

Christoph Paus
March 25, 2024


MIT Supports:
'eduroam'
otherwise
'MIT GUEST'


Iconic View of MIT
The Stata Center
and our venue
A Frank Gehry building

*From the 2023 P5 report**

Recommendation 2: Construct a portfolio of major projects that collectively study nearly all fundamental constituents of our universe and their interactions, as well as how those interactions determine both the cosmic past and future.

<snip>

c. An off-shore Higgs factory realized in collaboration with international partners, in order to reveal the secrets of the Higgs boson. The current designs of FCC-ee and ILC meet our scientific requirements. The US should actively engage in feasibility and design studies. Once a specific project is deemed feasible and well-defined (see also Recommendation 6), the US should aim for a contribution at funding levels commensurate to that of the US involvement in the LHC and HL-LHC, while maintaining a healthy US on-shore program in particle physics (section 3.2).

<snip>

* *2023 P5 report*

Goals for the Workshop

P5 report – offshore Higgs factory

- US must make a strong impact on the Higgs factory

Build up an active US FCC community

- Accelerator development essential to help FCC-ee design
- But detectors are the key for the physics
- Develop our own ideas about the physics focus of a detector
  - What is the way to optimize a detector?
  - Given a physics goal, where do we spend the money?
- Make sure we can ask for R&D funding in a coherent fashion

Synergy with linear collider folks very important

- Plenary session today, invited plenty of people

Overview

Second Annual U.S. Future Circular Collider (FCC) Workshop 2024

25–27 Mar 2024
MIT
America/New_York timezone

Enter your search term

design by Jordan Lang

Overview

The annual US FCC workshop series started in 2023 at BNL with the idea of building and fostering the US community around the FCC and in particular the FCC-ee project. We will have the second instance of this workshop at MIT in Cambridge, MA.

After the long and rich Snowmass process and multiple P5 panel town hall meetings, the High-Energy Physics community has come to a conclusion on what to recommend to the DOE and NSF about our

PHYSICS COMMUNITY VALUES

Our vision

Our Physics Community Values stem from the basic principle that members of our community should treat each other with respect and decency at all times. In turn, we should not alienate, diminish or insult each other, either in word or deed.

Values in Physics at MIT

Our values

Well-being

We support each other at all times and remember that we are not alone.

Respect

We value the multitude of ways to be a physicist and the many paths through our field and Department.

Inclusion

We strive to speak and act in ways that support and include all members of our community.

Collaboration

Physics is a social endeavor and we proudly collaborate with others to advance the field.

Mentorship

All physicists are here because of the mentorship we have received and continue to receive, and the mentorship we offer to others.

*Code of Conduct**

It is our policy at MIT that all participants, including attendees, MIT staff, volunteers, and all other stakeholders at an MIT hosted meetings will conduct themselves in a professional manner that is welcoming to all participants and free from any form of discrimination, harassment, or retaliation. Participants will treat each other with respect and consideration to create a collegial, inclusive, and professional environment at the meetings. Creating a supportive environment to enable scientific discourse is the responsibility of all participants.

Participants will avoid any inappropriate actions or statements based on individual characteristics such as age, race, ethnicity, sexual orientation, gender identity, gender expression, marital status, nationality, political affiliation, ability status, educational background, or any other characteristic protected by law. Disruptive or harassing behavior of any kind will not be tolerated. Harassment includes but is not limited to inappropriate or intimidating behavior and language, unwelcome jokes or comments, unwanted touching or attention, offensive images, photography without permission, and stalking.

Violations of this code of conduct policy should be reported to meeting organizers or the appointed contacts. Sanctions may range from verbal warning, to ejection from the meeting without refund, to notifying appropriate authorities. Retaliation for complaints of inappropriate conduct will not be tolerated. If a participant observes inappropriate comments or actions and personal intervention seems appropriate and safe, they should be considerate of all parties before intervention.

If you need to report something, here are our contacts: Sarah Eno (eno@umd.edu), Christoph Paus (paus@mit.edu), Bolek Wyslouch (wyslouch@mit.edu).

** Adapted from the APS*

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Participants will ge, race, ethnicity, sexual , ability status, educational back y kind will not be tolerated. Harass velcome jokes or comments, unwa .

We want everybody to have a positive and constructive experience at the workshop.

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Agenda – Monday

Opening Plenary: Welcome to the 2nd U.S. FCC Workshop at MIT!

Building 32, various rooms, MIT 08:30 - 09:00

Plenary: Vision, P5 Report and FCC Status *Alessandro Tricoli, Christoph Paus, Sarah Eno*

Building 32, various rooms, MIT

Coffee break

Building 32, various rooms, MIT

Plenary: Detector Concepts

Building 32, various rooms, MIT

Morning

Afternoon

Plenary: Synergies in Machines, Detectors, Software and Theory *Anadi Canepa, Ayres Freitas*

Building 32, 32-123, MIT 14:00 - 15:40

Coffee break and US FCC Workshop Photo

Workshop Photo

Building 32, 32-123, MIT 15:40 - 16:10

Plenary: Synergies in Machines, Detectors, Software and Theory: Part 2

Building 32, 32-123, MIT 16:10 - 16:40

Plenary: Reports from DOE and NSF and Panel Discussion *Sally Seidel, Srini Rajagopalan*

Building 32, 32-123, MIT 16:40 - 18:00

Social events: Workshop Reception

Agenda – Tuesday

Parallel: Accelerator and Machine Detector Interface (MDI)
Tor Raubenheimer, Vladimir Shiltsev
Building 32, 32-123, MIT 08:30 - 10:00

Parallel: Computing and Software Tutorials
Building 32, 32-124, MIT 08:30 - 10:00

Coffee break
Building 32, 32-123, MIT

Parallel: Detectors: Part 1 *Alessandro Tricoli, Sergei Chekanov*
Building 32, 32-123, MIT 10:30 - 12:32

Parallel: Theory and Experimer
Patrizia Azzi, Robert Szafron
Building 32, 32-124, MIT

Morning

Afternoon

Parallel: Detectors: Part 2 *Alessandro Tricoli, Sergei Chekanov*
Building 32, 32-123, MIT 13:30 - 15:29

Parallel: Theory and Experiment: Part 2
Patrizia Azzi, Robert Szafron
Building 32, 32-124, MIT 13:30 - 15:30

Coffee break
Building 32, 32-123, MIT 15:30 - 16:00

Plenary: Lightning Talks *Julia Gonski, Samuel Homiller*
Building 32, 32-123, MIT 16:00 - 17:30

→ Conference Dinner

Agenda – Wednesday

Morning

Plenary: Expression of Interest: Part 1 — *Christoph Paus, Julia Gonski, Robert Szafron, Srini Rajagopa…*
Building 32, 32-123, MIT 08:30 - 10:30

Coffee break
Building 32, 32-123, MIT 10:30 - 11:00

Plenary: Expression of Interest: Part 2 — *Christoph Paus, Julia Gonski, Robert Szafron, Srini Rajagopa…*
Building 32, 32-123, MIT 11:00 - 13:00

Afternoon

Plenary: Closeout — *Alessandro Tricoli, Sarah Eno*
Building 32, various rooms, MIT 14:00 - 15:30

Weather in Boston...

Mon 25	**42°**/34°		Mostly Cloudy	3%	NE 17 mph
Tue 26	**39°**/37°		PM Showers	37%	NNE 14 mph
Wed 27	**61°**/47°		AM Showers	37%	WSW 7 mph
Thu 28	**50°**/41°		Rain	97%	NNW 8 mph
Fri 29	**48°**/35°		Showers	75%	NW 17 mph

Comments from the locals ...

- At least we have a chance of sun for the workshop photo
- The cold has made a comeback but …
- Fairly standard weather in Cambridge this time of the year

Where to eat?

We serve in breaks

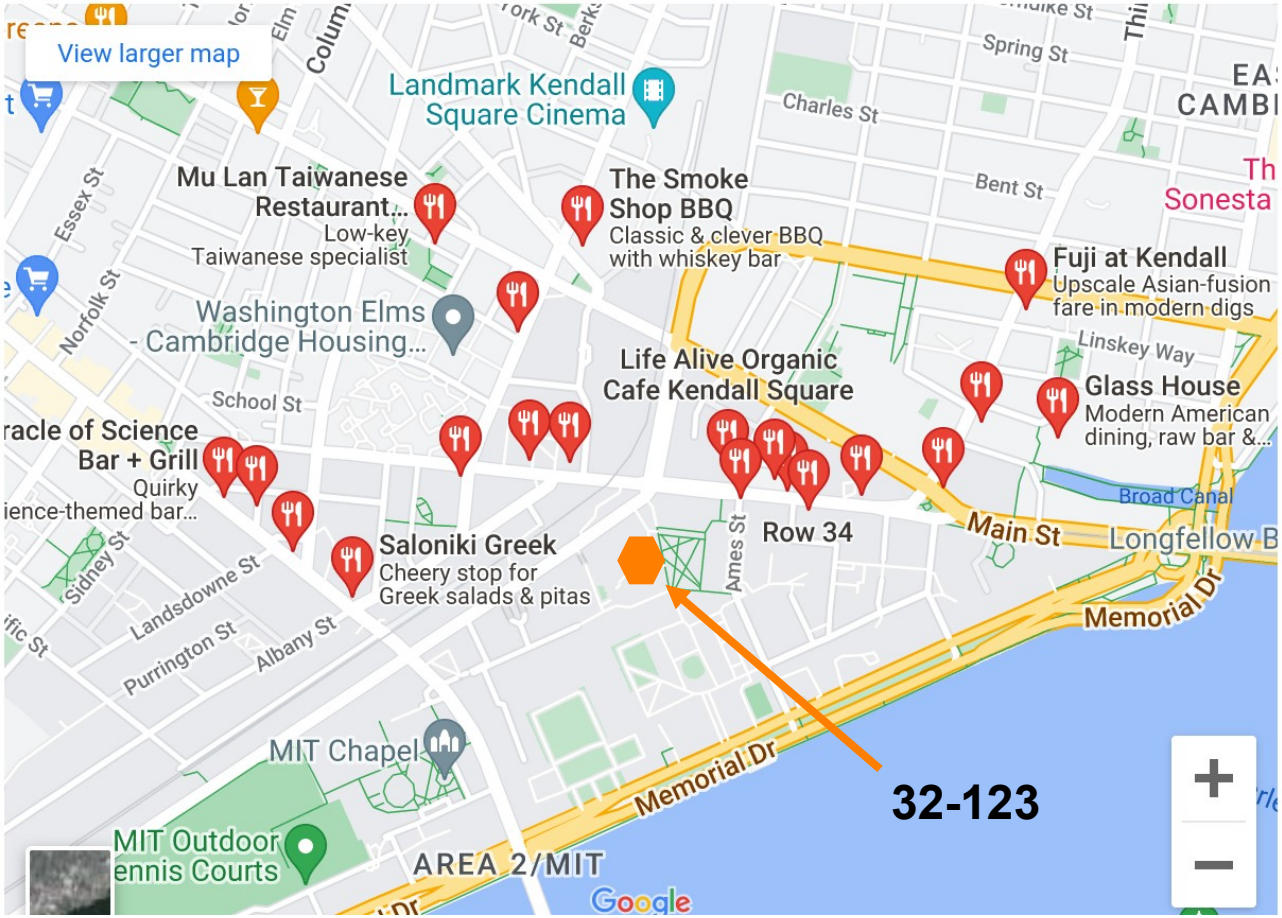
- coffee/tea
- bakery/snacks

Lunch favorites

- Stata center (easiest)
- Al's Cafe (subs)
- Cava (middle east 'Chipotle')
- Saloniki (greek)
- Beantown Taqueria (Taco Tuesday)
- Chipotle

What also works

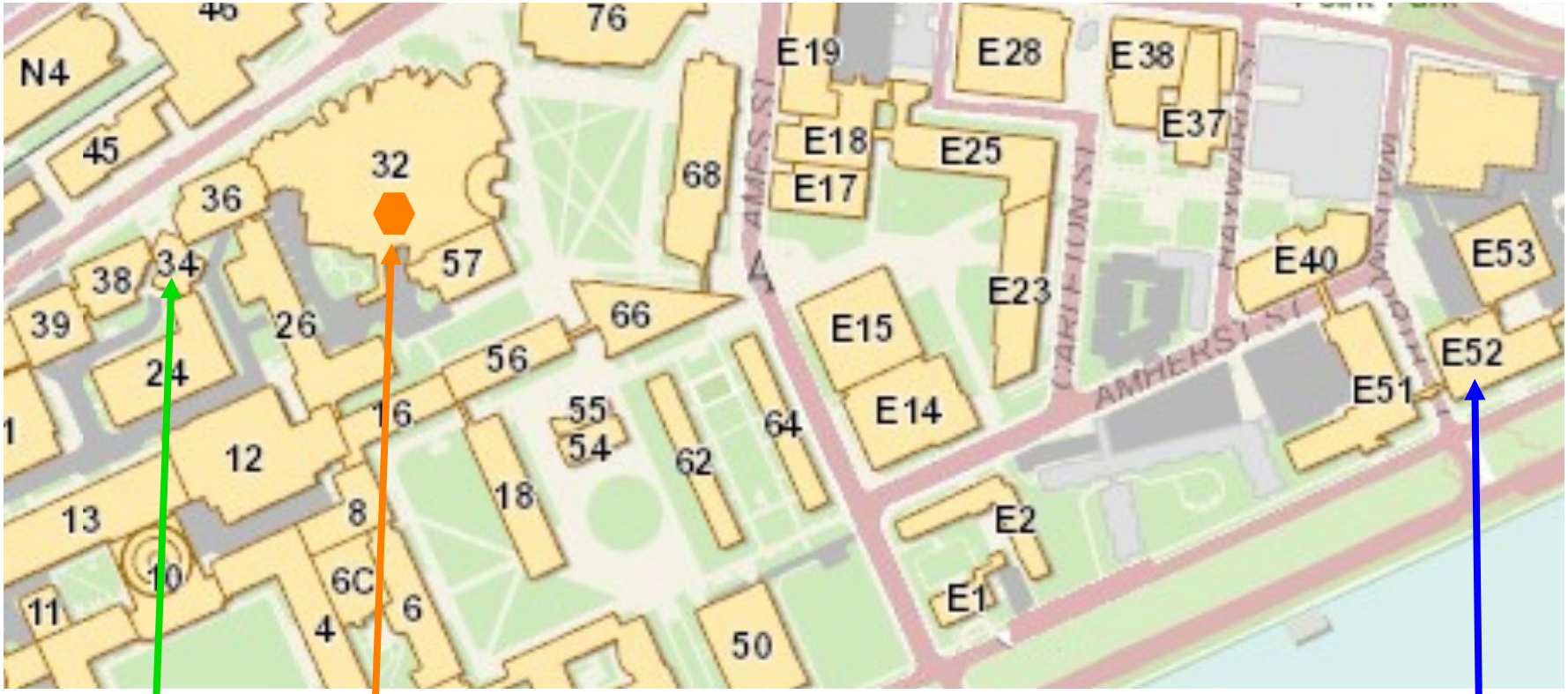
- .. just use your phone as usual



MIT Web site

https://web.mit.edu/visitmit/where-eat/

Reception / Dinner



32-123 /124
Conference Venue

34-401 A/B (4th floor)
Reception
Monday 6:30-8:30pm

E52 Samberg Center
Conference Dinner
Tuesday 7-9pm

Zoom and Indico

Zoom connections

32-123 Big room -- Plenary/Parallel room:
https://mit.zoom.us/j/94405507633?pwd=WHNySGNXN0h3ZU9UeC9OdnZwaDdGUT09
Password: 511786

32-124 Smaller room -- Parallel only:
https://mit.zoom.us/j/95307472672?pwd=cXhHeHFtZ3ozcS9mZTEvcldhaUJidz09
password: 558789

Indico and slides

- We project from *a fixed laptop*, please upload your slides at least one hour before your talk!
- PDF files are by far most reliable
- To upload: make a local (MIT) indico account with your email as used in submitting your abstract (your standard email)
- Trouble? email session conveners or fcc-help@mit.edu

Thank you!

To DOE/BNL, the MIT Physics Department and the Lab for Nuclear Science for funding support

International Organizing Committee

- Martin Aleksa (CERN)
- Patrizia Azzi (Padova)
- Anadi Canepa (FNAL)
- Sergei Chekanov (ANL)
- Sarah Eno (Maryland)
- Ayres Freitas (Pittsburgh)
- Julia Gonski (SLAC)
- Samuel Homiller (Harvard)
- Zoltan Ligeti (LBNL)
- Michelangelo Mangano (CERN)
- Christoph Paus (MIT)
- Marc-André Pleier (BNL)
- Srini Rajagopalan (BNL)
- Tor Raubenheimer (SLAC)
- Sally Seidel (New Mexico)
- Vladimir Shiltsev (NIU)
- Robert Szafron (BNL)
- Alessandro Tricoli (BNL)
- Christopher Tully (Princeton)

Local Organizing Committee

- Alisa Cabral
- Karen Dow
- Luca Lavezzo
- Elsye Luc
- Christoph Paus