



# Higgs Pairs 2021 mini-workshop

Elizabeth Brost, Luca Cadamuro, Alexandra Carvalho,  
Arnaud Ferrari, Ramona Gröber, Katharine Leney,  
Javier Mazzitelli, Margarete Mühlleitner

September 29th, 2021



# Welcome to Higgs Pairs 2021 mini-workshop

- Two half-days of HH physics (14:00-17:00 CEST, September 29-30)
- Stepping stone until Higgs Pairs workshop next spring
  - Higgs Pairs workshop originally planned for this week in Croatia
  - We felt that it was an important priority to hold the workshop in person, once the travel situation improved widely
  - **TODAY:** Update on current state-of-the-art in HH physics, Discussion/planning/preparation for workshop in May 2022

**Thank you to all of the speakers and discussion leaders  
for agreeing to participate in this mini-workshop!**

# Higgs Pairs 2021 mini-workshop schedule

Wednesday, September 29th

## HH Theory and Experiment Overview

- SM HH Theory Overview (Michael Spira)
- CMS Overview (Agni Bethani)
- ATLAS Overview (Tulin Mete)

Coffee/Tea Break

## Preparing BSM HH results

- BSM coupling scans (Christoph Englert)
- EFT Tools and Technical Aspects (Gudrun Heinrich)

Thursday, September 30th

## Future Colliders, Resonant SS/SH

- Future Colliders, Experiment (Michele Selvaggi)
- Future Colliders, Theory (Sally Dawson)
- Resonant SH/SS Overview (Jonas Wittbrodt)
- Resonant SH/SS Discussion & Planning (Fabio Ravera, Jason Veatch)

Coffee/Tea Break

## Preparation of New HH Results

- Machine Learning: Lessons Learned (Elliot Reynolds)
- Re-interpretable Results (ATLAS: Jana Schaarschmidt, CMS: Nan Lu, Theory: Tania Robens)
- Re-interpretable Results, Discussion (Nadya Chernyavskaya, Maximilian Swiatlowski)

# Workshop Logistics: Code of Conduct

We follow the [CERN code of conduct](#):

- Abstain from and actively discourage all forms of harassment as well as verbal, non-verbal, written, or physical abuse.
  - Sexual language and imagery, sexist, racist, or otherwise exclusionary jokes are not appropriate.
- Everyone is welcome, regardless of gender, sexual orientation, gender identity, culture, physical ability, ethnicity, appearance, nationality, age, education, or religious background.
- Questions are welcome, and should be asked and answered respectfully. We want all participants to be able to express their opinions freely.

**We ask that all workshop participants follow these principles and have an enjoyable and productive workshop!**

**Please reach out to any member of the organizing committee if you experience problems or have any concerns.**

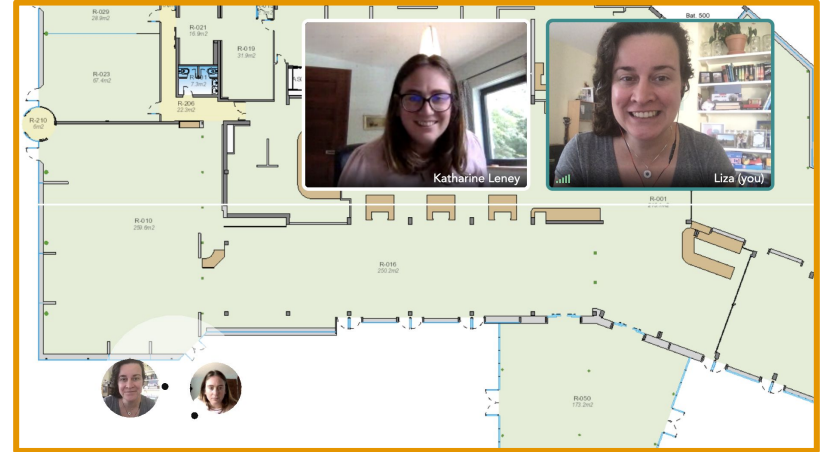
# Workshop Logistics: Zoom



- Please remain muted if you are not speaking
- Raise your hand to ask questions, the session chair will call on you
- Keep discussions on-topic, we have a tight schedule this week :)
- **Sessions will be recorded**

# Workshop Logistics: Coffee breaks

- We will have a [wonder.me room](#) available during coffee breaks and at the end of the afternoon
- To use wonder.me:
  - Move your avatar around with your mouse
  - To join a conversation, move closer to another person
  - To leave a conversation, move away
- Only works on Chrome (download if you don't have it already!)



# Higgs Pairs 2022

- Postponed to May 30th - June 3rd, 2022 in Dubrovnik, Croatia
  - We hope to be able to see you all there, in person!
- Thank you to the LOC for continuing to support this workshop
- Thank you to the HH2022 session chairs for helping to prepare the mini-workshop program for this week!





**BACKUP**

