



SSI21 will begin soon at 9AM Pacific Daylight Time
(UTC -7)



THE BIGGS STATE FAIR

SLAC SUMMER INSTITUTE, AUGUST 16-27, 2021

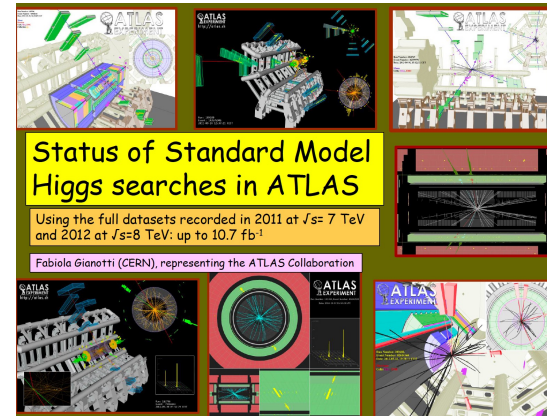
Welcome to the
49th SLAC SUMMER
INSTITUTE !!



Status of the CMS SM Higgs Search

Joe Incandela
UCSB/CERN
July 4, 2012

CMS Experiment at LHC, CERN
Data recorded: Mon May 28 01:16:20 2012 CEST
Run/Event: 195099 / 35438125
Lumi section: 65
Orbit/Crossing: 16992111 / 2295



Hopefully everything you need to know is on the SSI webpage but let's briefly review a few things...

SSI 2021 - SLAC Summer Institute 2021

[HOME](#)

[PROGRAM](#)

[INDICO AGENDA](#)

[PAST SSI](#)

[REGISTRATION](#)

[PARTICIPANTS](#)

[CONTACT US](#)



49th SLAC SUMMER INSTITUTE

The Higgs State Fair

Date: August 16-27, 2021

Online ZOOM video-conference

The SLAC Summer Institute (SSI) is an annual two-week-long Summer School tradition since 1973. Given the special circumstances and uncertainties with COVID-19 continuing this year, we are planning for a reduced program of just three online lectures each morning through the two weeks, without the usual afternoon programs.

QUICK LINKS

[Register](#)

[Program](#)

[Indico Time Table](#)

[Poster Session](#)

[Code of Conduct](#)

[Land Acknowledgement](#)

ANNOUNCEMENTS AND KEY DATES

Feb/17	Prelim Program
Mar/01	Registration open
May/05	Program with lecturers
June/23	Poster abstract submission open
	Poster abstract submission

SSI 2021 - SLAC Summer Institute 2021

[HOME](#)
[PROGRAM ▾](#)
[INDICO AGENDA](#)
[PAST SSI](#)
[REGISTRATION](#)
[PARTICIPANTS](#)
[CONTACT US](#)

Code of Conduct

The SLAC Summer Institute is a community event intended for networking and collaboration as well as learning. We value the participation of everyone and want all attendees to have an enjoyable and fulfilling experience. Accordingly, all attendees are expected to show respect and courtesy to other attendees and to abide by the following Code of Conduct. Any issues can be brought to the confidential attention of the organizers and we thank you for helping make these events welcoming and friendly event.

CODE OF CONDUCT

The community of participants of the SLAC Summer Institute is made up of members from around the globe with a diverse set of skills, personalities, and experiences. It is through these differences that our community experiences success and continued growth. We expect everyone in our community to follow these guidelines when interacting with others both inside and outside of our community. Our goal is to keep ours a positive, inclusive, successful, and growing community.

As members of the community,

- We pledge to treat all people with respect and provide a harassment- and bullying-free environment, regardless of sex, sexual orientation and/or gender identity, disability, physical appearance, body size, race, nationality, ethnicity, and religion. In particular, sexual language and imagery, sexist, racist, or otherwise exclusionary jokes are not appropriate.
- We pledge to respect the work of others by recognizing acknowledgment/citation requests of original authors. As authors, we pledge to be explicit about how we want our own work to be cited or acknowledged.
- We pledge to welcome those interested in joining the community, and realize that including people with a variety of opinions and backgrounds will only serve to enrich our community. In particular, discussions relating to pros/cons of various technologies, programming languages, and so on are welcome, but these should be done with respect, taking proactive measure to ensure that all participants are heard and feel confident that they can freely express their opinions.
- We pledge to welcome questions and answer them respectfully, paying particular attention to those new to the community.
- We pledge to be conscientious of the perceptions of the wider community and to respond to criticism respectfully. We will strive to model behaviors that encourage productive debate and disagreement, both within our community and where we are criticized. We will treat those outside our community with the same respect as people within our community.
- We pledge to help the entire community follow the code of conduct, and to not remain silent when we see violations of the code of conduct. We will take action when members of our community violate this code such as notifying a workshop organizer or talking privately with the person.

This code of conduct applies to all community situations online and offline, including the meetings themselves, mailing lists, forums, social media, social events associated with the conference, and one-to-one interactions.

Participants asked to stop any harassing behavior are expected to comply immediately. Attendees violating these rules may be asked to leave the event at the sole discretion of the organizers.

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[Register](#)
[Program](#)
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[Poster Session](#)
[Code of Conduct](#)
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SSI 2021 - SLAC Summer Institute 2021

[HOME](#)
[PROGRAM](#)
[INDICO AGENDA](#)
[PAST SSI](#)
[REGISTRATION](#)
[PARTICIPANTS](#)
[CONTACT US](#)

Land Acknowledgement

“ We recognize that Stanford sits on the ancestral land of the Muwekma Ohlone Tribe. This land was and continues to be of great importance to the Ohlone people. Consistent with our values of community and inclusion, we have a responsibility to acknowledge, honor and make visible the university’s relationship to Native peoples.

STANFORD LAND ACKNOWLEDGMENT

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[Program](#)
[Indico Time Table](#)
[Poster Session](#)
[Code of Conduct](#)
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The Schedule

Program Summary – good for a fast check!

SSI 2021 - The Higgs State Fair										
Time / Date	Aug/16 Monday	Aug/17 Tuesday	Aug/18 Wednesday	Aug/19 Thursday	Aug/20 Friday	Aug/23 Monday	Aug/24 Tuesday	Aug/25 Wednesday	Aug/26 Thursday	Aug/27 Friday
9:00 -- 9:55	Introductory Overview	SM Higgs Basics - II	Precision Higgs - Production	Precision Higgs - Decays	How and Why is the Higgs Light ?	Higgs Mechanism History	Higgs EFT Basics - I	Higgs EFT Basics - II	Higgs & Baryogenesis	Higgs & Cosmology
	Sally Dawson	Stefania Gori	Bernard Mistlberger	Ayres Freitas	Nathaniel Craig	Chris Quigg	Veronica Sanz		Patrick Meade	Mikhail Shaposhnikov
9:55 -- 10:10	Q & A					Q & A				
10:10 -- 10:20	Break					Break				
10:20 -- 11:15	SM Higgs Basics - I	Higgs at LHC - II	Higgs at LHC - III	Higgs Self Coupling	BSM Higgs Searches	Extending Higgs Measurement Capabilities - I	Extending Higgs Measurement Capabilities - II	Higgs at Future Colliders - I e+e-	Higgs at Future Colliders - II Hadron Colliders	Higgs at Future Colliders - What Do We Learn?
	Stefania Gori	Marumi Kado		Caterina Vernieri	Jan Steggemann	Maria Cepeda		Patrizia Azzi	Michele Selvaggi	Michael Peskin
11:15--11:30	Q & A					Q & A				
11:30--11:40	Break					Break				
11:40--12:35	Higgs at LHC - I	BSM Higgs Models - I	BSM Higgs Models - II	Higgs Portal to BSM - I	Higgs Portal to BSM - II	Higgs & Flavor -I	Higgs & Flavor -II	Higgs & Flavor -III: experiments	Is There a Higgs - Gravity Link ?	The View Ahead
	Marumi Kado	Nausheen Shah		Jessie Shelton		Wolfgang Altmannshofer		Phillip Urquijo	Mikhail Shaposhnikov	Howard Haber
12:35--12:50	Q & A					Q & A				

See the SSI website for any updates!

49th SLAC Summer Institute (SSI 2021)



16 Aug 2021, 08:00 → 27 Aug 2021, 14:00 America/Los_Angeles

ZOOM videoconf (SLAC)

Thomas Rizzo (SLAC), Mark Convery (SLAC), Lisa Kaufman (SLAC), Greg Madejski, Richard Partridge (SLAC), Dong Su (SLAC), Charles Young (SLAC)

Description The SLAC Summer Institute (SSI) is an annual two-week-long Summer School tradition since 1973. Given the special circumstances and uncertainties with COVID-19 this year, SSI-2020 is a reduced program of just three online lectures each morning through the two weeks, without the usual afternoon programs in regular editions. We still require interested participants to register online (no registration fee) in order to receive updated online instructions. SSI is especially targeted for graduate students and postdocs while senior researchers are also welcome.

The 2021 SLAC Summer Institute will focus on the physics of the Higgs sector, from its foundational role in the Standard Model to the various Beyond the Standard Model scenarios, as well as its cosmological connections. Several aspects of spontaneous symmetry breaking are not yet well understood and many properties of the 125 GeV Higgs boson are either poorly determined or remain unmeasured. Some fundamental assumptions in most existing investigations also require more concerted probing. Through future measurements, these poorly known aspects of the Higgs may lead to new opportunities to explore for new physics signals such as links to the dark sector and/or long-lived particles, as well as to unexpected flavor dynamics and/or new sources of CP-violation. The lectures are primarily aimed at senior graduate students and postdocs. 2021 SLAC Summer Institute will focus on a broad spectrum of topics associated with the Higgs.



SSI-2021 Home Page

Registration



You are registered for this event.

1219

Modify registration

Participants

Aaditya Bhattacharya, Aarti Girdhar, Aayush Mishra, Aayushi Rajgor, Abdelhamid Haddad, Abdelrhman Fawzy, Abdul W. Khanday, Abhass Kumar, Abhinandan Angra, Abhishek Pandey, Abhishek Rajak, Abhishikth Mallampalli

Support sudong@slac.stanford.edu

3:30

→ 16:00

Poster Session: 1



13:30

#100 Lepton Flavor Violating Mixings at 2-Loop from the S-Matrix

Speaker: Mehmet Asim Gumus (Sissa)

contribution

🕒 1h 15m 📍 ZOOM videoconf



13:30

#101 Search for the Decay of the Higgs Boson to Charm Quarks with the ATLAS Experiment

Speaker: Zijun Xu (SLAC)

contribution

🕒 1h 15m 📍 ZOOM videoc...



13:30

#73 Optimization of sensitivity for the Di-Higgs search in $b\bar{b}l\nu qq$ final state in the LHC data recorded by the ATLAS detector in pp collisions at $\sqrt{s} = 13$ TeV

Speaker: Pratik Kafle (Reed College)

contribution

🕒 1h 15m



13:30

#76 Study of variability in radiation from the Blazar source 3C454.3

Speaker: Kaustav Dipta Goswami (Tezpur University)

contribution

🕒 1h 15m 📍 ZOOM videoconf



13:30

#77 Gravitational Microlensing by Dark Matter Subhalos and Boson Stars

Speaker: Zihui Wang (NYU)

contribution

🕒 1h 15m 📍 ZOOM videoconf



13:30

#92 Directly Probing the Higgs-top Coupling at High Scales

Speaker: Roshan Mammen Abraham (Oklahoma State University)

contribution

🕒 1h 15m 📍 ZOOM videoconf



13:30

#93 Hubble Selection of the Weak Scale: possibility from QCD quantum phase transition

Speaker: TaeHun Kim (Seoul National University)

🕒 1h 15m 📍 ZOOM videoc...



Q & A

Practical/Technical Questions : use **chat only** to push questions to the organizers...**NOT (!)** questions for the lecturers. Physics questions on chat will be strictly ignored.

The screenshot shows a presentation agenda with two items:

- 09:05** | **The Higgs: What We Know & What We Want to Learn**
Speaker: Sally Dawson (BNL) | 55m | [edit icon]
- 10:00** | **Q & A** | 10m | [edit icon]

Below the 'Q & A' item is a button with a link icon and the text 'Submit questions'. A red arrow points from the 'Q & A' section to this button.

Physics Questions : use the presentation **indico link** “**Submit questions**” to write questions to the lecturers – these will be (partly) addressed during the Q&A after each talk; other answers will appear later but will be delayed.
Please limit yourselves to concise questions !

Notice

Be careful, patient & considerate when downloading from the indico site

09:05

The Higgs: What We Know & What We Want to Learn

Speaker: Sally Dawson (BNL)

🕒 55m



Zoom recording here

Don't rush there immediately to access slides/videos etc. as there will be a delay

There are > 1200 of you.. if you all try to download the same thing at once we risk a failure & that is not good for you or your neighbor (or us) !

SSI21: Issues no certificates of attendance