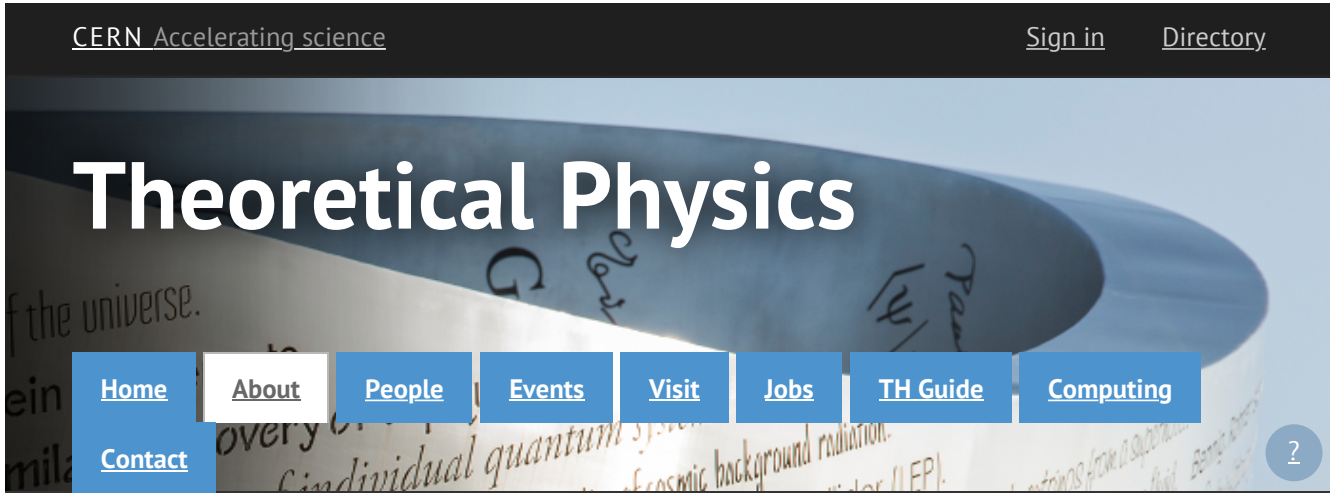


CERN Neutrino Platform - Theory working group (CENF-TH)

The Neutrino Platform (http://cenf.web.cern.ch/) is CERN's undertaking to foster and contribute to fundamental research in neutrino physics at particle accelerators worldwide.

The CERN Theory department (http://wwwth.cern.ch) contributes to this activity by supporting an associated activity in theoretical neutrino physics. CENF-TH aims at strengthening the connections between CERN and the worldwide community in neutrino physics, and will help to promote research in theoretical neutrino physics at CERN.

CENF-TH

Convenors: G. Barenboim (Valencia)
P. Coloma (Fermilab)
P. Hernandez (Valencia)
P. Huber (Virginia Tech)
S. Pascoli (Durham)
T. Schwetz (Karlshrue)

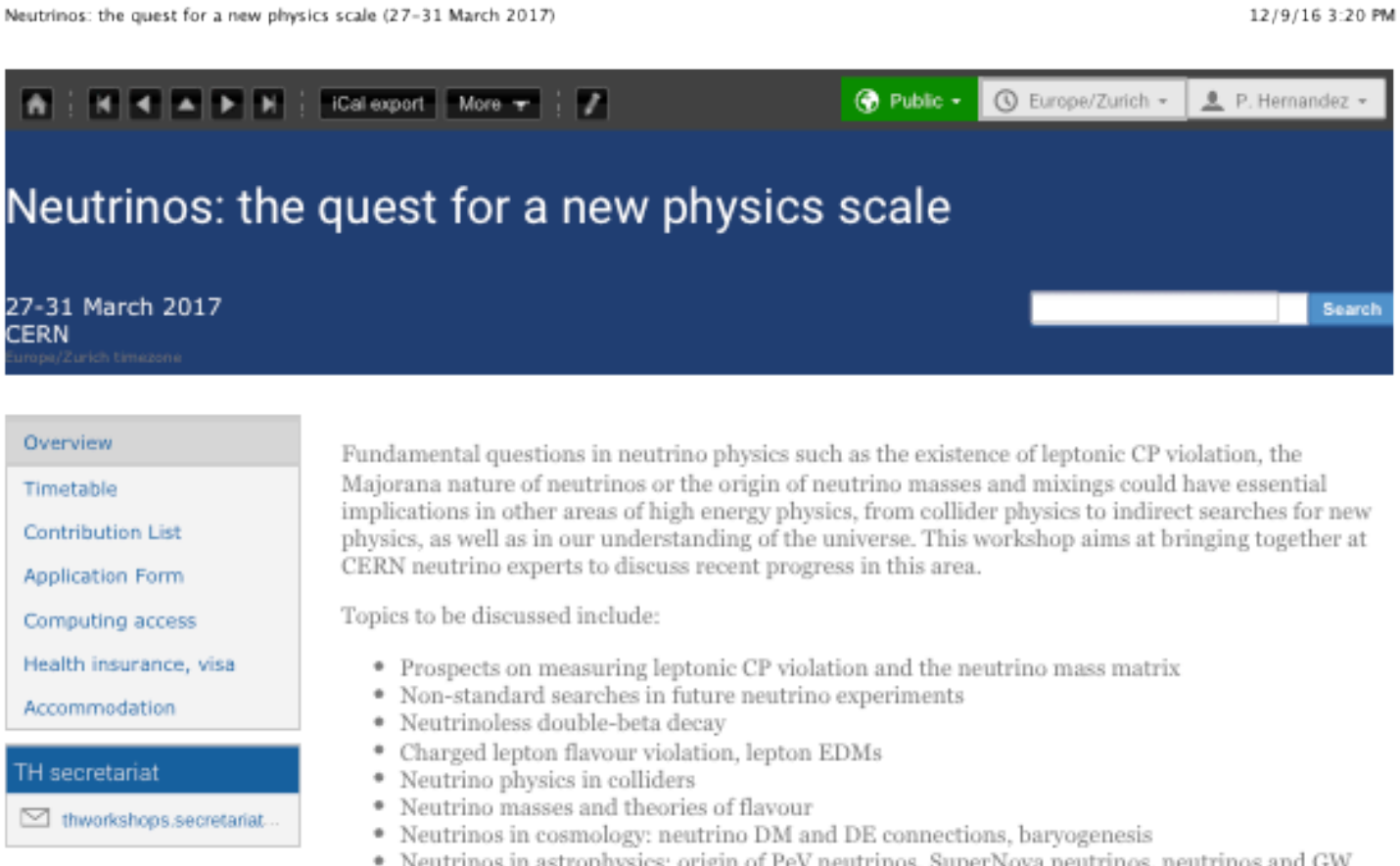
Main mandate: steer a sustained theory activitity on neutrino physics @ CERN

- Topical workshops (in close collaboration with Fermilab Theory Group)
- Increasing TH/EP exchanges
- Attracting leaders in the field to work at CERN (SASS, visitors, fellows…)

Webpage: http://th-dep.web.cern.ch/neutrino-platform-theory

& mailing list

A kick-off workshop will be organized on
27-31 March 2017:
Neutrinos: the quest of a new physics scale



Neutrinos: the quest for a new physics scale (27-31 March 2017) 12/9/16 3:20 PM

iCal export More Public Europe/Zurich P. Hernandez

Neutrinos: the quest for a new physics scale

27-31 March 2017
CERN
Europe/Zurich timezone

Search

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- Computing access
- Health insurance, visa
- Accommodation

TH secretariat
thworkshops.secretariat...

Fundamental questions in neutrino physics such as the existence of leptonic CP violation, the Majorana nature of neutrinos or the origin of neutrino masses and mixings could have essential implications in other areas of high energy physics, from collider physics to indirect searches for new physics, as well as in our understanding of the universe. This workshop aims at bringing together at CERN neutrino experts to discuss recent progress in this area.

Topics to be discussed include:

- Prospects on measuring leptonic CP violation and the neutrino mass matrix
- Non-standard searches in future neutrino experiments
- Neutrinoless double-beta decay
- Charged lepton flavour violation, lepton EDMs
- Neutrino physics in colliders
- Neutrino masses and theories of flavour
- Neutrinos in cosmology: neutrino DM and DE connections, baryogenesis
- Neutrinos in astrophysics: origin of PeV neutrinos, SuperNova neutrinos, neutrinos and GW

Scientific Programme:

Perspective talks

Monday: -Status of neutrino mass/mixing and near prospects Gonzalez-Garcia
-Critical review of neutrino anomalies Giunti

Tuesday: -Neutrino masses versus charged lepton violation Davidson
-Neutrino physics at colliders Han

Wednesday: -Neutrino properties from cosmology Lesgourges
-Lepton perspective on flavour Isidori
-TH Colloquium: Origin of neutrino mass: will we ever know ? Volkas

Thursday: - Status of neutrino Dark Matter Horiuchi

Friday: -On PeV neutrinos Winter
-Supernova neutrinos Mirizzi

Discussion/topical sessions

Monday: -Neutrino portals to BSM (Kopp, Huber)
-EP/TH: Beyond 3ν in neutrino experiments (Coloma, Patterson)

Tuesday: -Flavour symmetries (King, Hagedorn)
-EP/TH: How to improve LHC/collider searches for ν related physics (De Roeck, Pascoli)

Wednesday:-Neutrino portals to DM and DE (Aoki, Schwetz)

Thursday: -Prospects on bbon and LFV searches (Lopez-Pavon, Rodejohan)
-Neutrino perspectives on baryogenesis (Hambye, Hernandez)
-Neutrinos in cosmology (Barenboim, Raffelt)

Friday: -Neutrinos & gravity, astrophysics (Schwetz, Smirnov)

Monday 15:30 - 17:00 Chairs: P. Coloma and R. Patterson

- 16:00 eV-sterile neutrinos at long baseline 20’ Boris Kayser
- 16:20 MeV neutrinos at short-baseline experiments 20’ Peter Ballett
- 16:40 GeV neutrinos at SHiP 20’ Jordi Salvado
- 17:00 Large extra dimensions at oscillation neutrino experiments 20’ Zahra Tabrizi

Tuesday 15:30 - 17:00: Chairs: Silvia Pascoli, Tao Han and Albert de Roeck

15:30 Channels and observables for neutrino mass models at colliders Tao Han (10')

15:45 Where we are now with the LHC searches Albert De Roeck (15')

16:10 Status for theoretical calculations for collider searches Richard Ruiz (10')

16:30 Theoretical motivation for collider searches of neutrino mass models Serguey Petcov (15')