

Session Program

18-22 Feb 2019

HPNP2019 - The 4th International Workshop on "Higgs as a Probe of New Physics 2019"

Oral Session

Osaka University, Nambu Yoichiro Hall
1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

Monday 18 February

09:30

Oral Session: Session 18A

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

09:30–10:00

Symmetries and Mass Degeneracies in the Scalar Sector

Speaker

Howard Haber

10:00–10:30

Disentangling Pseudo-Goldstone DM from Vector DM

Speaker

Bohdan Grzadkowski

10:30

11:00

Oral Session: Session 18B

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

11:00–11:45

Recent Results and Future Prospects of Higgs Physics at the LHC

Speaker

Tatsuya Masubuchi

11:45–12:30

Space gravitational wave antenna DECIGO and B-DECIGO

Speaker

Seiji Kawamura

12:30

14:00

Oral Session: Session 18C

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

14:00–14:30

Measuring Higgs-boson property at the LHC and future e^+e^- collider

Speaker

Qing-Hong Cao

14:30–15:00

CP in extended scalar sectors at the LHC

Speaker

Rui Santos

15:00–15:30

Higgs Pair Production in the Standard Model and Beyond

Speaker

Milada Muhlleitner

15:30

Tuesday 19 February

09:00

Oral Session: Session 19A

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

09:00–09:30 **Cosmology on electroweak scales**

Speaker

Thomas Markus Konstandin

09:30–10:00

EW Baryogenesis through varying Yukawas in Composite Higgs models

Speaker

Sebastian Bruggisser

10:00–10:15

Cosmological constraints on leptophilic flavons

Speaker

Dr Venus Keus

10:15

10:45

Oral Session: Session 19B

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

10:45–11:15

CP in the Dark

Speaker

Prof. Pedro Ferreira

11:15–11:35

Dark matter in the supersymmetric left-right model

Speaker

Katri Huitu

11:35–11:50

Dark matter impostors with Higgs portal couplings in multicomponent dark sector

Speaker

Dr Takaaki Nomura

11:50–12:05

Detectability of pseudo-Goldstone boson dark matter

Speaker

Dr Takashi Toma

12:05–12:20

Fermion dark matter in models with U(1) symmetry

Speaker

Dr Toshinori Matsui

12:20–12:35

Light Fermionic WIMP Dark Matter with Light Scalar Mediator

Speaker

Dr Po-Yen Tseng

12:35

14:05

Oral Session: Session 19C**Session** | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan**14:05–14:35** **U(1)_H extensions of 2HDM****Speaker**

Prof. Pyungwon Ko

14:35–15:05 **Basis-invariant road to 3HDMs with symmetries****Speaker**

Igor Ivanov

15:05–15:25 **Unitarity constraints on general Higgs sectors****Speaker**

Mark Dayvon Goodsell

15:25–15:45 **R-symmetry for Higgs alignment without decoupling****Speaker**

Prof. Karim Benakli

15:45

Wednesday 20 February

09:00

Oral Session: Session 20A

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

09:00–09:30

Electroweak Scalars: Cosmological Implications and Terrestrial Probes

Speaker

Michael Ramsey-Musolf

09:30–10:00

Long Live the Higgs boson: Collider probes of freeze-in Dark Matter via the Higgs

Speaker

Jose Miguel No Redondo

10:00–10:15

Top-driven electroweak baryogenesis

Speaker

Kaori Fuyuto

10:15

10:45

Oral Session: Session 20B

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

10:45–11:15

Higgs Bosons below 125 GeV?!

Speaker

Sven Heinemeyer

11:15–11:35

Pursuing exotic decay channels of a charged Higgs boson

Speaker

Jeonghyeon Song

11:35–11:50

Deciphering CP Property of Top-Higgs Interaction and Higgs Total Width from Multi-Top Production

Speaker

Yandong Liu

11:50–12:05

Multi-Higgs production at the LHC in the Type-I 2HDM

Speaker

Shoaib Munir

12:05–12:20

Probing neutral BSM gauge boson from Higgs at the colliders

Speaker

Dr Arindam Das

12:20

Thursday 21 February

09:00

Oral Session: Session 21A

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

09:00–09:30

Higgs as a probe of long-lived particle productions

Speaker

Nobuchika Okada

09:30–10:00

Reconstructing Higgs masses in Type-X 2HDM for muon $g-2$

Speaker

Eung Jin Chun

10:00–10:20

Higgs inflation and the Swampland Conjecture

Speaker

Prof. Seong Chan Park

10:20–10:40

Higgs potential, New Physics and Stability of the EW vacuum

Speaker

Prof. Vincenzo Branchina

10:40

11:10

Oral Session: Session 21B

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

11:10–11:40

Learning from Higgs Physics at Future Higgs Factories

Speaker

Shufang Su

11:40–12:00

The golden couple of the SM: top and Higgs at present and future colliders

Speaker

Marcel Vos

12:00

13:55

Oral Session: Session 21C

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

13:55–14:25

Hierarchy problem from bottom-up and/or top-down

Speaker

Satoshi Iso

14:25–14:55

Topological Aspects of Two Higgs Doublet Models

Speaker

Muneto Nitta

14:55

Friday 22 February

09:00

Oral Session: Session 22A

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

09:00–09:30

A Concrete Composite 2-Higgs Doublet Model

Speaker

Stefania De Curtis

09:30–09:50

Composite Higgs bosons and non-standard top partner decays

Speaker

Rikard Enberg

09:50–10:05

Hidden scalar QCD at leading-order scale-symmetry limit: probed as enhanced diHiggs signal

Speaker

Prof. Shinya Matsuzaki

10:05–10:20

Light scalars in composite Higgs models

Speaker

Thomas Flacke

10:20–10:40

Higgs production in association with a photon in extended Higgs models at ILC250

Speaker

Kentarou Mawatari

10:40–10:55

Observables and New Physics Scales @ Future Lepton Colliders

Speaker

Dr Shao-Feng Ge

10:55

11:25

Oral Session: Session 22B

Session | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

11:25–11:45

The implication of gauge-Higgs unification for the hierarchical fermion masses

Speaker

Prof. C.S. Lim

11:45–12:05

Scotogenic Model: Phenomenological Constraints and Mono-Higgs Search

Speaker

Amine Ahriche

12:05–12:20

Lepton-nucleus CLFV scattering $e N \rightarrow e X$ by scalar interaction

Speaker

Dr Masato Yamanaka

12:50

12:20–12:35

Quintessence Saves Higgs Instability**Speaker**

Dr Chengcheng Han

14:20

12:35–12:50

Higgs inflation in the NMSSM: impact at the electroweak scale**Speaker**

Sebastian Paßehr

15:25

Oral Session: Session 22C**Session** | **Location:** Osaka University, Nambu Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

14:20–14:50

Determination of Higgs couplings to weak bosons**Speaker**

Prof. Cheng-Wei Chiang

14:50–15:10

Limits on exotic contributions to electroweak symmetry breaking**Speaker**

Heather Logan

15:10–15:25

Light Scalars in Georgi-Machacek Model at the LHC**Speaker**

Dr Yongcheng Wu