

## **Session Program**

**9-13 Jun 2025**

# **HPNP2025 - The 7th International Workshop on "Higgs as a Probe of New Physics"**

## ***Parallel***

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

# Monday 9 June

14:30

## Parallel: Session 1A: Chair S. Su

**Session** |

**Location:** The University of Osaka, Nambu-Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

14:30–14:45

### Advancing probes of the top quark Yukawa coupling with Conditional Neural Networks

**Speaker**

Adil Jueid

14:45–15:00

### Distinguishing $A \rightarrow HZ$ and $H \rightarrow AZ$ with top-quark spin correlations

**Speaker**

Panagiotis Stylianou

15:00–15:15

### CP-violation in complex-singlet extension of 2HDM

**Speaker**

Jayita Lahiri

15:15–15:30

### The Higgs phenomenology in the dark Z model

**Speaker**

Kazuki Enomoto

15:30–15:45

### Unveiling the CP-odd Higgs boson in a generalized 2HDM at future colliders

**Speaker**

Nivedita Ghosh

15:45

16:15

## Parallel: Session 2A: Chair P. Ferreira

**Session** |

**Location:** The University of Osaka, Nambu-Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

16:15–16:30

### Non-decoupling Heavy Higgs Bosons as a Probe of Spontaneous CP-Violation

**Speaker**

Tanmoy Mondal

16:30–16:45

### Searching for resonant flavor-changing charged Higgs production at the LHC

**Speaker**

Mohamed Krab

16:45–17:00

### Refining Two-Loop Corrections to Trilinear Higgs Couplings

**Speaker**

Felix Egle

17:00-17:15

**Large BSM One-Loop Triple Higgs Couplings in Di-Higgs Production at  $e^+e^-$  Colliders****Speaker**

Francisco Arco

17:15-17:30

**Loop-induced  $H^{\pm} \rightarrow W^{\pm} Z$  decays as a probe of the CP violation in the general 2HDM****Speaker**

Yushi Mura

17:30

## Tuesday 10 June

14:30

### Parallel: Session 3A: Chair R. Santos

**Session** |

**Location:** The University of Osaka, Nambu-Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

14:30–14:45

#### Horizontal three Higgs-doublet model

**Speaker**

Dipankar Das

14:45–15:00

#### Higgs Alignment limit and relaxed flavor constraints in a three-higgs-doublet extension

**Speaker**

Ipsita Saha

15:00–15:15

#### Walking-dilaton hybrid inflation in dynamical scalegenesis

**Speaker**

Hiroyuki Ishida

15:15–15:30

#### Revisiting Higgs physics in context of a light radion

**Speaker**

Soumya Sadhukhan

15:30–15:45

#### Extended Higgs sectors based on $SU(2)$ gauge theories with confinement

**Speaker**

Tetsuo Shindou

15:45

# Thursday 12 June

11:30

## Parallel: Session 4A: Chair T. Takahashi

**Session** |

**Location:** The University of Osaka, Nambu-Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

11:30–11:45

### **NANOGrav and other PTA signals and PBH from the modified Higgs inflation**

**Speaker**

Po-Yen Tseng

11:45–12:00

### **Probing BSM effects through gravitational wave observations**

**Speaker**

Katsuya Hashino

12:00–12:15

### **Primordial Magnetogenesis in the Two-Higgs-doublet Model**

**Speaker**

Maria Olalla Olea Romacho

12:15–12:30

### **Unitarity in Einstein-Cartan Higgs Inflation with Quantum Correction**

**Speaker**

Minxi He

12:30–12:45

### **Effects of electroweak phase transition on dark matter relic density**

**Speaker**

Chikako Idegawa

12:45–13:00

### **Primordial Black Hole catalyzes the First-Order Electroweak Phase Transition and its Parameter Space**

**Speaker**

Jiang Zhu

13:00

## Friday 13 June

11:30

### Parallel: Session 5A: T. Robens

**Session** |

**Location:** The University of Osaka, Nambu-Yoichiro Hall, 1-1 Machikaneyama-cho, Toyonaka, Osaka, Japan

11:30–11:45

#### Accumulating hints for flavorful Higgs bosons at the electroweak scale

**Speaker**

Syuhei Iguro

11:45–12:00

#### Light 2HDM scalars as dark matter mediators

**Speaker**

Johannes Herms

12:00–12:15

#### Effective field theory for type II seesaw model —symmetric phase v.s. broken phase—

**Speaker**

Yoshiki Uchida

12:15–12:30

#### On the CP Properties of Spin-0 Dark Matter

**Speaker**

Atri Dey

12:30–12:45

#### Landscape of the (extended) Georgi Machacek model in the presence of a light scalar

**Speaker**

Poulami Mondal

12:45–13:00

#### Unveiling the Unexplored Decay Mode of a Light Charged Higgs Boson to an Off-Shell Top Quark and a Bottom Quark

**Speaker**

Jinheung Kim

13:00