

## **Session Program**

**23-27 Sept 2019**

# **International Workshop on New Physics at the Low Energy Scales (NEPLES-2019)**

## ***Talk Session***

Korea Institute for advanced Study(KIAS), Auditorium(1F)  
85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

# Monday 23 September

09:15

## Talk Session: Morning 1A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

09:15-09:45

**QCD axion and more: Theories**

09:45-10:15

**ALP dark matter**

10:30

11:00

## Talk Session: Morning 1B

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

11:00-11:25

**Latest results from ABRA-10 and new ideas related to the axion DM detection**

11:25-11:50

**Production and detection of an axion dark matter echo**

11:50-12:10

**Dark Axion Portal**

12:30

14:00

## Talk Session: Afternoon 1A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

14:00-14:30

**The FASER experiment**

14:30-15:00

**The numerous and Varied impacts of sterile neutrinos on Cosmology**

15:30

16:00

## Talk Session: Afternoon 1B

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

16:00-16:30

**On determination of the neutrino oscillation parameters and status of Hyper-K-K**

16:30-17:00

**The 5 MeV bump**

17:30

## Tuesday 24 September

09:00

### Talk Session: Morning 2A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

09:00–09:30

**Axions and Swampland Conjectures**

09:30–10:00

**Axion and Inflation**

10:30

11:00

### Talk Session: Morning 2B

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

11:00–11:30

**Searching for Dark Matter and Dark energy at Cosmic Dawn**

11:30–11:50

**Axion-Photon Conversion and Effects on 21cm Line**

11:50–12:10

**Quantum effects in axion dark matter**

12:30

14:00

### Talk Session: Afternoon 2A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

14:00–14:20

**Scalar dark matter interacting through an extra  $U(1)$  gauge interaction**

14:20–14:40

**Probing light dark matter-induced fifth force with neutron-star inspirals and gravitational waves**

14:40–15:00

**Search for muon-philic new light gauge boson at Belle II**

15:30

16:00

### Talk Session: Afternoon 2B

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

16:00–16:30

**Parallel/Mirror Dark World**

16:30–17:00

**Latest results from COHERENT**

17:30

## Wednesday 25 September

09:00

### Talk Session: Morning 3A

**Session** |**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

09:00–09:30

**NEOS**

10:30

09:30–10:00

**The eV-scale sterile neutrinos and neutrino anomalies: status**

11:00

### Talk Session: Morning 3B

**Session** |**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

11:00–11:20

**Possible new physics through search for unitarity violation**

11:20–11:45

**COSINE-100**

12:30

11:45–12:10

**Dark matter search in a Beam-Dump eXperiment (BDX) at Jefferson Lab**

# Thursday 26 September

09:00

## Talk Session: Morning 4A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

09:00–09:30

**MiniBooNE results and bounds on their non-oscillations explanations**

09:30–10:00

**Light dark sectors and neutrino masses generation**

10:30

11:00

## Talk Session: Morning 4B

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

11:00–11:30

**Sterile neutrinos: Hiding from the Universe**

11:30–11:50

**Probing Fuzzy DM in Neutrino Experiments**

11:50–12:10

**TeV scale leptogenesis via dark sector scattering**

12:30

14:00

## Talk Session: Afternoon 4A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

14:00–14:30

**Physics and properties of relic neutrinos**

14:30–15:00

**The Ptolemy project: towards relic neutrino detection**

15:30

16:00

## Talk Session: Afternoon 4B

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

16:00–16:30

**Relic neutrino detection through angular correlations in inverse beta decay**

16:30–17:00

**Coherency and incoherency in neutrino-nucleus elastic and inelastic scattering**

17:00–17:20

**Radio telescope probes on the light scalar fields**

17:30

# Friday 27 September

09:00

## Talk Session: Morning 5A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

09:00–09:25

**Neutrino matter effect and non-standard interactions**

09:25–09:50

**The Price of Tiny Kinetic Mixing**

09:50–10:10

**Inelastic Boosted Dark Matter at Low Energy Scale Experiments**

10:30

11:00

## Talk Session: Morning 5B

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

11:00–11:30

**Manifestations of physics beyond standard model in atomic and nuclear phenomena**

11:30–12:00

**The MSW potentials induced by ultralight mediators**

12:30

14:00

## Talk Session: Afternoon 5A

**Session** |

**Location:** Korea Institute for advanced Study(KIAS), Auditorium(1F), 85 Hoegiro, Dongdaemun-gu, Seoul 02455, Republic of Korea

14:00–14:30

**AMoRE**

14:30–15:00

**Searches for light dark sector with high-energy astrophysical neutrinos**

15:00–15:30

**Probing light dark matter**

16:00