

**Brookhaven Forum 2017: In  
Search of New Paradigms**

**Report of Contributions**

Contribution ID: 0

Type: **not specified**

## **CMS**

*Wednesday, 11 October 2017 09:00 (45 minutes)*

**Presenter:** KLUTE, Markus (CMS, MIT)

**Session Classification:** Plenary Session I

Contribution ID: 1

Type: **not specified**

## ATLAS

*Wednesday, 11 October 2017 09:45 (45 minutes)*

**Presenter:** PAGAN GRISO, Simone (ATLAS, LBL)

**Session Classification:** Plenary Session I

Contribution ID: 2

Type: **not specified**

## **SM Measurements and New Physics**

*Wednesday, 11 October 2017 11:00 (45 minutes)*

**Presenter:** ZANDERIGHI, Giulia (Oxford)

**Session Classification:** Plenary Session II

Contribution ID: 3

Type: **not specified**

## Ultra-light Scalar Dark Matter

*Wednesday, 11 October 2017 11:45 (45 minutes)*

**Presenter:** OSTRIKER, Jeremiah (Princeton)

**Session Classification:** Plenary Session II

Contribution ID: 4

Type: **not specified**

## Electroweak Physics

Contribution ID: 5

Type: **not specified**

## **LHC Results: Electroweak**

*Wednesday, 11 October 2017 14:00 (20 minutes)*

**Presenter:** HSU, S.C. (University of Washington)

**Session Classification:** Parallel Session I

Contribution ID: 6

Type: **not specified**

## **Model independent studies of new physics in Higgs + jet(b-jet)**

*Wednesday, 11 October 2017 14:20 (20 minutes)*

**Presenter:** Dr BAR-SHALOM, Shaouly (Technion)

**Session Classification:** Parallel Session I

Contribution ID: 7

Type: **not specified**

# **A Statistical Approach to Higgs Couplings in the SMEFT**

*Wednesday, 11 October 2017 14:40 (20 minutes)*

**Presenter:** MURPHY, Christopher (BNL)

**Session Classification:** Parallel Session I

Contribution ID: 8

Type: **not specified**

## **LHC Results: Standard Model Higgs**

*Wednesday, 11 October 2017 15:00 (20 minutes)*

**Presenter:** CHENG, Tongguang (Perdue Northwest University)

**Session Classification:** Parallel Session I

Contribution ID: 9

Type: **not specified**

# The Minimal Fermionic Model of Electroweak Baryogenesis

*Wednesday, 11 October 2017 15:20 (20 minutes)*

**Presenter:** EGANA UGRINOVIC, Daniel Ignatio (Stony Brook University)

**Session Classification:** Parallel Session I

Contribution ID: **10**

Type: **not specified**

## **Dark Sector Searches with BABAR**

*Wednesday, 11 October 2017 14:00 (20 minutes)*

**Presenter:** HITLIN, David (CalTech)

**Session Classification:** Parallel Session II

Contribution ID: 11

Type: **not specified**

## **Dark Sector Searches with LDMX**

*Wednesday, 11 October 2017 14:20 (20 minutes)*

**Presenter:** HITLIN, David (CalTech)

**Session Classification:** Parallel Session II

Contribution ID: 12

Type: **not specified**

## **Dark Photons from Nuclear Transitions**

*Wednesday, 11 October 2017 14:40 (20 minutes)*

**Presenter:** KOZACZUK, Jonathan (University of Massachusetts)

**Session Classification:** Parallel Session II

Contribution ID: 13

Type: **not specified**

## **Supernova 1987A Constraints on Low-Mass Hidden Sectors**

*Wednesday, 11 October 2017 15:00 (20 minutes)*

**Presenter:** CHANG, Jae Hyeok (SBU)

**Session Classification:** Parallel Session II

Contribution ID: 14

Type: **not specified**

## **Higgs Boson Decays to Dark Photons through the Vectorized Lepton Portal**

*Wednesday, 11 October 2017 15:20 (20 minutes)*

**Presenter:** WIJANGCO, Alexander (TRIUMF)

**Session Classification:** Parallel Session II

Contribution ID: 15

Type: **not specified**

## **Charmless Hadronic B Decays from Belle**

*Wednesday, 11 October 2017 14:00 (20 minutes)*

**Presenter:** GAUR, Vipin (Virginia Tech)

**Session Classification:** Parallel Session III

Contribution ID: 16

Type: **not specified**

## **R(D\*) and R(K\*) at Belle**

*Wednesday, 11 October 2017 14:20 (20 minutes)*

**Presenter:** PAL, Bilas (University of Cincinnati)

**Session Classification:** Parallel Session III

Contribution ID: 17

Type: **not specified**

## **BSM Searches with Tests of LFU and Rare Decays at LHCb**

*Wednesday, 11 October 2017 14:40 (20 minutes)*

**Presenter:** LEROY, Olivier (CPPM)

**Session Classification:** Parallel Session III

Contribution ID: **18**

Type: **not specified**

## **Lattice B-physics**

*Wednesday, 11 October 2017 15:00 (20 minutes)*

**Presenter:** WITZEL, Oliver (University of Colorado, Boulder)

**Session Classification:** Parallel Session III

Contribution ID: 19

Type: **not specified**

## **CP Violation Measurements in Beauty and Charm Hadrons at LHCb**

*Wednesday, 11 October 2017 15:20 (20 minutes)*

**Presenter:** DI CANTO, Angelo (CERN)

**Session Classification:** Parallel Session III

Contribution ID: 20

Type: **not specified**

## **Latest Results on the Beyond the Standard Model Higgs Searches from ATLAS & CMS**

*Wednesday, 11 October 2017 14:00 (20 minutes)*

**Presenter:** BARONE, Gaetano (Bradeis University)

**Session Classification:** Parallel Session IV

Contribution ID: 21

Type: **not specified**

## **Left-Right Symmetry: At the Edges of Phase Space and Beyond**

*Wednesday, 11 October 2017 14:20 (20 minutes)*

**Presenter:** RUIZ, Richard (University of Durham)

**Session Classification:** Parallel Session IV

Contribution ID: 22

Type: **not specified**

## **Spectral Properties and S Parameter of $N_f=8$ QCD**

*Wednesday, 11 October 2017 14:40 (20 minutes)*

**Presenter:** AOKI, Yasumichi (Nagoya University)

**Session Classification:** Parallel Session IV

Contribution ID: 23

Type: **not specified**

## **BSM-lattice**

*Wednesday, 11 October 2017 15:00 (20 minutes)*

**Presenter:** Prof. HASENFRATZ, Anna (University of Colorado Boulder)

**Session Classification:** Parallel Session IV

Contribution ID: 24

Type: **not specified**

## Highlights from Flavor Physics

*Thursday, 12 October 2017 09:00 (45 minutes)*

**Presenter:** Ms BLANKE, Monika (Technical University Munich and MPi Physik Munich)

**Session Classification:** Plenary Session I

Contribution ID: 25

Type: **not specified**

## **Higgs Physics: Behind and Beyond the SM**

*Thursday, 12 October 2017 09:45 (45 minutes)*

**Presenter:** GROJEAN, Christophe (DESY, Hamburg and Humboldt University)

**Session Classification:** Plenary Session I

Contribution ID: 26

Type: **not specified**

## **Present Status and Future of Neutrino Physics**

*Thursday, 12 October 2017 11:00 (45 minutes)*

**Presenter:** Prof. HUBER, Patrick (Virginia Tech)

**Session Classification:** Plenary Session II

Contribution ID: 27

Type: **not specified**

## **New Ideas and Status of Dark Sector Theory and Searches**

*Thursday, 12 October 2017 11:45 (45 minutes)*

**Presenter:** KRNJAIC, Gordan (Fermilab)

**Session Classification:** Plenary Session II

Contribution ID: 28

Type: **not specified**

## **Cosmology and Neutrino Physics**

*Friday, 13 October 2017 09:00 (45 minutes)*

**Presenter:** DI BARI, Pasquale (University of Southampton)

**Session Classification:** Plenary Session I

Contribution ID: 29

Type: **not specified**

## **Testing the LCDM Paradigm with Large-scale Structure Probes**

*Friday, 13 October 2017 09:45 (45 minutes)*

**Presenter:** HEITMANN, Katrin (ANL)

**Session Classification:** Plenary Session I

Contribution ID: **30**

Type: **not specified**

## **New Ideas and Status of Direct Detection of Dark Matter**

*Friday, 13 October 2017 11:00 (45 minutes)*

**Presenter:** MANALAYSAY, Aaron (UC Davis)

**Session Classification:** Plenary Session II

Contribution ID: 31

Type: **not specified**

## Status and Prospects of Theory

*Friday, 13 October 2017 11:45 (45 minutes)*

**Presenter:** LYKKEN, Joseph (Fermilab)

**Session Classification:** Plenary Session II

Contribution ID: 32

Type: **not specified**

## Closing Remarks

**Presenters:** SONI, Amarjit (BNL); DAVOUDIASL, Hooman (Brookhaven National Laboratory)

Contribution ID: 33

Type: **not specified**

## **Lattice QCD and Neutrino Physics**

**Presenter:** MEYER, Aaron (BNL)

Contribution ID: 34

Type: **not specified**

## **S. Homiller: Measuring the Higgs Trilinear Coupling at HE-LHC**

*Thursday, 12 October 2017 14:00 (20 minutes)*

**Presenter:** HOMILLER, Samuel (SBU)

**Session Classification:** Parallel Session I

Contribution ID: 35

Type: **not specified**

## **Double Higgs Production in the Singlet Extended Standard Model**

*Thursday, 12 October 2017 14:40 (20 minutes)*

**Presenter:** SULLIVAN, Matthew (Kansas University/BNL)

**Session Classification:** Parallel Session I

Contribution ID: 36

Type: **not specified**

## **Radiative Decays of the Higgs Boson to a Pair of Fermions**

**Presenter:** WANG, Xing (University of Pittsburgh)

Contribution ID: 37

Type: **not specified**

## **Radiative Decays of the Higgs Boson to a Pair of Fermions**

*Thursday, 12 October 2017 15:00 (20 minutes)*

**Presenter:** WANG, Xing (University of Pittsburgh)

**Session Classification:** Parallel Session I

Contribution ID: **38**

Type: **not specified**

## **Loop-induced Single Top Partner Production at the LHC**

**Presenter:** KIM, Jeonghan (University of Kansas)

Contribution ID: 39

Type: **not specified**

## **Self Destructive Dark Matter**

*Thursday, 12 October 2017 14:00 (20 minutes)*

**Presenter:** Dr ZHANG, Yue (Northwestern University)

**Session Classification:** Parallel Session II

Contribution ID: 40

Type: **not specified**

## **Dark Matter in the Exo Higgs Scenario**

*Thursday, 12 October 2017 14:20 (20 minutes)*

**Presenter:** GIARDINO, Pier Paolo (BNL)

**Session Classification:** Parallel Session II

Contribution ID: 41

Type: **not specified**

## **Dark Matter Collider: Relativistic Scattering of Boosted Dark Matter**

*Thursday, 12 October 2017 14:40 (20 minutes)*

**Presenter:** Dr SHIN, Seodong (Yonsei University)

**Session Classification:** Parallel Session II

Contribution ID: 42

Type: **not specified**

# Optical, Gravitational, and Radio Signatures of DM-induced Neutron Star Implosions

*Thursday, 12 October 2017 15:00 (20 minutes)*

**Presenter:** TSAI, Yu-Dai (Cornell University)

**Session Classification:** Parallel Session II

Contribution ID: 43

Type: **not specified**

## **TOP and QCD studies with ATLAS and CMS**

*Thursday, 12 October 2017 14:00 (20 minutes)*

**Presenter:** BEHNKE, Olaf (DESY)

**Session Classification:** Parallel Session III

Contribution ID: 44

Type: **not specified**

## **Future Prospects of CMS/ATLAS**

*Thursday, 12 October 2017 14:20 (20 minutes)*

**Presenter:** HATAKEYAMA, Kenichi (Baylor University)

**Session Classification:** Parallel Session III

Contribution ID: 45

Type: **not specified**

## **Towards a non-perturbative calculation of Weak Hamiltonian Wilson Coefficients**

*Thursday, 12 October 2017 14:40 (20 minutes)*

**Presenter:** Mr BRUNO, Mattia (BNL)

**Session Classification:** Parallel Session III

Contribution ID: 46

Type: **not specified**

## **Double Gauge Boson Production in the SM EFT**

*Thursday, 12 October 2017 15:00 (20 minutes)*

**Presenter:** Dr LEWIS, Ian (BNL)

**Session Classification:** Parallel Session III

Contribution ID: 47

Type: **not specified**

## **Lattice QCD and Neutrino Physics**

*Thursday, 12 October 2017 14:00 (20 minutes)*

**Presenter:** MEYER, Aaron (BNL)

**Session Classification:** Parallel Session IV

Contribution ID: 48

Type: **not specified**

## **Neutrino Background for Sub-GeV Dark Matter-electron Scattering**

*Thursday, 12 October 2017 14:20 (20 minutes)*

**Presenter:** SHOLAPURKAR, Mukul (SBU)

**Session Classification:** Parallel Session IV

Contribution ID: 49

Type: **not specified**

## Separate Universe Simulations with Massive Neutrinos

*Thursday, 12 October 2017 14:40 (20 minutes)*

**Presenter:** CHI-TING, Chiang (SBU)

**Session Classification:** Parallel Session IV

Contribution ID: 50

Type: **not specified**

## **The Latest Daya Bay Results**

*Thursday, 12 October 2017 15:00 (20 minutes)*

**Presenter:** Dr ZHANG, Chao (BNL)

**Session Classification:** Parallel Session IV

Contribution ID: 51

Type: **not specified**

## **Resolving Combinatorial Ambiguity Using Constrained M2 Variable**

*Thursday, 12 October 2017 16:10 (20 minutes)*

**Presenter:** DEBNATH, Dipsikha (University of Florida)

**Session Classification:** Parallel Session IV

Contribution ID: 52

Type: **not specified**

## **Radiative Corrections in Universal Extra Dimensions**

*Thursday, 12 October 2017 16:30 (20 minutes)*

**Presenter:** WIEGAND, Daniel (University of Pittsburgh)

**Session Classification:** Parallel Session IV

Contribution ID: 53

Type: **not specified**

## **Diphoton Resonance Below Higgs Mass at LHC**

*Thursday, 12 October 2017 16:50 (20 minutes)*

**Presenter:** KOHSAKU, Tobioka (SBU)

**Session Classification:** Parallel Session IV

Contribution ID: 54

Type: **not specified**

## **Dark Interactions and Supercomputers**

*Thursday, 12 October 2017 15:50 (20 minutes)*

**Presenter:** Dr RINALDI, Enrico (BNL)

**Session Classification:** Parallel Session III

Contribution ID: 55

Type: **not specified**

## **Interacting Dark Sector and Precision Cosmology**

*Thursday, 12 October 2017 16:10 (20 minutes)*

**Presenter:** BUEN-ABAD NAJAR, Miguel (Boston University)

**Session Classification:** Parallel Session III

Contribution ID: 56

Type: **not specified**

## Colour Breaking Baryogenesis

*Thursday, 12 October 2017 16:30 (20 minutes)*

**Presenter:** WHITE, Graham (TRIUMF)

**Session Classification:** Parallel Session III

Contribution ID: 57

Type: **not specified**

# Entanglement Entropy and Decoupling in the Universe

*Thursday, 12 October 2017 16:50 (20 minutes)*

**Presenter:** NAKAI, Yuichiro (Rutgers)

**Session Classification:** Parallel Session III

Contribution ID: 58

Type: **not specified**

## Status of the Muon $g-2$ Experiment

*Thursday, 12 October 2017 15:50 (20 minutes)*

**Presenter:** Mr TISHCHENKO, Vladimir (BNL)

**Session Classification:** Parallel Session II

Contribution ID: 59

Type: **not specified**

## **g-2 on the lattice**

*Thursday, 12 October 2017 16:10 (20 minutes)*

**Presenter:** LEHNER, Christoph (BNL)

**Session Classification:** Parallel Session II

Contribution ID: **60**

Type: **not specified**

## **Searching for Long-lived Particles: A Compact Detector for Exotics at LHCb**

*Thursday, 12 October 2017 16:30 (20 minutes)*

**Presenter:** KNAPEN, Simon (LBNL)

**Session Classification:** Parallel Session II

Contribution ID: **61**

Type: **not specified**

## **Muon Beam Experiments to Probe the Dark Sector**

*Thursday, 12 October 2017 16:50 (20 minutes)*

**Presenter:** Dr CHEN, Chien-Yi (Brookhaven National Laboratory)

**Session Classification:** Parallel Session II

Contribution ID: 62

Type: **not specified**

## Double Higgs at the LHC

**Presenter:** HUANG, Peisi (University of Nebraska-Lincoln)

Contribution ID: 63

Type: **not specified**

## **Probing Higgs Physics Through Interference Effects**

*Thursday, 12 October 2017 15:50 (20 minutes)*

**Presenter:** LIU, Zhen (Fermilab)

**Session Classification:** Parallel Session I

Contribution ID: **64**

Type: **not specified**

## **LHC Results: SUSY+Exotics**

*Thursday, 12 October 2017 16:10 (20 minutes)*

**Presenter:** CARLSON, Ben (University of Pittsburgh)

**Session Classification:** Parallel Session I

Contribution ID: 65

Type: **not specified**

## **Little Hierarchy in the Minimally Specified MSSM**

*Thursday, 12 October 2017 16:30 (20 minutes)*

**Presenter:** DERMISEK, Radovan (Indiana University)

**Session Classification:** Parallel Session I

Contribution ID: 66

Type: **not specified**

# Loop-induced Single Top Partner Production at the LHC

*Thursday, 12 October 2017 15:50 (20 minutes)*

**Presenter:** KIM, Jeonghan (University of Kansas)

**Session Classification:** Parallel Session IV

Contribution ID: 67

Type: **not specified**

## Welcome

*Wednesday, 11 October 2017 08:45 (10 minutes)*

**Presenter:** MA, Hong (BNL)

**Session Classification:** Welcome

Contribution ID: **68**

Type: **not specified**

## Welcome

*Wednesday, 11 October 2017 08:55 (5 minutes)*

**Presenters:** SONI, Amarjit (BNL); DAVOUDIASL, Hooman (Brookhaven National Laboratory)

**Session Classification:** Welcome

Contribution ID: **69**

Type: **not specified**

## **Double Higgs at the LHC**

*Thursday, 12 October 2017 14:20 (20 minutes)*

**Presenter:** HUANG, Peisi (University of Nebraska-Lincoln)

**Session Classification:** Parallel Session I