

# **Higgs Couplings 2018**

## **Report of Contributions**

Contribution ID: 1

Type: **Higher order theory calculation**

## **High precision Higgs phenomenology from NNLOJET (10+5)**

*Thursday 29 November 2018 14:00 (15 minutes)*

**Primary authors:** CHEN, Xuan (University of Zurich); Prof. GLOVER, Nigel (IPPP, Durham University); Prof. GEHRMANN, Thomas (University of Zurich); Dr HUSS, Alexander (CERN); Dr CIERI, Leandro (INFN, Italy)

**Presenter:** CHEN, Xuan (University of Zurich)

**Session Classification:** Parallel

Contribution ID: 3

Type: **Beyond the standard model**

## Flavor Violating Higgs Couplings in Minimal Flavor Violation (9+3)

*Thursday 29 November 2018 15:45 (12 minutes)*

**Primary authors:** Prof. ZHANG, Jin-Jun (School of Physics and Information Engineering, Shanxi Normal University, Linfen 041004, China); HE, Min (Institute of Nuclear and Particle Physics, School of Physics and Astronomy, Shanghai Jiao Tong University, Shanghai 200240, China); Prof. HE, Xiao-Gang (Physics Division, National Center for Theoretical Sciences, Hsinchu 30013, Taiwan); Dr YUAN, Xing-Bo (Department of Physics, National Taiwan University, Taipei 10617, Taiwan)

**Presenter:** HE, Min (Institute of Nuclear and Particle Physics, School of Physics and Astronomy, Shanghai Jiao Tong University, Shanghai 200240, China)

**Session Classification:** Parallel

Contribution ID: 4

Type: **Beyond the standard model**

## **Asymptotic Safety and the Higgs Portal Models (9+3)**

*Thursday 29 November 2018 16:09 (12 minutes)*

**Primary author:** KWAPISZ, Jan (University of Warsaw)

**Co-author:** Mr GRABOWSKI, Frederic (University of Warsaw)

**Presenter:** KWAPISZ, Jan (University of Warsaw)

**Session Classification:** Parallel

Contribution ID: 5

Type: **Study related effective field theory**

## **Dimension-Six Effective Field Theory for Vector Boson Scattering (10+5)**

*Thursday 29 November 2018 17:15 (15 minutes)*

**Primary author:** GOMEZ-AMBROSIO, Raquel (IPPP Durham)

**Presenter:** GOMEZ-AMBROSIO, Raquel (IPPP Durham)

**Session Classification:** Parallel

Contribution ID: 6

Type: **Beyond the standard model**

## **Associated production of Higgs at linear collider in Seesaw Type II Model (9+3)**

*Thursday 29 November 2018 16:21 (12 minutes)*

**Primary author:** RAHILI, LARBI (EPTHE, Université Ibn Zohr)

**Presenter:** RAHILI, LARBI (EPTHE, Université Ibn Zohr)

**Session Classification:** Parallel

Contribution ID: 7

Type: **Higgs property measurements**

## **Review on precision Higgs phenomenology (30+15)**

*Monday 26 November 2018 14:40 (45 minutes)*

**Presenter:** LINDERT, Jonas (University of Durham (GB))

**Session Classification:** Plenary

Contribution ID: 8

Type: **Higgs property measurements**

## **Higgs boson property measurements from ATLAS and CMS (20+10)**

*Monday 26 November 2018 14:10 (30 minutes)*

**Presenters:** ROSATI, Stefano (Istituto Nazionale di Fisica Nucleare Sezione di Roma 1); ROSATI, Stefano (Sapienza Universita e INFN, Roma I (IT))

**Session Classification:** Plenary



Contribution ID: 9

Type: **not specified**

## **Summary for ggF measurement using bosonic channels from ATLAS and CMS (20+10)**

*Monday 26 November 2018 15:25 (30 minutes)*

**Presenter:** CAPPATI, Alessandra (Universita e INFN Torino (IT))

**Session Classification:** Plenary

Contribution ID: **10**

Type: **not specified**

## **Recent development for the calculation of ggH in the SM (20+10)**

*Monday 26 November 2018 16:15 (30 minutes)*

**Presenter:** MONNI, Pier Francesco (CERN)

**Session Classification:** Plenary

Contribution ID: 11

Type: **not specified**

## **VH- and VBF-related production at ATLAS and CMS (20+10)**

*Monday 26 November 2018 16:45 (30 minutes)*

**Presenter:** TAENZER, Joe (Tel Aviv University (IL))

**Session Classification:** Plenary

Contribution ID: 12

Type: **not specified**

## **Recent development for the calculation of VBF/VH in the SM (20+10)**

*Monday 26 November 2018 17:15 (30 minutes)*

**Presenters:** ZANDERIGHI, Giulia (CERN); ZANDERIGHI, Giulia (CERN)

**Session Classification:** Plenary

Contribution ID: 13

Type: **not specified**

## **Higgs measurement using boosted topology at the LHC(20+10)**

*Tuesday 27 November 2018 09:00 (30 minutes)*

**Presenter:** KILMINSTER, Ben (Universitaet Zuerich (CH))

**Session Classification:** Plenary

Contribution ID: 14

Type: **not specified**

## **Recent development for the boosted technique (20+10)**

*Tuesday 27 November 2018 09:30 (30 minutes)*

**Presenter:** TAKEUCHI, Michihisa (Univ. of Tokyo)

**Session Classification:** Plenary

Contribution ID: 15

Type: **not specified**

## **Machine Learning for Higgs boson physics at the LHC (20+10)**

*Tuesday 27 November 2018 10:00 (30 minutes)*

**Presenter:** BUZATU, Adrian (Academia Sinica (TW))

**Session Classification:** Plenary

Contribution ID: 16

Type: **not specified**

## **Results on the heavy Higgs searches from ATLAS and CMS (20+10)**

*Tuesday 27 November 2018 11:00 (30 minutes)*

**Presenter:** STEGGEMANN, Jan (CERN)

**Session Classification:** Plenary



Contribution ID: 17

Type: **not specified**

## **Extended Higgs sectors at LHC (20+10)**

*Tuesday 27 November 2018 11:30 (30 minutes)*

**Presenters:** SANTOS, Rui (ISEL and CFTEC-UL); SANTOS, Rui (ISEL)

**Session Classification:** Plenary

Contribution ID: **18**

Type: **not specified**

## **Review for the DM (including Higgs portal DM) (20+10)**

*Thursday 29 November 2018 11:30 (30 minutes)*

**Presenters:** MATSUMOTO, Shigeki (KEK); Dr MATSUMOTO, Shigeki (Kavli IPMU)

**Session Classification:** Plenary

Contribution ID: 19

Type: **not specified**

## **Analyses on H to bb and cc at ATLAS (18+7)**

*Tuesday 27 November 2018 14:00 (25 minutes)*

**Presenter:** SCHAEFER, Douglas Michael (University of Chicago (US))

**Session Classification:** Plenary

Contribution ID: **20**

Type: **not specified**

## **Measurement of Hbb/Hcc in CMS (18+7)**

*Tuesday 27 November 2018 14:25 (25 minutes)*

**Presenter:** DE WIT, Adinda (Deutsches Elektronen-Synchrotron (DE))

**Session Classification:** Plenary

Contribution ID: 21

Type: **not specified**

## **Measurement of Higgs to lepton decay mode from ATLAS and CMS(20+10)**

*Tuesday 27 November 2018 14:50 (30 minutes)*

**Presenter:** CAILLOL, Cecile Sarah (University of Wisconsin Madison (US))

**Session Classification:** Plenary

Contribution ID: 22

Type: **not specified**

## Heavy quark radiation in NLO+PS (30+15)

*Tuesday 27 November 2018 15:20 (45 minutes)*

**Presenter:** TRAMONTANO, Francesco (Universita e sezione INFN di Napoli (IT))

**Session Classification:** Plenary

Contribution ID: 23

Type: **not specified**

## **Constraints on effective Lagrangians from ATLAS and CMS (30+15)**

*Tuesday 27 November 2018 16:35 (45 minutes)*

**Presenter:** HAYS, Chris (University of Oxford (GB))

**Session Classification:** Plenary

Contribution ID: 24

Type: **not specified**

## **Review for EFT (30+15)**

*Tuesday 27 November 2018 17:20 (45 minutes)*

**Presenter:** JENKINS, Elizabeth

**Session Classification:** Plenary



Contribution ID: 25

Type: **not specified**

## **EFT global fit (20+10)**

*Tuesday 27 November 2018 18:05 (30 minutes)*

**Presenter:** YOU, Tevong (University of Cambridge)

**Session Classification:** Plenary

Contribution ID: 26

Type: **not specified**

## **Analyses of ttH production in ATLAS (20+10)**

*Wednesday 28 November 2018 09:00 (30 minutes)*

**Presenter:** BOUTLE, Sarah (University of Glasgow (GB))

**Session Classification:** Plenary

Contribution ID: 27

Type: **not specified**

## **Measurement of ttH production in CMS (20+10)**

*Wednesday 28 November 2018 09:30 (30 minutes)*

**Presenter:** MARAVIN, Yuri (Kansas State University (US))

**Session Classification:** Plenary

Contribution ID: 28

Type: **not specified**

## **Top-quark mass and Yukawa coupling (20+10)**

*Wednesday 28 November 2018 10:00 (30 minutes)*

**Presenter:** SUMINO, Yukinari (Tohoku University)

**Session Classification:** Plenary

Contribution ID: 29

Type: **not specified**

## **The future frontier in precision Higgs physics (20+10)**

*Wednesday 28 November 2018 11:00 (30 minutes)*

**Presenter:** LOW, Ian

**Session Classification:** Plenary

Contribution ID: **30**

Type: **not specified**

## **Higgs with FCC”(mainly on FCC-hh) (20+10)**

*Wednesday 28 November 2018 12:00 (30 minutes)*

**Presenter:** PETERS, Krisztian (Deutsches Elektronen-Synchrotron (DE))

**Session Classification:** Plenary

Contribution ID: **31**

Type: **not specified**

## **Higgs with future lepton collider (20+10)**

*Wednesday 28 November 2018 11:30 (30 minutes)*

**Presenter:** SIMON, Frank (Max-Planck-Institut fuer Physik)

**Session Classification:** Plenary

Contribution ID: 32

Type: **not specified**

## **Vector Boson Scattering and Anomalous Quartic Couplings from ATLAS and CMS (20+10)**

*Thursday 29 November 2018 09:00 (30 minutes)*

**Presenter:** TORASSA, Ezio (Universita e INFN, Padova (IT))

**Session Classification:** Plenary



Contribution ID: 33

Type: **not specified**

## **Higgs to photon-photon decay in SM EFT at NLO (20+10)**

*Thursday 29 November 2018 09:30 (30 minutes)*

**Presenter:** ROSIEK, Janusz Andrzej (University of Warsaw (PL))

**Session Classification:** Plenary

Contribution ID: **34**

Type: **not specified**

## **EFT tools (20+10)**

*Thursday 29 November 2018 10:00 (30 minutes)*

**Presenter:** FUKS, Benjamin (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Plenary

Contribution ID: 35

Type: **not specified**

## **Low mass Higgs boson searches from ATLAS and CMS (20+10)**

*Thursday 29 November 2018 11:00 (30 minutes)*

**Presenter:** NEUBAUER, Mark (Univ. Illinois at Urbana Champaign (US))

**Session Classification:** Plenary

Contribution ID: **36**

Type: **not specified**

## **hhh-EWPT correlation beyond 1-loop order (20+10)**

*Tuesday 27 November 2018 12:00 (30 minutes)*

**Presenter:** SENAHA, Eibun

**Session Classification:** Plenary

Contribution ID: 37

Type: **not specified**

## **Exotic Higgs Searches (FCNC, LFV and rare decay) from ATLAS and CMS (20+10)**

*Thursday 29 November 2018 12:00 (30 minutes)*

**Presenter:** IIYAMA, Yutaro (Massachusetts Inst. of Technology (US))

**Session Classification:** Plenary

Contribution ID: **38**

Type: **not specified**

## **Latest results on CMS Higgs boson combination (25+5)**

*Friday 30 November 2018 09:00 (30 minutes)*

**Presenter:** GILBERT, Andrew (CERN)

**Session Classification:** Plenary

Contribution ID: 39

Type: **not specified**

## **Latest results on ATLAS Higgs boson combination (25+5)**

*Friday 30 November 2018 09:30 (30 minutes)*

**Presenter:** GADATSCH, Stefan (Universite de Geneve (CH))

**Session Classification:** Plenary

Contribution ID: 40

Type: **not specified**

## **BSM from Higgs precision measurements (20+10)**

*Friday 30 November 2018 10:00 (30 minutes)*

**Presenter:** YAGYU, Kei (University of Southampton)

**Session Classification:** Plenary



Contribution ID: 41

Type: **not specified**

## **Searches on Invisible Higgs boson and Dark Matter from ATLAS and CMS (20+10)**

*Friday 30 November 2018 11:00 (30 minutes)*

**Presenter:** CORTES GONZALEZ, Arely (CERN)

**Session Classification:** Plenary

Contribution ID: 42

Type: **not specified**

## **Vision for high energy physics, from string to Higgs (20+10)**

*Friday 30 November 2018 11:30 (30 minutes)*

**Presenter:** ISO, Satoshi (Unknown)

**Session Classification:** Plenary

Contribution ID: 43

Type: **not specified**

## **Basic questions of high energy physics (20+10)**

*Friday 30 November 2018 12:00 (30 minutes)*

**Presenter:** NOMURA, Yasunori

**Session Classification:** Plenary

Contribution ID: 44

Type: **not specified**

## **HH resonance searches at ATLAS+CMS (18+7)**

*Friday 30 November 2018 14:00 (25 minutes)*

**Presenter:** TIKO, Andres (Universita e INFN, Padova (IT))

**Session Classification:** Plenary

Contribution ID: 45

Type: **not specified**

## **HH searches (non resonance) at ATLAS+CMS (18+7)**

*Friday 30 November 2018 14:25 (25 minutes)*

**Presenter:** FROST, James (University of Oxford (GB))

**Session Classification:** Plenary

Contribution ID: 46

Type: **not specified**

## **Self-coupling from the double Higgs production (20+10)**

*Friday 30 November 2018 14:50 (30 minutes)*

**Presenter:** SON, Minho

**Session Classification:** Plenary

Contribution ID: 47

Type: **not specified**

## **Self-coupling from the single Higgs production (20+10)**

*Friday 30 November 2018 15:20 (30 minutes)*

**Presenter:** PAGANI, Davide (TUM - Garching bei München)

**Session Classification:** Plenary

Contribution ID: 48

Type: **not specified**

## Prospect on HL-LHC (30+15)

*Friday 30 November 2018 16:15 (45 minutes)*

**Presenter:** MILENOVIC, Predrag (CERN)

**Session Classification:** Plenary



Contribution ID: 49

Type: **not specified**

## **Higgs physics at HL/HE-LHC (30+15)**

*Friday 30 November 2018 17:00 (45 minutes)*

**Presenter:** HAN, Tao (University of Pittsburgh)

**Session Classification:** Plenary

Contribution ID: 50

Type: **not specified**

## **Rerent results of gravitational wave (25+5)**

*Wednesday 28 November 2018 14:00 (30 minutes)*

**Presenter:** ANDO, Masaki

**Session Classification:** Plenary

Contribution ID: 51

Type: **not specified**

## **Recent development for the Higgs inflation (30+15)**

*Wednesday 28 November 2018 14:30 (45 minutes)*

**Presenter:** BEZRUKOV, Fedor (University of Manchester (GB))

**Session Classification:** Plenary

Contribution ID: 52

Type: **not specified**

## Recent results of CMB (25+5)

*Wednesday 28 November 2018 15:15 (30 minutes)*

**Presenter:** REICHARDT, Christian (University of Melbourne)

**Session Classification:** Plenary

Contribution ID: 53

Type: **not specified**

## **Topological objects in the Higgs sector (25+5)**

*Wednesday 28 November 2018 15:45 (30 minutes)*

**Presenter:** KURACHI, Masafumi

**Session Classification:** Plenary

Contribution ID: 54

Type: **Beyond the standard model**

## **Dark Matter EFT with Extended Scalar Sector (9+3)**

*Thursday 29 November 2018 15:45 (12 minutes)*

**Primary authors:** TENORTH, Valentin (Max-Planck-Institut für Kernphysik); Dr ALANNE, Tommi (MPIK Heidelberg); Dr GOERTZ, Florian (Max-Planck-Gesellschaft (DE)); ARCADI, Giorgio (MPIK Heidelberg); VOGL, Stefan (Max Planck Institute for Nuclear Physics)

**Presenter:** TENORTH, Valentin (Max-Planck-Institut für Kernphysik)

**Session Classification:** Parallel

Contribution ID: 55

Type: **Higher order theory calculation**

## **Standard Model Effective Theory at NLO in QCD (10+5)**

*Thursday 29 November 2018 14:30 (15 minutes)*

**Primary author:** MIMASU, Ken (Université Catholique de Louvain)

**Co-authors:** MALTONI, Fabio (Universite Catholique de Louvain (UCL) (BE)); ZHANG, Cen (Institute of High Energy Physics, Chinese Academy Sciences); VRYONIDOU, Eleni (CERN); DEGRANDE, Celine Catherine A (CERN)

**Presenter:** MIMASU, Ken (Université Catholique de Louvain)

**Session Classification:** Parallel

Contribution ID: 56

Type: **Beyond the standard model**

## **Effect of Gauge Kinetic Mixing on Higgs Sector in B-L Supersymmetric Standard Model (9+3)**

*Thursday 29 November 2018 16:45 (12 minutes)*

**Primary author:** MUKHERJEE, Samadrita (Indian Association for the Cultivation of Science)

**Co-authors:** Prof. CHATTOPADHYAY, Utpal (Indian Association for the Cultivation of Science); Mr DEY, Abhishek (Maulana Azad College)

**Presenter:** MUKHERJEE, Samadrita (Indian Association for the Cultivation of Science)

**Session Classification:** Parallel



Contribution ID: 57

Type: **Di-Higgs, self-coupling**

## **Constraints on Higgs couplings from double-Higgs production at future hadron colliders (10+5)**

*Thursday 29 November 2018 17:30 (15 minutes)*

**Primary authors:** ROTTOLI, Luca (University of Oxford); Mr BIZON, Wojciech (University of Oxford (GB)); HAISCH, Ulrich Andreas (University of Oxford (GB))

**Presenter:** ROTTOLI, Luca (University of Oxford)

**Session Classification:** Parallel

Contribution ID: 59

Type: **Study related effective field theory**

## **Positivity bounds on vector boson scattering (10+5)**

*Thursday 29 November 2018 17:30 (15 minutes)*

**Primary author:** ZHANG, Cen (Institute of High Energy Physics, Chinese Academy Sciences)

**Co-author:** Prof. ZHOU, Shuang-Yong (University of Science and Technology of China)

**Presenter:** ZHANG, Cen (Institute of High Energy Physics, Chinese Academy Sciences)

**Session Classification:** Parallel

Contribution ID: 60

Type: **Higher order theory calculation**

## **High Precision Vector Boson Fusion Dihiggs Production (10+5)**

*Thursday 29 November 2018 14:00 (15 minutes)*

**Primary author:** KARLBERG, Alexander (Universitaet Zuerich (CH))

**Co-authors:** DREYER, Frederic Alexandre (MIT); RAUCH, Michael (Univ. Karlsruhe, KIT)

**Presenter:** KARLBERG, Alexander (Universitaet Zuerich (CH))

**Session Classification:** Parallel

Contribution ID: 61

Type: **Others**

## **Production and hadronic decays of Higgs bosons in heavy-ion collisions (10+5)**

*Thursday 29 November 2018 18:00 (15 minutes)*

**Primary authors:** JUEID, Adil (Shanghai JiaoTong University/Shanghai Key Laboratory for Partic); Prof. BERGER, Edmond L. (Argonne National Laboratory); Prof. GAO, Jun (Shanghai Jiao Tong University); Dr ZHANG, Hao (University of Chinese Academy of Sciences)

**Presenter:** JUEID, Adil (Shanghai JiaoTong University/Shanghai Key Laboratory for Partic)

**Session Classification:** Parallel

Contribution ID: 62

Type: **Higgs property measurements**

## **Higgs self couplings at the FCC-hh (10+5)**

*Thursday 29 November 2018 18:30 (15 minutes)*

**Primary authors:** SELVAGGI, Michele (CERN); HELSENS, Clement (CERN)

**Presenter:** HELSENS, Clement (CERN)

**Session Classification:** Parallel

Contribution ID: 64

Type: **Higher order theory calculation**

## **Differential decay rates of CP-even and CP-odd Higgs bosons to massive quarks at NNLO QCD (10+5)**

*Thursday 29 November 2018 15:15 (15 minutes)*

**Primary author:** Mr CHEN, Long (RWTH Aachen University)

**Co-authors:** Prof. BERNREUTHER, Werner (RWTH Aachen University); Prof. SI, Zongguo (Shandong University)

**Presenter:** Mr CHEN, Long (RWTH Aachen University)

**Session Classification:** Parallel

Contribution ID: 65

Type: **Beyond the standard model**

## **Constraining right handed neutrinos from the Higgs (10+5)**

*Thursday 29 November 2018 17:45 (15 minutes)*

**Primary author:** DAS, Arindam (KIAS)

**Presenter:** DAS, Arindam (KIAS)

**Session Classification:** Parallel

Contribution ID: 66

Type: **Beyond the standard model**

## **MSSM Higgs Boson Searches at the LHC: Benchmark Scenarios for Run 2 and Beyond (10+5)**

*Thursday 29 November 2018 14:15 (15 minutes)*

**Primary authors:** BAHL, Henning (Max Planck Institute for Physics, Munich); FUCHS, Elina (Weizmann Institute of Science); HAHN, Thomas (MPI f. Physik); HEINEMEYER, Sven (CSIC (Madrid, ES)); LIEBLER, Stefan Rainer (KIT - Karlsruhe Institute of Technology (DE)); PATEL, Shruti (ITP Karlsruhe); SLAVICH, Pietro (LPTHE Paris); Dr STEFANIAK, Tim (DESY); WAGNER, Carlos E.M. (University of Chicago); WEIGLEIN, Georg Ralf (Deutsches Elektronen-Synchrotron (DE))

**Presenter:** SLAVICH, Pietro (LPTHE Paris)

**Session Classification:** Parallel



Contribution ID: 67

Type: **Di-Higgs, self-coupling**

## **Double-Higgs boson production at NLO in the high-energy limit (10+5)**

*Thursday 29 November 2018 14:15 (15 minutes)*

**Primary authors:** Mr WELLMANN, David (Karlsruhe Institute of Technology); MISHIMA, Go (Karlsruhe Institute of Technology); Dr DAVIES, Joshua (Karlsruhe Institute of Technology); Prof. STEINHAUSER, Matthias (Karlsruhe Institute of Technology)

**Presenter:** MISHIMA, Go (Karlsruhe Institute of Technology)

**Session Classification:** Parallel

Contribution ID: 68

Type: **Higher order theory calculation**

## **Higgs Boson Pair Production via Gluon Fusion: Full NLO QCD Corrections (10+5)**

*Thursday 29 November 2018 14:45 (15 minutes)*

**Primary author:** GLAUS, Seraina (Karlsruhe Institute of Technology)

**Co-authors:** Prof. SPIRA, Michael (Paul Scherrer Institut); Prof. MÜHLEITNER, Margarete (Karlsruher Institut für Technologie); Dr BAGLIO, Julien (Universität Tübingen); Dr CAMPANARIO, Francisco (University of Valencia); Dr STREICHER, Juraj (Universität Tübingen)

**Presenter:** GLAUS, Seraina (Karlsruhe Institute of Technology)

**Session Classification:** Parallel

Contribution ID: 70

Type: **Higgs property measurements**

## **Coupling strength and CP properties in Higgs $\rightarrow$ $\tau\tau$ at ILC (10+5)**

*Thursday 29 November 2018 17:15 (15 minutes)*

**Primary author:** JEANS, Daniel

**Presenter:** JEANS, Daniel

**Session Classification:** Parallel

Contribution ID: 71

Type: **Higher order theory calculation**

## **Associated Higgs Boson Production via Flavour-Tagging in NNLOJET (9+3)**

*Thursday 29 November 2018 15:57 (12 minutes)*

**Primary author:** MAJER, Imre (ETHZ - ETH Zurich)

**Presenter:** MAJER, Imre (ETHZ - ETH Zurich)

**Session Classification:** Parallel

Contribution ID: 72

Type: **not specified**

## **Probing shape of the Higgs sector by precise calculations of Higgs decay rates (9+3)**

*Thursday 29 November 2018 16:09 (12 minutes)*

**Primary authors:** KANEMURA, Shinya; KIKUCHI, Mariko; Dr MAWATARI, Kentarou (Osaka Univ.); SAKURAI, Kodai; YAGYU, Kei

**Presenter:** SAKURAI, Kodai

**Session Classification:** Parallel

Contribution ID: 73

Type: **Beyond the standard model**

## **Higgs binoculars for dark matter searches (10+5)**

*Thursday 29 November 2018 18:00 (15 minutes)*

**Primary authors:** WESTHOFF, Susanne (Heidelberg University); ZURITA, José Francisco (KIT); BLANKE, Monika; THOMPSON, Jennifer (ITP Heidelberg); KAST, Simon (Karlsruhe Institute for Technology)

**Presenter:** KAST, Simon (Karlsruhe Institute for Technology)

**Session Classification:** Parallel

Contribution ID: 74

Type: **Beyond the standard model**

## **The h(125) decays to c cbar, b bbar, photon photon and gluon gluon in the light of the MSSM with quark flavour violation (10+5)**

*Thursday 29 November 2018 18:15 (15 minutes)*

**Primary authors:** HIDAKA, K (Department of Physics, Tokyo Gakugei University); Prof. BARTL, A (University of Vienna, Institute for Physics); Dr EBERL, H; Dr GININA, E; Prof. MAJEROTTO, W

**Presenter:** HIDAKA, K (Department of Physics, Tokyo Gakugei University)

**Session Classification:** Parallel

Contribution ID: 75

Type: **Beyond the standard model**

## **Another Higgs production at ILC250 (10+5)**

*Thursday 29 November 2018 18:00 (15 minutes)*

**Primary authors:** MAWATARI, Kentarou (LPSC Grenoble); Prof. KANEMURA, Shinya (Osaka University); SAKURAI, Kodai

**Presenter:** MAWATARI, Kentarou (LPSC Grenoble)

**Session Classification:** Parallel



Contribution ID: 76

Type: **Di-Higgs, self-coupling**

## **Higgs self-coupling projections at the ILC (10+5)**

*Thursday 29 November 2018 17:45 (15 minutes)*

**Primary author:** TIAN, Junping (The University of Tokyo)

**Presenter:** TIAN, Junping (The University of Tokyo)

**Session Classification:** Parallel

Contribution ID: 78

Type: **Di-Higgs, self-coupling**

## **hhh-EWPT correlation beyond 1-loop order (10+5)**

**Primary author:** SENAHA, Eibun (IBS-CTPU)

**Presenter:** SENAHA, Eibun (IBS-CTPU)

**Session Classification:** Parallel

Contribution ID: 79

Type: **Yukawa couplings**

## **Prospects of measuring Higgs boson decays into muon pairs at the International Linear Collider (10+5)**

*Thursday 29 November 2018 18:15 (15 minutes)*

**Primary author:** KAWADA, Shin-ichi (DESY)

**Presenter:** KAWADA, Shin-ichi (DESY)

**Session Classification:** Parallel

Contribution ID: **80**

Type: **Beyond the standard model**

## **Test of the $R(D^{(*)})$ anomaly at the LHC (9+3)**

*Thursday 29 November 2018 15:57 (12 minutes)*

**Primary authors:** TAKEUCHI, Michihisa (IPMU); IGURO, Syuhei; OMURA, Yuji (KMI)

**Presenter:** IGURO, Syuhei

**Session Classification:** Parallel

Contribution ID: 81

Type: **Higgs property measurements**

## **Probing the nature of Higgs boson by colliders in synergy with gravitational waves (10+5)**

*Thursday 29 November 2018 18:30 (15 minutes)*

**Primary author:** HUANG, Fa Peng (Institute of Basic Science)

**Presenter:** HUANG, Fa Peng (Institute of Basic Science)

**Session Classification:** Parallel

Contribution ID: 82

Type: **not specified**

## **Indirect search for CP-violation in the Higgs sector by the precision test of Higgs couplings (9+3)**

*Thursday 29 November 2018 16:21 (12 minutes)*

**Primary authors:** KUBOTA, Mitsunori (Osaka University); KANEMURA, Shinya; AOKI, Mayumi; HASHINO, Katsuya; KANEKO, Daiki

**Presenter:** KUBOTA, Mitsunori (Osaka University)

**Session Classification:** Parallel

Contribution ID: 83

Type: **Study related effective field theory**

## **SFitter EFT fit with LHC Run II data (9+3)**

*Thursday 29 November 2018 16:33 (12 minutes)*

**Primary authors:** PLEHN, Tilman; BIEKOETTER, Anke (Uni Heidelberg); CORBETT, Tyler (University of Melbourne); DAWSON, Sally

**Presenter:** BIEKOETTER, Anke (Uni Heidelberg)

**Session Classification:** Parallel

Contribution ID: 84

Type: **Higher order theory calculation**

## **Matching scalar couplings between general renormalisable theories (9+3)**

*Thursday 29 November 2018 16:45 (12 minutes)*

**Primary authors:** BRAATHEN, Johannes (LPTHE Paris); GOODSELL, Mark Dayvon (Centre National de la Recherche Scientifique (FR)); SLAVICH, Pietro (LPTHE Paris)

**Presenter:** BRAATHEN, Johannes (LPTHE Paris)

**Session Classification:** Parallel



Contribution ID: 85

Type: **Higgs property measurements**

## **Direct measurement of the Higgs self-coupling in $e+e^- \rightarrow ZH$ (10+5)**

*Thursday 29 November 2018 18:15 (15 minutes)*

**Primary authors:** GONÇALVES, Dorival (University of Pittsburgh); NAKAMURA, Junya (Universität Tübingen)

**Presenter:** NAKAMURA, Junya (Universität Tübingen)

**Session Classification:** Parallel

Contribution ID: 86

Type: **Study related effective field theory**

## **Probing top-quark couplings indirectly at Higgs factories (10+5)**

*Thursday 29 November 2018 18:30 (15 minutes)*

**Primary authors:** ZHANG, Cen (Institute of High Energy Physics, Chinese Academy Sciences); VRYONIDOU, Eleni (CERN); DURIEUX, Gauthier (DESY); GU, Jiayin (DESY)

**Presenter:** DURIEUX, Gauthier (DESY)

**Session Classification:** Parallel

Contribution ID: 87

Type: **Higgs property measurements**

## **Sensitivity to anomalous VVH couplings at the ILC (10+5)**

*Thursday 29 November 2018 17:30 (15 minutes)*

**Primary authors:** OGAWA, Tomohisa (High Energy Accelerator Research Organization); FUJII, Keisuke (High Energy Accelerator Research Organization (JP)); TIAN, Junping (The University of Tokyo)

**Presenter:** FUJII, Keisuke (High Energy Accelerator Research Organization (JP))

**Session Classification:** Parallel

Contribution ID: **88**

Type: **Yukawa couplings**

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**Primary author:** ENARI, Yuji (University of Tokyo (JP))

**Presenter:** ENARI, Yuji (University of Tokyo (JP))

**Session Classification:** Parallel

Contribution ID: 89

Type: **Di-Higgs, self-coupling**

## **HH production from Vector Boson Scattering: an efficient test of the Higgs selfcoupling at the LHC (10+5)**

*Thursday 29 November 2018 15:00 (15 minutes)*

**Primary author:** HERRERO, maria (Universidad Autonoma de Madrid)

**Presenter:** HERRERO, maria (Universidad Autonoma de Madrid)

**Session Classification:** Parallel

Contribution ID: 90

Type: **Higher order theory calculation**

## **Higgs decays at full one loop and beyond in the (N)MSSM (10+5)**

*Thursday 29 November 2018 14:45 (15 minutes)*

**Primary author:** HEINEMEYER, Sven (CSIC (Madrid, ES))

**Presenter:** HEINEMEYER, Sven (CSIC (Madrid, ES))

**Session Classification:** Parallel

Contribution ID: 91

Type: **Di-Higgs, self-coupling**

## **Machine learning with augmentation for boosting di-Higgs searches (10+5)**

*Thursday 29 November 2018 15:15 (15 minutes)*

**Primary author:** CHO, Won Sang (Seoul National University)

**Presenter:** CHO, Won Sang (Seoul National University)

**Session Classification:** Parallel

Contribution ID: 92

Type: **not specified**

# **Optimising the performance of the CMS Electromagnetic Calorimeter to measure Higgs properties during Phase I and Phase II of the LHC (10+5)**

*Thursday 29 November 2018 14:15 (15 minutes)*

**Presenter:** PETYT, David Anthony (Science and Technology Facilities Council STFC (GB))

**Session Classification:** Parallel



Contribution ID: 93

Type: **not specified**

## **Search for the Decay of the Higgs Boson to Charm Quarks with the ATLAS Experiment (10+5)**

*Thursday 29 November 2018 14:45 (15 minutes)*

**Presenter:** SCHOPF, Elisabeth (University of Oxford (GB))

**Session Classification:** Parallel

Contribution ID: 94

Type: **not specified**

## **Symmetry and geometry in generalized Higgs sector - Finiteness of oblique corrections v.s. perturbative unitarity (10+5)**

*Thursday 29 November 2018 15:00 (15 minutes)*

**Presenter:** UCHIDA, Yoshiki (Nagoya University)

**Session Classification:** Parallel

Contribution ID: 95

Type: **not specified**

## **Cross-section measurement in the $H \rightarrow WW^* \rightarrow e\nu\mu\nu$ channel with the ATLAS Detector (9+3)**

*Thursday 29 November 2018 15:45 (12 minutes)*

**Presenter:** GUGEL, Ralf (Albert Ludwigs Universitaet Freiburg (DE))

**Session Classification:** Parallel

Contribution ID: 96

Type: **not specified**

## **Higgs boson production in decays to two tau leptons using the ATLAS detector (9+3)**

*Thursday 29 November 2018 16:21 (12 minutes)*

**Presenter:** MLYNARIKOVA, Michaela (Charles University (CZ))

**Session Classification:** Parallel

Contribution ID: 97

Type: **not specified**

## **Measurement of Higgs production cross sections in the four lepton channel at 13 TeV with the ATLAS detector (10+5)**

*Thursday 29 November 2018 17:45 (15 minutes)*

**Presenter:** WANG, Rongkun (Univ. of Michigan (US) / Univ. of Sci. & Tech. of China (CN))

**Session Classification:** Parallel

Contribution ID: 98

Type: **not specified**

## **A search for Higgs boson pair production in the bb $\tau\tau$ decay channel with the ATLAS detector (10+5)**

*Thursday 29 November 2018 14:30 (15 minutes)*

**Presenter:** PARKER, Adam Jackson (Lancaster University (GB))

**Session Classification:** Parallel

Contribution ID: 99

Type: **not specified**

## **Observation of H $\rightarrow$ bb decays and VH production with the ATLAS detector (9+3)**

*Thursday 29 November 2018 15:57 (12 minutes)*

**Presenter:** MA, Yanhui (Shandong University (CN))

**Session Classification:** Parallel

Contribution ID: **100**

Type: **not specified**

## **Search for boosted $t\bar{t}H(H\rightarrow b\bar{b})$ with the ATLAS detector (9+3)**

*Thursday 29 November 2018 16:33 (12 minutes)*

**Presenter:** WINKELS, Emma (University of Sussex (GB))

**Session Classification:** Parallel



Contribution ID: **101**

Type: **not specified**

## **Estimation of backgrounds with non-prompt leptons in same sign multi-leptonic signatures of the $t\bar{t}H$ analysis at ATLAS (10+5)**

*Thursday 29 November 2018 14:00 (15 minutes)*

**Presenter:** MILESI, Marco (University of Melbourne (AU))

**Session Classification:** Parallel

Contribution ID: **102**

Type: **not specified**

## **A search for pairs of highly collimated groupings of photons in pp collisions at 13 TeV with the ATLAS detector (10+5)**

*Thursday 29 November 2018 14:30 (15 minutes)*

**Presenter:** KANO, Yuya (University of Tokyo (JP))

**Session Classification:** Parallel

Contribution ID: **103**

Type: **not specified**

## **Searches for Dark Matter produced in association with the Higgs boson at the CMS experiment (10+5)**

*Thursday 29 November 2018 15:00 (15 minutes)*

**Presenter:** DE FILIPPIS, Nicola (Politecnico/INFN Bari (IT) and LPC-Fermilab (US))

**Session Classification:** Parallel

Contribution ID: **104**

Type: **not specified**

## **Search for the Higgs boson decay to a pair of muons with the ATLAS detector at the LHC (9+3)**

*Thursday 29 November 2018 16:09 (12 minutes)*

**Presenter:** ZGUBIC, Miha (University of Oxford (GB))

**Session Classification:** Parallel

Contribution ID: 105

Type: **not specified**

## **Challenges and plans in search for Higgs decays to Invisible particles via VBF production with the ATLAS detector in Run II (9+3)**

*Thursday 29 November 2018 16:33 (12 minutes)*

**Presenter:** ZOU, Rui (University of Chicago (US))

**Session Classification:** Parallel

Contribution ID: 106

Type: **not specified**

## **Searches for boosted low mass resonances decaying to b quarks with the ATLAS detector (9+3)**

*Thursday 29 November 2018 16:45 (12 minutes)*

**Presenter:** FEICKERT, Matthew (Southern Methodist University (US))

**Session Classification:** Parallel

Contribution ID: **107**

Type: **not specified**

## **Searches for light Higgs bosons at CMS (10+5)**

*Thursday 29 November 2018 17:15 (15 minutes)*

**Presenter:** TAO, Junquan (Institute of High Energy Physics, Chinese Academy of Sciences (CN))

**Session Classification:** Parallel

Contribution ID: **108**Type: **not specified**

## **Symmetry and geometry in generalized Higgs sector - Finiteness of oblique corrections v.s. perturbative unitarity -**

We formulate a generalization of Higgs effective field theory (HEFT) to include arbitrary number of extra neutral and charged Higgs bosons. The relationship between the finiteness of the electroweak oblique corrections and the perturbative unitarity of the scattering amplitudes involving the Higgs bosons and the longitudinal gauge bosons is clarified in this setup: we verify that once the tree level unitarity is ensured, then oblique parameters' one-loop finiteness is automatically guaranteed. We also obtain formulas which relates the coefficients of the S and U parameter divergences with the scattering amplitudes which can be measured in future collider experiments. These relations give us new prospects when we formulate the strategy of model-building.

**Primary author:** UCHIDA, Yoshiki (Nagoya University)

**Presenter:** UCHIDA, Yoshiki (Nagoya University)

**Session Classification:** Parallel



Contribution ID: **109**

Type: **not specified**

## Welcome and announcement

*Monday 26 November 2018 14:00 (10 minutes)*

**Presenters:** ASAI, Shoji (University of Tokyo (JP)); ENARI, Yuji (University of Tokyo (JP))

**Session Classification:** Plenary

Contribution ID: **110**

Type: **not specified**

## **Closing remarks**

*Friday 30 November 2018 17:45 (10 minutes)*

**Session Classification:** Plenary

Contribution ID: **111**

Type: **not specified**

## **Higgs Couplings 2019 in Oxford**

*Thursday 29 November 2018 12:30 (10 minutes)*

**Presenter:** HAYS, Chris (University of Oxford (GB))

**Session Classification:** Plenary