Mini workshop: Precision EW and QCD calculations for the FCC studies: methods and tools

Report of Contributions

Contribution ID: **1** Type: **not specified**

Motivation: Experimental capabilities and requirements

Friday, 12 January 2018 09:30 (30 minutes)

Presenter: BLONDEL, Alain (Universite de Geneve (CH))

Contribution ID: **2**
Type: **not specified**

Theory - status

Friday, 12 January 2018 10:00 (30 minutes)

Presenter: GLUZA, Janusz (University of Silesia (PL))

Contribution ID: **3**   Type: **not specified**

The Z boson line shape - from 1.5 loops at LEP to 2.5 loops in future

Friday, 12 January 2018 10:30 (45 minutes)

Presenter: RIEMANN, Tord (University of Silesia)

Contribution ID: **4**　　　　　　　　　　　　　　　　Type: **not specified**

How to calculate QED higher orders in a form useful for MC event generators with soft photon and/or collinear resummation?

Friday, 12 January 2018 11:45 (30 minutes)

Presenter: JADACH, Staszek (Polish Academy of Sciences (PL))

Contribution ID: **5**   Type: **not specified**

A mini review of methods of evaluating Feynman integrals. Solving differential equations for Feynman integrals by expansions near singular points

Friday, 12 January 2018 12:15 (45 minutes)

Presenter: SMIRNOV, Vladimir (Inst. of Nuclear Physics of Moscow State Univ.)

Contribution ID: **6** Type: **not specified**

MB-suite 1: AMBRE news: non-planar 3-loop vertices

Friday, 12 January 2018 15:00 (30 minutes)

Presenter: DUBOVYK, Evgen (U. Hamburg)

Contribution ID: **7** Type: **not specified**

MB-suite 2: MBnumerics news

Friday, 12 January 2018 15:30 (30 minutes)

Presenter: USOVITSCH, Johann (Trinity College, Dublin)

Contribution ID: **8** Type: **not specified**

pySecDec for phenomenological predictions

Friday, 12 January 2018 16:00 (30 minutes)

Presenter: BOROWKA, Sophia Carola (CERN)

Contribution ID: **9** Type: **not specified**

Direct calculation of multiloop integrals in d=4

Friday, 12 January 2018 16:30 (30 minutes)

Presenter: PITTAU, Roberto (Universidad de Granada (ES))

Contribution ID: **10**　　　　　　　　　　　　　　Type: **not specified**

Dinner

Contribution ID: **11**   Type: **not specified**

Bootstrapping pentagon functions

Saturday, 13 January 2018 09:30 (40 minutes)

Presenter: HENN, Johannes (JGU Mainz)

Contribution ID: **12**

Type: **not specified**

Exploring the function space of Feynman integrals

Saturday, 13 January 2018 10:10 (40 minutes)

Presenter: WEINZIERL, Stefan (University of Mainz)

Contribution ID: **13** Type: **not specified**

Expectations from Current Multi-loop Computations with the Unitarity Method

Saturday, 13 January 2018 10:50 (30 minutes)

Presenter: ITA, Harald (Universität Freiburg)

Contribution ID: **14**   Type: **not specified**

Mellin-Barnes meets Method of Brackets

Saturday, 13 January 2018 11:50 (30 minutes)

Presenter: PRAUSA, Mario (U. Freiburg)

Contribution ID: **15**   Type: **not specified**

Steepest descent, homology, Lefschetz thimbles and numerical multidimensional MB integrals

Saturday, 13 January 2018 12:20 (20 minutes)

Presenter: FLIEGER, Wojciech (University of Silesia)

Contribution ID: **16**   Type: **not specified**

About cuts and differential eqs approach

Saturday, 13 January 2018 14:00 (30 minutes)

Presenter: PAPADOPOULOS, Konstantinos (Nat. Cent. for Sci. Res. Demokritos (GR))

Contribution ID: **17**   Type: **not specified**

Christoph Meyer "Transforming multi-loop Feynman integrals to a canonical basis with CANONICA"

Contribution ID: **18**   Type: **not specified**

Fuchsia and differential equations for multi-scale master integrals

Saturday, 13 January 2018 14:30 (30 minutes)

Presenter: GITULIAR, Oleksandr (Universität Hamburg)

Contribution ID: **19**　　　　　　　　　　　　　　　　　Type: **not specified**

Three-loop formfactors

Saturday, 13 January 2018 15:30 (30 minutes)

Presenter:　MARQUARD, Peter (DESY)

Contribution ID: **20**   Type: **not specified**

Four loop form factor in N=4

Saturday, 13 January 2018 16:00 (30 minutes)

Presenter: BOELS, Rutger (Universität Hamburg)

Contribution ID: **21**   Type: **not specified**

discussion and action items

Saturday, 13 January 2018 16:30 (20 minutes)

Presenters: BLONDEL, Alain (Universite de Geneve (CH));   GLUZA, Janusz (University of Silesia (PL))