

LPC EFT Workshop at Notre Dame

Report of Contributions

Contribution ID: 1

Type: **not specified**

Writing time

Friday 26 April 2024 15:15 (1h 45m)

Session conveners convert notes to a summary of recommendations. Convenors named as editors, all discussion attendees as contributors

Contribution ID: 2

Type: **not specified**

Grand combinations at LEP, Tevatron

Thursday 25 April 2024 15:30 (20 minutes)

Presenter: JUNK, Tom (Fermi National Accelerator Lab. (US))

Session Classification: Logistics of combining likelihoods

Contribution ID: 3

Type: **not specified**

Introduction

Thursday 25 April 2024 09:00 (10 minutes)

Presenters: LANNON, Kevin Patrick (University of Notre Dame (US)); SMITH, Nick (Fermi National Accelerator Lab. (US))

Session Classification: How far beyond linear?

Contribution ID: 4

Type: **not specified**

Re-interpretability of detector-level measurements

Thursday 25 April 2024 11:30 (20 minutes)

Presenter: SANCHEZ CRUZ, Sergio (CERN)

Session Classification: Reconstruction-level results

Contribution ID: 5

Type: **not specified**

When EFT for new physics is not linear

Thursday 25 April 2024 09:10 (20 minutes)

Presenter: FONTES, Duarte

Session Classification: How far beyond linear?

Contribution ID: 6

Type: **not specified**

Discussion (linear)

Thursday 25 April 2024 11:00 (30 minutes)

Presenters: MOHRMAN, Kelci Ann (University of Florida (US)); BHATTACHARYA, Saptaparna (Wayne State University (US))

Session Classification: How far beyond linear?

Contribution ID: 7

Type: **not specified**

Which orders

Thursday 25 April 2024 09:40 (20 minutes)

Presenter: MARTIN, Adam Orion (University of Notre Dame (US))

Session Classification: How far beyond linear?

Contribution ID: 8

Type: **not specified**

Truncation and validity

Thursday 25 April 2024 10:10 (20 minutes)

Presenter: SHEPHERD, William

Session Classification: How far beyond linear?

Contribution ID: 9

Type: **not specified**

Topics

Tuesday 23 April 2024 10:30 (10 minutes)

Presenter: SMITH, Nick (Fermi National Accelerator Lab. (US))

Session Classification: Hackathon

Contribution ID: **10**

Type: **not specified**

Tutorial on Effective Field Theories and SMEFT

Wednesday 24 April 2024 13:00 (1 hour)

Presenter: PESKIN, Michael

Session Classification: Hackathon

Contribution ID: **11**

Type: **not specified**

Observables for EFT Measurements

Thursday 25 April 2024 13:00 (20 minutes)

Author: GRITSAN, Andrei (Johns Hopkins University (US))

Presenter: GRITSAN, Andrei (Johns Hopkins University (US))

Session Classification: Reconstruction-level results

Contribution ID: 12

Type: **not specified**

Top entanglement

Thursday 25 April 2024 13:30 (20 minutes)

Author: GONÇALVES, dorival (Oklahoma State University)

Presenter: GONÇALVES, dorival (Oklahoma State University)

Session Classification: Reconstruction-level results

Contribution ID: 13

Type: **not specified**

Simulation-based inference

Thursday 25 April 2024 14:00 (20 minutes)

Author: PROSPER, Harry (Florida State University (US))

Presenter: PROSPER, Harry (Florida State University (US))

Session Classification: Reconstruction-level results

Contribution ID: 14

Type: **not specified**

Discussion (reconstruction)

Thursday 25 April 2024 14:30 (30 minutes)

Presenters: PICCINELLI, Andrea (University of Notre Dame (US)); ROY, Titas (University of Illinois at Chicago (US))

Session Classification: Reconstruction-level results

Contribution ID: 15

Type: **not specified**

Grand combinations at HL-LHC & FAIROS-HEP

Thursday 25 April 2024 16:00 (20 minutes)

Presenter: CRANMER, Kyle Stuart (University of Wisconsin Madison (US))

Session Classification: Logistics of combining likelihoods

Contribution ID: 16

Type: **not specified**

SMEFT for top quarks at LHC and future Higgs factories

Thursday 25 April 2024 16:30 (20 minutes)

Presenter: PESKIN, Michael

Session Classification: Logistics of combining likelihoods

Contribution ID: 17

Type: **not specified**

Discussion (logistics)

Thursday 25 April 2024 17:00 (30 minutes)

Presenters: WILSON, Jon (Baylor University (US)); GRAY, Lindsey (Fermi National Accelerator Lab. (US))

Session Classification: Logistics of combining likelihoods

Contribution ID: **18**

Type: **not specified**

Group dinner

Thursday 25 April 2024 18:00 (2 hours)

Presenter: LANNON, Kevin Patrick (University of Notre Dame (US))

Contribution ID: 19

Type: **not specified**

Challenges in the EFT interpretation of unfolded cross section measurements

Friday 26 April 2024 09:00 (20 minutes)

Presenter: GILBERT, Andrew (LLR / CNRS / École Polytechnique (FR))

Session Classification: Unfolded results

Contribution ID: **20**

Type: **not specified**

Higgs and STXS

Friday 26 April 2024 09:30 (20 minutes)

Presenter: LANGFORD, Jonathon Mark (Imperial College (GB))

Session Classification: Unfolded results

Contribution ID: 21

Type: **not specified**

SMEFT probes with LHC Drell-Yan data

Friday 26 April 2024 10:00 (20 minutes)

We discuss several opportunities for probing new physics in the SMEFT framework using LHC Drell-Yan data. We consider the forward-backward asymmetry, the lepton-pair transverse momentum, and the Collins-Soper angles, and show that this full spectrum of measurements can probe unexplored sectors of the SMEFT and can help distinguish between ultraviolet completions of the SMEFT. We present several challenges that arise in the comparison of theory with experimental data.

Presenter: Prof. PETRIELLO, Francis (Northwestern University and Argonne National Lab)

Session Classification: Unfolded results

Contribution ID: 22

Type: **not specified**

(Library) EFT and PDFs interplay

Friday 26 April 2024 10:50 (20 minutes)

Presenter: MANTANI, Luca (DAMTP, University of Cambridge)

Session Classification: Unfolded results

Contribution ID: 23

Type: **not specified**

Discussion (unfolded)

Friday 26 April 2024 11:30 (30 minutes)

Presenters: PASPALAKI, Garyfallia (Purdue University (US)); DICKINSON, Jennet Elizabeth (Fermi National Accelerator Lab. (US))

Session Classification: Unfolded results

Contribution ID: 24

Type: **not specified**

Samples for TOP-22-006

Friday 26 April 2024 13:00 (20 minutes)

Presenter: WIGHTMAN, Andrew (University of Nebraska Lincoln (US))

Session Classification: Building a sample library

Contribution ID: 25

Type: **not specified**

Building the STXS parameterization

Friday 26 April 2024 13:30 (20 minutes)

Presenter: KNIGHT, Charlotte (Imperial College London)

Session Classification: Building a sample library

Contribution ID: 26

Type: **not specified**

Discussion (library)

Friday 26 April 2024 14:00 (30 minutes)

Presenters: SPITZBART, Daniel (Boston University (US)); SMITH, Nick (Fermi National Accelerator Lab. (US))

Session Classification: Building a sample library

Contribution ID: 27

Type: **not specified**

Workshop wrap-up

Friday 26 April 2024 14:30 (15 minutes)

Presenters: LANNON, Kevin Patrick (University of Notre Dame (US)); SMITH, Nick (Fermi National Accelerator Lab. (US))

Session Classification: Building a sample library

Contribution ID: 28

Type: **not specified**

Introduction to EFT

Monday 22 April 2024 09:00 (1 hour)

Presenters: MARTIN, Adam Orion (University of Notre Dame (US)); ASSI, Benoit

Session Classification: Introduction to EFT

Contribution ID: 29

Type: **not specified**

What it means to us

Monday 22 April 2024 11:00 (1 hour)

Presenter: MOHRMAN, Kelci Ann (University of Florida (US))

Session Classification: Introduction to EFT

Contribution ID: **30**

Type: **not specified**

MELA Tools

Wednesday 24 April 2024 11:00 (1 hour)

Presenters: PICCINELLI, Andrea (University of Notre Dame (US)); SRIVASTAV, Mohit Vir (Johns Hopkins University (US))

Session Classification: Hackathon