

# **29th Mini-workshop on the frontier of LHC**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Registration

*Friday, 13 December 2024 14:00 (8 hours)*

Contribution ID: 2

Type: **not specified**

## Discussion

*Monday, 16 December 2024 09:00 (6 hours)*

Contribution ID: 3

Type: **not specified**

## 开幕式

*Saturday, 14 December 2024 08:30 (30 minutes)*

**Session Classification:** Session 1

Contribution ID: 4

Type: **not specified**

# 格点量子色动力学——人工智能带来的机遇和挑战

*Saturday, 14 December 2024 09:00 (30 minutes)*

**Presenter:** 冯, 旭 (北京大学)

**Session Classification:** Session 1

Contribution ID: 5

Type: **not specified**

## **Westlake Chat: 西湖大学如何使用 AI 助力科学研究**

*Saturday, 14 December 2024 09:30 (30 minutes)*

**Presenter:** 陈, 辉 (西湖大学)

**Session Classification:** Session 1

Contribution ID: 6

Type: **not specified**

## Higgs at HL-LHC and Machine Learning Interpretability

*Saturday, 14 December 2024 10:30 (15 minutes)*

**Presenter:** 钱, 卓妮 (杭州师范大学)

**Session Classification:** Session 2

Contribution ID: 7

Type: **not specified**

# Jet Tagging with More-Interaction Particle Transformer

*Saturday, 14 December 2024 10:45 (15 minutes)*

**Presenter:** 王, 坤 (上海理工大学)

**Session Classification:** Session 2



Contribution ID: 8

Type: **not specified**

## **Machine learning detection of Higgs and top quark jets in collider events**

*Saturday, 14 December 2024 11:00 (15 minutes)*

**Presenter:** 李, 金勉 (四川大学)

**Session Classification:** Session 2

Contribution ID: 9

Type: **not specified**

# Probing highly collimated photon-jets at the LHC with deep learning

*Saturday, 14 December 2024 11:15 (15 minutes)*

**Presenter:** 卢, 致廷 (南京师范大学)

**Session Classification:** Session 2

Contribution ID: **10**

Type: **not specified**

## **Higgs Pair to 4b with Transformer**

*Saturday, 14 December 2024 11:30 (15 minutes)*

**Presenter:** 吴, 永成 (南京师范大学)

**Session Classification:** Session 2

Contribution ID: 11

Type: **not specified**

## Experimental Overview: QCD

*Saturday, 14 December 2024 13:30 (30 minutes)*

**Presenter:** 肖, 滕 (浙江大学)

**Session Classification:** Session 3

Contribution ID: 12

Type: **not specified**

## Experimental Overview: Higgs

*Saturday, 14 December 2024 14:00 (30 minutes)*

**Presenter:** 张, 雷 (南京大学)

**Session Classification:** Session 3

Contribution ID: 13

Type: **not specified**

## **Transverse momentum slicing for multijet processes**

*Saturday, 14 December 2024 14:30 (15 minutes)*

**Presenter:** 邵, 鼎煜 (复旦大学)

**Session Classification:** Session 3

Contribution ID: 14

Type: **not specified**

## **Global analysis of fragmentation functions with high-precision data from the LHC**

*Saturday, 14 December 2024 14:45 (15 minutes)*

**Presenter:** 高, 俊 (上海交通大学)

**Session Classification:** Session 3

Contribution ID: 15

Type: **not specified**

## **Recent Progress in Study of PDFs from CTEQ-TEA Global Analysis**

*Saturday, 14 December 2024 15:00 (15 minutes)*

**Presenter:** 侯, 铁君 (南华大学)

**Session Classification:** Session 3



Contribution ID: 16

Type: **not specified**

## Experimental Overview: Heavy Flavor

*Saturday, 14 December 2024 16:00 (30 minutes)*

**Presenter:** 钱, 文斌 (国科大)

**Session Classification:** Session 4

Contribution ID: 17

Type: **not specified**

## LHCb 实验上对称性研究

*Saturday, 14 December 2024 16:30 (15 minutes)*

**Presenter:** 张, 艳席 (北京大学)

**Session Classification:** Session 4

Contribution ID: 18

Type: **not specified**

## Study of Bc meson at LHCb

*Saturday, 14 December 2024 16:45 (15 minutes)*

**Presenter:** 俞, 洁晟 (湖南大学)

**Session Classification:** Session 4

Contribution ID: 19

Type: **not specified**

## **Indirect probes of new physics with non-standard interactions of leptons**

*Saturday, 14 December 2024 17:00 (15 minutes)*

**Presenter:** 李, 刚 (中山大学)

**Session Classification:** Session 4

Contribution ID: 20

Type: **not specified**

# Improved constraints on the Higgs potential

*Saturday, 14 December 2024 17:15 (15 minutes)*

**Presenter:** 王, 健 (山东大学)

**Session Classification:** Session 4

Contribution ID: 21

Type: **not specified**

## AI for HEP experiment

*Sunday, 15 December 2024 08:30 (30 minutes)*

**Presenter:** 李, 科 (中科院高能所)

**Session Classification:** Session 5

Contribution ID: 22

Type: **not specified**

# Boosting the LHC resonance search program with Sophon

*Sunday, 15 December 2024 09:00 (15 minutes)*

**Presenter:** 李, 聪乔 (北京大学)

**Session Classification:** Session 5

Contribution ID: 23

Type: **not specified**

# Machine Learning for CMS data quality monitoring

*Sunday, 15 December 2024 09:15 (15 minutes)*

**Presenter:** 郭, 倩颖 (北京大学)

**Session Classification:** Session 5



Contribution ID: 24

Type: **not specified**

## **Machine learning at LHCb: from event reconstruction to physical analysis**

*Sunday, 15 December 2024 09:30 (15 minutes)*

**Presenter:** 任, 赞 (国科大)

**Session Classification:** Session 5

Contribution ID: 25

Type: **not specified**

# Quantum annealing-inspired algorithms for future colliders

*Sunday, 15 December 2024 10:30 (15 minutes)*

**Presenter:** 大川, 英希 (中科院高能所)

**Session Classification:** Session 6

Contribution ID: 26

Type: **not specified**

## 原子核无轨道密度泛函的机器学习研究

*Sunday, 15 December 2024 10:45 (15 minutes)*

**Presenter:** 吴, 鑫辉 (福州大学)

**Session Classification:** Session 6

Contribution ID: 27

Type: **not specified**

# Low-Energy Supernova Constraints on Millicharged Particles

*Sunday, 15 December 2024 11:00 (15 minutes)*

**Presenter:** 刘, 佐伟 (南京大学)

**Session Classification:** Session 6

Contribution ID: 28

Type: **not specified**

## **Dark matter and PBH constraints from radio and X-ray observations**

*Sunday, 15 December 2024 11:15 (15 minutes)*

**Presenter:** 丁, 然 (安徽大学)

**Session Classification:** Session 6

Contribution ID: 29

Type: **not specified**

## LHAASO 宇宙线能谱测量进展和展望

*Sunday, 15 December 2024 11:30 (15 minutes)*

**Presenter:** 张, 寿山 (中科院高能所)

**Session Classification:** Session 6

Contribution ID: 30

Type: **not specified**

## Experimental Overview: Electroweak

*Sunday, 15 December 2024 13:30 (30 minutes)*

**Presenter:** 梁, 志均 (中科院高能所)

**Session Classification:** Session 7

Contribution ID: 31

Type: **not specified**

## Measuring hhWW coupling at lepton colliders

*Sunday, 15 December 2024 14:00 (15 minutes)*

**Presenter:** 刘, 言东 (北京师范大学)

**Session Classification:** Session 7



Contribution ID: 32

Type: **not specified**

## **NNLO matching to parton shower with Vincia**

*Sunday, 15 December 2024 14:15 (15 minutes)*

**Presenter:** 李, 海涛 (山东大学)

**Session Classification:** Session 7

Contribution ID: 33

Type: **not specified**

## **Transverse spin effects of light quark dipole moments at colliders**

*Sunday, 15 December 2024 14:30 (15 minutes)*

**Presenter:** 文, 新锴 (北京大学)

**Session Classification:** Session 7

Contribution ID: 34

Type: **not specified**

## **Explore axion through neutron-star-induced phase transition**

*Sunday, 15 December 2024 14:45 (15 minutes)*

**Presenter:** 王, 俊谔 (北京大学)

**Session Classification:** Session 7

Contribution ID: 35

Type: **not specified**

## **Probe the anomalous electromagnetic moments of the tau lepton at LHC**

*Sunday, 15 December 2024 16:00 (15 minutes)*

**Presenter:** 王, 大勇 (北京大学)

**Session Classification:** Session 8

Contribution ID: 36

Type: **not specified**

## **B-meson FCNC decays as a probe of dark matter**

*Sunday, 15 December 2024 16:15 (15 minutes)*

**Presenter:** 袁, 兴博 (华中师范大学)

**Session Classification:** Session 8

Contribution ID: 37

Type: **not specified**

## Exploring the meson distribution amplitudes from lattice QCD

*Sunday, 15 December 2024 16:30 (15 minutes)*

**Presenter:** 张, 其安 (北京航空航天大学)

**Session Classification:** Session 8

Contribution ID: 38

Type: **not specified**

## 会议总结

*Sunday, 15 December 2024 16:45 (45 minutes)*

**Presenter:** 曹, 庆宏 (北京大学)

**Session Classification:** Session 8

Contribution ID: 39

Type: **not specified**

## **Baryogenesis via symmetry non-restoration**

*Sunday, 15 December 2024 09:45 (15 minutes)*

**Presenter:** 晁, 伟 (北京师范大学)

**Session Classification:** Session 5