

**2023 年粒子物理实验计算软件
与技术研讨会 (Workshop of
Computing Software and
Technologies in Particle
Physics Experiment in 2023)**

Report of Contributions

Contribution ID: 1

Type: **not specified**

软件整体介绍

Saturday, 10 June 2023 08:30 (30 minutes)

Primary author: HUANG, Xingtao (Shandong University)

Presenter: HUANG, Xingtao (Shandong University)

Session Classification: 框架

Contribution ID: 2

Type: **not specified**

从 Gaudi 和 SNIpER 谈高能物理软件框架

Saturday, 10 June 2023 09:00 (30 minutes)

Primary author: ZOU, Jiaheng (高能所)

Presenter: ZOU, Jiaheng (高能所)

Session Classification: 框架

Contribution ID: 3

Type: **not specified**

STCF 离线数据处理软件

Saturday, 10 June 2023 09:30 (30 minutes)

Primary author: 李, 腾 (Shandong University)

Presenter: 李, 腾 (Shandong University)

Session Classification: 框架

Contribution ID: 4

Type: **not specified**

模拟框架现状与展望

Saturday, 10 June 2023 10:00 (30 minutes)

Primary author: LIN, Tao (高能所)

Presenter: LIN, Tao (高能所)

Session Classification: 框架

Contribution ID: 5

Type: **not specified**

STCF 量能器的模拟与重建

Saturday, 10 June 2023 12:00 (20 minutes)

Primary author: SONG, Yong (USTC)

Presenter: SONG, Yong (USTC)

Session Classification: 量能器

Contribution ID: 6

Type: **not specified**

BESIII 和 PANDA 实验上的 EMC 软件（远程）

Saturday, 10 June 2023 11:00 (20 minutes)

Zoom Meeting ID: 256 161 5446

Primary author: ZHAO, Guang (高能所)

Presenter: ZHAO, Guang (高能所)

Session Classification: 量能器

Contribution ID: 7

Type: **not specified**

长条型晶体量能器重建

Saturday, 10 June 2023 11:20 (20 minutes)

Primary author: GUO, Fangyi

Presenter: GUO, Fangyi

Session Classification: 量能器

Contribution ID: 8

Type: **not specified**

BESIII 和 CEPC 上的粒子鉴别

Saturday, 10 June 2023 13:30 (20 minutes)

Primary author: WU, Linghui (IHEP)

Presenter: WU, Linghui (IHEP)

Session Classification: PID

Contribution ID: 9

Type: **not specified**

STCF 上 RICH 探测器的粒子鉴别算法

Saturday, 10 June 2023 14:30 (20 minutes)

Primary author: WANG, Binlong (UCAS)

Presenter: WANG, Binlong (UCAS)

Session Classification: PID

Contribution ID: 10

Type: **not specified**

STCF 上 DTOF 探测器的粒子鉴别算法

Saturday, 10 June 2023 14:10 (20 minutes)

Primary authors: 冯, 匡潼 (中国科学技术大学); GENG, Cong (Sun Yat-Sen (Zhongshan) University)

Presenter: 冯, 匡潼 (中国科学技术大学)

Session Classification: PID

Contribution ID: 11

Type: **not specified**

Recap on track reconstruction in HEP

Saturday, 10 June 2023 15:20 (20 minutes)

Zoom Meeting ID: 256 161 5446

Primary author: AI, Xiaocong (Zhengzhou University)

Presenter: AI, Xiaocong (Zhengzhou University)

Session Classification: Tracking

Contribution ID: 12

Type: **not specified**

ACTS - A Common Tracking Software Project (remote)

Saturday, 10 June 2023 15:40 (30 minutes)

Zoom Meeting ID: 256 161 5446

Presenter: SALZBURGER, Andreas (CERN)

Session Classification: Tracking

Contribution ID: 13

Type: **not specified**

Track reconstruction in BESIII main drift chamber

Saturday, 10 June 2023 16:10 (20 minutes)

Primary authors: ZHANG, Jin (Sun Yat-Sen (Zhongshan) University); ZHANG, Yao (Institute of high energy physics, Beijing China)

Presenter: ZHANG, Jin (Sun Yat-Sen (Zhongshan) University)

Session Classification: Tracking

Contribution ID: 14

Type: **not specified**

Track reconstruction in STCF

Saturday, 10 June 2023 16:30 (20 minutes)

Primary author: ZHOU, Hang (University of Science and Technology of China)

Presenter: ZHOU, Hang (University of Science and Technology of China)

Session Classification: Tracking

Contribution ID: 15

Type: **not specified**

CGEM

Primary author: WANG, Liang-Liang (Institute of High Energy Physics (Beijing))

Presenter: WANG, Liang-Liang (Institute of High Energy Physics (Beijing))

Session Classification: Tracking

Contribution ID: 16

Type: **not specified**

Vertex reconstruction on silicon detector

Primary author: FU, Chengdong (IHEP)

Presenter: FU, Chengdong (IHEP)

Session Classification: Tracking

Contribution ID: 17

Type: **not specified**

基于 RDataframe 的分析框架

Sunday, 11 June 2023 09:25 (15 minutes)

Primary author: 汪, 圣宜 (山东大学)

Presenter: 汪, 圣宜 (山东大学)

Session Classification: 分析技术

Contribution ID: 18

Type: **not specified**

Tag based analysis in BESIII and IAD based analysis in JUNO

Sunday, 11 June 2023 08:30 (20 minutes)

Primary authors: DENG, Ziyang (高能所); LIN, Tao (高能所)

Presenter: DENG, Ziyang (高能所)

Session Classification: 分析技术

Contribution ID: 19

Type: **not specified**

运动学和顶点拟合算法

Sunday, 11 June 2023 09:10 (15 minutes)

Primary author: YAN, Liang (Fudan University)

Presenter: YAN, Liang (Fudan University)

Session Classification: 分析技术

Contribution ID: 20

Type: **not specified**

Zc(3900) observation at BESIII based on quantum machine learning

Sunday, 11 June 2023 09:40 (15 minutes)

Primary author: 丁, 彪 (济南大学)

Presenter: 丁, 彪 (济南大学)

Session Classification: 分析技术

Contribution ID: 21

Type: **not specified**

Simulation and optimisation of the CLIC and FCC-ee positron sources and the CompactLight beamline

Primary author: ZHAO, Yongke (CERN)

Presenter: ZHAO, Yongke (CERN)

Session Classification: Tracking

Contribution ID: 22

Type: **not specified**

基于 DD4hep 的几何管理和事例显示软件

Sunday, 11 June 2023 10:50 (20 minutes)

Primary author: 李, 腾 (Shandong University)

Presenter: 李, 腾 (Shandong University)

Session Classification: 几何管理与事例显示

Contribution ID: 23

Type: **not specified**

Method of visualization based physics analysis and applications in BESIII

Sunday, 11 June 2023 10:10 (20 minutes)

Primary authors: LI, Zhijun (Sun Yat-Sen University); YOU, Zhengyun (Sun Yat-Sen University)

Presenter: LI, Zhijun (Sun Yat-Sen University)

Session Classification: 几何管理与事例显示

Contribution ID: 24

Type: **not specified**

Simulation and optimisation of the CLIC and FCC-ee positron sources and the CompactLight beamline

Primary author: ZHAO, Yongke (CERN)

Presenter: ZHAO, Yongke (CERN)

Session Classification: 几何管理与事例显示

Contribution ID: 25

Type: **not specified**

Jet tagging and event classification at CEPC

Sunday, 11 June 2023 13:30 (20 minutes)

Primary author: (EPD.IHEP), LI Gang (高能所)

Presenter: (EPD.IHEP), LI Gang (高能所)

Session Classification: 机器学习

Contribution ID: 26

Type: **not specified**

Particle flow reconstruction

Primary author: RUAN, Manqi (IHEP)

Presenter: RUAN, Manqi (IHEP)

Session Classification: 机器学习

Contribution ID: 27

Type: **not specified**

BESIII 实验粒子鉴别方法研究

Primary author: 陈, 正元 (高能所)

Presenter: 陈, 正元 (高能所)

Session Classification: 机器学习

Contribution ID: 28

Type: **not specified**

BESIII 实验上基于机器学习的 μ/π 鉴别算法

Sunday, 11 June 2023 14:10 (20 minutes)

Primary author: 翟, 云聪 (Shandong University)

Presenter: 翟, 云聪 (Shandong University)

Session Classification: 机器学习

Contribution ID: 29

Type: **not specified**

STCF DTOF 探测器上基于卷积神经网络的 π/K 鉴别算法

Sunday, 11 June 2023 14:30 (20 minutes)

Primary author: 姚, 志鹏 (Shandong University)

Presenter: 姚, 志鹏 (Shandong University)

Session Classification: 机器学习

Contribution ID: 30

Type: **not specified**

CHEP 机器学习进展分享

Sunday, 11 June 2023 13:50 (20 minutes)

Primary author: 方, 文兴 (高能所)

Presenter: 方, 文兴 (高能所)

Session Classification: 机器学习

Contribution ID: 31

Type: **not specified**

BESIII 软件在天河 2 号的部署和测试应用

Sunday, 11 June 2023 16:00 (20 minutes)

Primary author: 陈, 锴 (Sun Yat-Sen University)

Presenter: 陈, 锴 (Sun Yat-Sen University)

Session Classification: 异构计算

Contribution ID: 32

Type: **not specified**

异构计算在径迹重建中的应用

Sunday, 11 June 2023 16:20 (20 minutes)

Primary author: 张, 逸舟

Presenter: 张, 逸舟

Session Classification: 异构计算

Contribution ID: 33

Type: **not specified**

Opticks : GPU Optical Photon Simulation using NVIDIA OptiX 7 and NVIDIA CUDA (remote)

Sunday, 11 June 2023 16:40 (20 minutes)

Zoom Meeting ID: 256 161 5446

Primary author: SIMON BLYTH, UNKNOWN

Presenter: SIMON BLYTH, UNKNOWN

Session Classification: 异构计算

Contribution ID: 34

Type: **not specified**

BESIII tracking algorithm based on machine learning

Primary author: 贾, 晓倩 (山东大学)

Presenter: 贾, 晓倩 (山东大学)

Session Classification: Tracking

Contribution ID: 35

Type: **not specified**

Comprehensive method for detector description transformation and visualization in Unity

Sunday, 11 June 2023 10:30 (20 minutes)

Primary author: SONG, Tianzi (Sun Yat-sen University)

Presenter: SONG, Tianzi (Sun Yat-sen University)

Session Classification: 几何管理与事例显示

Contribution ID: 36

Type: **not specified**

BESIII 实验粒子鉴别方法研究

Saturday, 10 June 2023 13:50 (20 minutes)

Presenter: 陈, 正元 (高能所)

Session Classification: PID

Contribution ID: 37

Type: **not specified**

Tensorflow 环境下开发的 FDC 分波软件

Sunday, 11 June 2023 08:50 (20 minutes)

Primary author: PINGRG, Ping (高能所)

Presenter: PINGRG, Ping (高能所)

Session Classification: 分析技术

Contribution ID: 38

Type: **not specified**

Simulation and optimisation of the CLIC and FCC-ee positron sources and the CompactLight beamline

Saturday, 10 June 2023 11:40 (20 minutes)

Primary author: ZHAO, Yongke (CERN)

Presenter: ZHAO, Yongke (CERN)

Session Classification: 量能器

Contribution ID: 39

Type: **not specified**

Track reconstruction in CEPC

Saturday, 10 June 2023 16:50 (20 minutes)

Primary author: 刘梦瑶, UNKNOWN

Presenter: 刘梦瑶, UNKNOWN

Session Classification: Tracking

Contribution ID: 40

Type: **not specified**

基于 GNN 的 BESIII 径迹重建

Sunday, 11 June 2023 14:50 (20 minutes)

Primary author: 贾, 晓倩 (山东大学)

Presenter: 贾, 晓倩 (山东大学)

Session Classification: 机器学习

Contribution ID: 41

Type: **not specified**

结束语

Sunday, 11 June 2023 17:00 (10 minutes)

Primary author: LI, Weidong (高能所)

Presenter: LI, Weidong (高能所)

Session Classification: 异构计算

Contribution ID: 42

Type: **not specified**

Simultaneous track finding and track fitting by the Deep Neural Network at BESIII

Sunday, 11 June 2023 15:10 (20 minutes)

Primary author: 杨, 志彬 (实验物理中心)

Presenter: 杨, 志彬 (实验物理中心)

Session Classification: 机器学习