

Introductory remarks

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March 28, 2018



中國科學院高能物理研究所

*Institute of High Energy Physics
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News

- CEPC Workshop in May
 - Rome, **May 24, 25 and 26** (Thurs - Sat)
 - <https://agenda.infn.it/conferenceDisplay.py?confId=14816>
 - Registration is open: Deadline April 24
 - Email registration: cepc2018localorganizer@lists.roma3.infn.it
 - Check website to request visa letter
 - Conference fee: 150 Euro
 - Scientific Committee second meeting last week:
- **Poster session will happen**
 - Europeans plan to submit some



Workshop on the Circular Electron-Positron Collider

EU Edition

Roma, May 24-26 2018
University of Roma Tre

<https://agenda.infn.it/conferenceDisplay.py?ovw=True&confId=14816>

Scientific Committee

- Franco Bedeschi - INFN, Italy
- Alain Blondel - Geneva Univ., Switzerland
- Daniela Bortoletto - Oxford Univ., UK
- Manuela Boscolo - INFN, Italy
- Biagio Di Micco - Roma Tre Univ. & INFN, Italy
- Yunlong Chi - IHEP, China
- Marcel Demarteau - ANL, USA
- Yuanning Gao - Tsinghua Univ., China
- Joao Guimaraes da Costa - IHEP, China
- Gao Jie - IHEP, China
- Gang Li - IHEP, China
- Jianbei Liu - USTC, China
- Xinchou Lou - IHEP, China
- Felix Sefkow - DESY, Germany
- Jin Shan - Nanjing Univ., China
- Marcel Vos - CSIC, Spain

Local Organizing Committee

- Antonio Baroncelli (INFN, Italy)
- Biagio Di Micco (Roma Tre Univ. & INFN, Italy)
- Ada Farilla (INFN, Italy)
- Francesca Paolucci (Roma Tre Univ. & INFN, Italy)
- Domizia Orestano (Roma Tre Univ. & INFN, Italy)
- Marco Sessa (Roma Tre Univ. & INFN, Italy)
- Monica Verducci (Roma Tre Univ. & INFN, Italy)

 

 



Workshop session structure

• **Day 1 - Morning**

- Plenary 9:00 - 11:00
- Plenary 11:30 - 13:00

• **Afternoon:**

- Parallel 14:30 - 17:00
 1. Final focus/MDI/Machine backgrounds
 2. Physics/Simulation
- Plenary 17:30 - 18:30

• **Day 2 - Morning**

- Parallel 9:00 - 11:00
 1. Accelerator
 2. Physics/Simulation
 3. Trackers
 4. Calorimeters
- Parallel 11:30 - 13:00

• **Afternoon:**

- Parallel 14:30 - 17:00
- Parallel 17:30 - 18:30



Workshop session structure

• **Day 3 - Morning**

- Plenary 9:00 - 11:00
 - Summary of parallel
- Plenary 11:30 - 13:00
 - Open discussion and closing

- Don't send requests for talks to secretaries
- Send suggestions to me and/or other committee members



Conveners for parallel sessions

- DAY 1:
 - **MDI:** Mike Koratzinos + Hongbo Zhu
 - **Physics/Simulation:** Fulvio Piccinini + Manqi Ruan

- DAY 2:
 - **Accelerator:** Jie Gao, Yunlong Chi + I Frascati + I CERN
 - **Physics/Simulation:** Patrizia Azzi, Yaquan Fang, Gang Li
 - **Tracker:** Paolo Giacomelli, Zhijun Liang (+TPC person?)
 - **Calorimeter:** Roberto Ferrari, Jianbei Liu, (+ CALICE person?)



Talks: Physics and Simulation

**Parallel I:
14:30-17:00**

Talk 1

Talk 2

Talk 3

Talk 4

Talk 5

**Parallel III:
9:00-11:00**

Talk 1

Talk 2

Talk 3

Talk 4

Physics/Simulation -- Requirements

Conveners: F. Piccinini [theorist], Manqi (alternative Yaquan)

14:30	0:30	Z pole physics		
15:00	0:30	WW physics	Maarten?	Saclay
15:30	0:30	Higgs physics		
16:00	0:30	Top physics		
16:30	0:30	Beam quality and properties	FCC-ee person?	

Day II: 04/25 - Parallel Sessions

Conveners: P. Azzi, LI Gang, Yaquan, (perhaps another foreigner)

Physics/Simulation

9:00	0:30	CEPC baseline concept		
9:30	0:30	IDEA concept		
10:00	0:30	Higgs --> tautau	Yu Dan	IHEP
10:30	0:30	Higgs --> ZZ	??	



Talks: Physics and Simulation

Parallel III: 11:30-13:00

Physics/Simulation

Conveners: same as above

Talk 1	11:30 0:30	Higgs—> gamma gamma		
Talk 2	12:00 0:30	Higgs —> mumu		
Talk 3	12:30 0:30	Higgs—>2 jet2	Baiyu	Southeast University

Parallel IV: 14:30-17:00

Physics/Simulation

Conveners: same as above

Talk 1	14:30 0:30	WW fusion Higgs cross section and Higgs width	Hao Liang/Manqi	IHEP
Talk 2	15:00 0:30	Higgs --> WW	Lianyou/Li Tong	IHEP/Shandong
Talk 3	15:30 0:30	Higgs to invisible		
Talk 4	16:00 0:30	Combination of CEPC Higgs precision measurement	Kaili Zhang	IHEP
Talk 5	16:30 0:30	Electroweak		

Parallel V: 17:00-18:00

Physics and Simulation

Conveners: same as above

Talk 1	17:30 0:30	Electroweak	Maarten	Saclay
Talk 2	18:00 0:30	Electroweak	Zhijun	IHEP



Talks: MDI

Parallel I:
14:30-17:00

MDI/Final focus/backgrounds -- Requirements

Conveners: Hongbo Zhu,
Mike Koratzinos

Talk 1

14:30 0:30

Overview MDI

Talk 2

15:00 0:30

Pipe sizes/cooling (implications on vertex detectors)

Talk 3

15:30 0:30

Quad location/forward space (implications on
luminometers/tracking)

Talk 4

16:00 0:30

Solenoid field compensation (implications of higher
fields on shielding and compensating magnets,
luminosity, other)

Talk 5

16:30 0:30

Beam structure & backgrounds (background
evaluation/optimization implications on detectors
bunch/time structure & options)

Hongbo Zhu



Talks: Tracker

Parallel I:
14:30-17:00

Tracker

Conveners: Paolo Giacomelli,
Zhijun Liang

Talk 1

Drift Chamber at CEPC

Franco

Talk 2

TPC at CEPC overview

Huirong?

Talk 3

TPC talk (2)

Talk 4

TPC talk (3)

Talk 5

Status of sensor R&D for CEPC Pixel Detector (1)

Talk 6

Status of sensor R&D for CEPC Pixel Detector (2)

Talk 7

Plans for small CEPC pixel prototype

Talk 8

Silicon tracker at CEPC

Talk 9

Full silicon detector option for CEPC

Talk 10

CEPC muon detector overview

Talk 11

MPGD options for CEPC

Talk 12

Silicon detector mechanics and construction R&D
considerations for CEPC

Tim Jones, Liverpool

Talk 13

CEPC detector magnet system

Talk 14



Talks: Calorimeter

Parallel I:
14:30-17:00

Tracker

Conveners:Roberto Ferrari,
Jianbei Liu

Talk 1

CEPC electromagnetic calorimeter

Talk 2

CEPC electromagnetic calorimeter

Talk 3

CEPC hadronic calorimeter

Talk 4

CEPC hadronic calorimeter

Talk 5

Lumical

Ivanka

Talk 6

Plans for CEPC hadronic calorimeter prototype?

Talk 7

Talk 8

Talk 9

Talk 10

Talk 11

Talk 12

Talk 13

Talk 14



Conferences

- Other upcoming meetings of interest:
 - FCPPL meeting in Marseille, May 22-25
 - CEPC activities early in the week
 - Elba Instrumentation Conference (May 27-Jun 2) - linked to Rome Workshop
 - <https://agenda.infn.it/conferenceDisplay.py?confId=13450>
 - They encourage abstracts to be submitted by us
 - Deadline: 18 March 2018
 - FCC Week in Amsterdam, April 9-13
 - <https://indico.cern.ch/event/656491/overview>
 - ICHEP 2018 in Seoul, July 4-11
 - <https://indico.cern.ch/event/686555/>
 - Abstract deadline: 19 March 2018
 - LHCP 2018 in Bologna, June 4-9
 - Requesting poster abstract submissions: Deadline March 25



CDR Schedule

- CDR timescale agreed upon at Steering group meeting on Nov 29:
 - Start harmonization of text and introduction chapters now
 - Complete draft of each chapter by Jan 2017
 - **Editing and internal review: Feb-Mar 2017**
 - International review: April 2018 ==> **May 2018**
 - Implementation of suggestions: May 2018 ==> **June 2018**
 - Public release: May-June 2018 ==> **July 2018**



Status of CDR

Sections	Status	TO DO
Short introduction		
Physics case		
Experimental conditions		
Vertex detector		
Silicon tracker		
TPC		
Full silicon tracker option		
Drift chamber option		
Electromagnetic Calorimeter		
Hadronic Calorimeter		
Detector magnet system		
Muon system		
Readout electronics and DAQ		
MDI		
Physics performance		
Future plans and R&D		