

ASP2024—Teachers Program at the 8th African School of Physics



Report of Contributions

Contribution ID: 1

Type: **not specified**

Teachers' Arrivals

Contribution ID: 2

Type: **not specified**

Fundamental physics research in Morocco

Presenter: HOUMMADA, Abdeslam (Universite Hassan II, Ain Chock (MA))

Session Classification: Physics research in Morocco

Contribution ID: 3

Type: **not specified**

Applied physics research in Morocco

Presenter: BENNOUNA, Amin (Cadi Ayyad University, Morocco)

Session Classification: Physics research in Morocco

Contribution ID: 4

Type: **not specified**

The Standard Model of particle physics

Presenter: Dr CHABAB, Mohamed (Cadi Ayyad University (MA))

Session Classification: High Energy Physics

Contribution ID: 5

Type: **not specified**

Fundamentals of Statistical Analysis in Physics

Presenter: COUSINS JR, Robert (University of California Los Angeles (US))

Session Classification: Statistics

Contribution ID: 6

Type: **not specified**

Accelerators

Contribution ID: 7

Type: **not specified**

Basics of accelerator physics

Presenter: BADGLEY, Karie (Fermilab)

Session Classification: Accelerators

Contribution ID: 8

Type: **not specified**

SOAPHYS (West African Physical Society)

Presenter: KA, Oumar (Cheikh Anta Diop University)

Session Classification: Evening news

Contribution ID: 9

Type: **not specified**

The African Academy of Sciences (AAS)

Presenter: MAAZA, Malik (iThemba LABS, South Africa)

Session Classification: Morning news

Contribution ID: 10

Type: **not specified**

Physics for sustainable development

Presenter: MURONGA, Azwinndini (Nelson Mandela University)

Session Classification: Sustainable development

Contribution ID: **11**

Type: **not specified**

IAEA

Presenter: MOKTAR, Najat (IAEA)

Session Classification: Sustainable development

Contribution ID: 12

Type: **not specified**

Fundamentals of Statistical Analysis in Physics

Presenter: COUSINS JR, Robert (University of California Los Angeles (US))

Session Classification: Statistics

Contribution ID: 13

Type: **not specified**

Particle interactions with matter

Presenter: GOERLACH, Ulrich (Centre National de la Recherche Scientifique (FR))

Session Classification: Particle interactions

Contribution ID: 14

Type: **not specified**

Fundamentals of detectors

Presenter: GOERLACH, Ulrich (Centre National de la Recherche Scientifique (FR))

Session Classification: Detectors

Contribution ID: 15

Type: **not specified**

Pan-African physics society, status, challenges and path forward

Session Classification: Evening news

Contribution ID: 16

Type: **not specified**

Department of Energy International Outreach

Presenter: SMITH, Jacqueline (DOE)

Session Classification: Morning news

Contribution ID: 17

Type: **not specified**

Standard Model of astrophysics & cosmology

Presenter: Prof. MIMOUNI, Jamal (University Mentouri Constantine1)

Session Classification: Astrophysics and cosmology

Contribution ID: 18

Type: **not specified**

Basics of accelerator physics

Presenter: BADGLEY, Karie (Fermilab)

Session Classification: Accelerators

Contribution ID: **19**

Type: **not specified**

Fundamentals of detectors

Presenter: SEIDEL, Sally (University of New Mexico (US))

Session Classification: Detectors

Contribution ID: 20

Type: **not specified**

Advanced datectors & instrumentation

Presenter: SEIDEL, Sally (University of New Mexico (US))

Session Classification: Detectors

Contribution ID: 21

Type: **not specified**

Linux tutorial

Session Classification: Tools

Contribution ID: 22

Type: **not specified**

Arab Physical Society

Presenter: Prof. KHALIL IBRAHIM, Shaaban (ENHEP Egyptian Network of High Energy Physics (EG))

Session Classification: Evening news

Contribution ID: 23

Type: **not specified**

ASFAP

Presenter: Prof. FASSI, Farida (Universite Mohammed V (MA))

Session Classification: Morning news

Contribution ID: 24

Type: **not specified**

Fundamentals of Statistical Analysis in Physics

Presenter: COUSINS JR, Robert (University of California Los Angeles (US))

Session Classification: Statistics

Contribution ID: 25

Type: **not specified**

Linux tutorial

Session Classification: Tools

Contribution ID: 26

Type: **not specified**

Optics & photonics

Session Classification: Laser physics

Contribution ID: 27

Type: **not specified**

Event generation & detector simulation

Presenter: LAASSIRI, Mounia (Brookhaven National Laboratory)

Session Classification: Simulation

Contribution ID: 28

Type: **not specified**

Event generation & detector simulation

Presenter: LAASSIRI, Mounia (Brookhaven National Laboratory)

Session Classification: Simulation

Contribution ID: 29

Type: **not specified**

Fluid and plasma physics

Presenter: MAKINDE, Oluwole Daniel (Stellenbosch University, South Africa)

Session Classification: Plasma physics

Contribution ID: **30**

Type: **not specified**

The Square Kilometer Array (SKA)

Presenter: BOURKE, Tyler (SKAO)

Session Classification: Evening news

Contribution ID: **31**

Type: **not specified**

NASAC

Presenter: CHERKAOUI, Rajaa (Universite Mohammed V (MA))

Session Classification: Morning news

Contribution ID: 32

Type: **not specified**

Digital libraries

Presenter: Mr VIGEN, Jens (CERN)

Session Classification: Libraries

Contribution ID: 33

Type: **not specified**

Flavor physics

Presenter: CAMPANELLI, Mario (UCL)

Session Classification: High Energy Physics

Contribution ID: 34

Type: **not specified**

Atomic and molecular physics

Presenter: ABAH, Obinna (Newcastle University, United Kingdom)

Session Classification: Materials Physics

Contribution ID: 35

Type: **not specified**

Beyond the Standard Model of particle physics

Presenter: Prof. KHALIL IBRAHIM, Shaaban (ENHEP Egyptian Network of High Energy Physics (EG))

Session Classification: High Energy Physics

Contribution ID: 36

Type: **not specified**

Event generation & detector simulation

Presenter: LAASSIRI, Mounia (Brookhaven National Laboratory)

Session Classification: Simulation

Contribution ID: 37

Type: **not specified**

Fundamentals of biophysics

Presenter: KRÜGER, Tjaart (University of Pretoria, South Africa)

Session Classification: biophysics

Contribution ID: **38**

Type: **not specified**

Event generation & detector simulation

Presenter: LAASSIRI, Mounia (Brookhaven National Laboratory)

Session Classification: Simulation

Contribution ID: 39

Type: **not specified**

Air quality research

Presenter: Dr TCHANCHE, Bertrand (Alioune Diop University)

Session Classification: Air quality

Contribution ID: 40

Type: **not specified**

Panel discuss: "The road to critical skills development for Africa's growth"

Panelists:

- Rajaa Cherkaoui (Mohammed V University, for the AAS)
- Pr. Jamila EL ALAMI (Director of the CNRST) or Pr. Fatima-Zohra Iflahen (Cadi Ayyad University)
- Hicham Benfeddoul: Director, Division of Studies, Research, and Support for Council Bodies
- Hamid Bouabid: Director of Scientific Research and Innovation at the Ministry of Higher Education
- Norbert Hounkonnou (Benin)
- Raissa Malu (Investing in People, RDC)
- Michel Spiro (IUPAP)

Presenter: WHITE, Herman (Fermilab)

Session Classification: ASP Forum

Contribution ID: 41

Type: **not specified**

African school of Physics (ASP) —Alignment, sustainability & impact

Presenter: LAASSIRI, Mounia (Brookhaven National Laboratory)

Session Classification: ASP Forum

Contribution ID: 42

Type: **not specified**

Feedback from an ASP alumna

Presenter: Dr SAMSAM, Sanae (INFN Milano)

Session Classification: ASP Forum

Contribution ID: 43

Type: **not specified**

Towards ASP2026 in Kenya

Presenters: NYONGESA, Francis (University of Nairobi, Kenya); ODARI, Victor (MMUST, Kenya)

Session Classification: ASP Forum

Contribution ID: 44

Type: **not specified**

TBD

Presenter: MATLON, Jordanna (American University, USA)

Session Classification: ASP Forum

Contribution ID: 45

Type: **not specified**

Académie Hassan II —vision & plan

Presenter: FASSI FEHRI, Omar (Permanent secretary of the Hassan II Academy of Science and Technology, Morocco)

Session Classification: ASP Forum

Contribution ID: 46

Type: **not specified**

RAWISE

Presenter: CYULINYANA, Marie Chantal (University of Rwanda)

Session Classification: ASP Forum

Contribution ID: 47

Type: **not specified**

Elimisha Msichana Elimisha Jamii an Astronomia

Presenter: ALANGO, Tabitha (Maasai Mara University, Department of Mathematics and Physical Sciences)

Session Classification: ASP Forum

Contribution ID: 48

Type: **not specified**

Science Advocacy for the Youth

Presenter: NKUITE, Harris Sop (Exeter University, UK)

Session Classification: ASP Forum

Contribution ID: 49

Type: **not specified**

Genius in Africa

Presenter: FAJEMISIN, Jesutofunmi (University of South Florida, USA)

Session Classification: ASP Forum

Contribution ID: 50

Type: **not specified**

Panel discussion: integration, coordination, resources sharing, support & sustainability of outreach efforts

Panelists:

- Marie-Chantal Cyulinyana (University of Rwanda)
- Tabitha Alango (Maasai Mara University, Kenya)
- Harris Sop Nkuite (University Exeter, UK)
- Jesutofunmi Fajemisin (University of South Florida, USA)

Presenter: WHITE, Herman

Session Classification: ASP Forum

Contribution ID: 51

Type: **not specified**

Light sources & applications

Presenter: BISCARI, Caterina (CELLS (ES))

Session Classification: Light sources

Contribution ID: 52

Type: **not specified**

Introduction to quantum computing

Presenter: TELMINI, Mourad (Tunis El Manar, Tunisia)

Session Classification: Quantum computing

Contribution ID: 53

Type: **not specified**

Nuclear reactions

Presenter: PELLEGGRI, Luna (University of the Witwatersrand, South Africa)

Session Classification: Nuclear physics

Contribution ID: 54

Type: **not specified**

Basics of quantum computing

Presenter: TELMINI, Mourad (Tunis El Manar, Tunisia)

Session Classification: Quantum computing

Contribution ID: 55

Type: **not specified**

Hadron dynamics

Presenter: DALTON, Mark (JLab)

Session Classification: Nuclear physics

Contribution ID: **56**

Type: **not specified**

TBD

Presenter: BAH, Ibrahima (Johns Hopkins University)

Session Classification: Gravity

Contribution ID: 57

Type: **not specified**

Gravitational waves

Presenter: COCCIA, Eugenio (IFAE)

Session Classification: Gravity

Contribution ID: 58

Type: **not specified**

Heavy ion physics

Presenter: TANG, Aihong (Brookhaven National Laboratory)

Session Classification: Nuclear physics

Contribution ID: 59

Type: **not specified**

Public outreach event in Arabic

Presenter: Mr ABOUABID, Hamza (Université Abdelmalek Essaadi)

Session Classification: Evening news

Contribution ID: **60**

Type: **not specified**

ICTP-Africa

Presenter: ACHARYA, Bobby Samir (Abdus Salam Int. Cent. Theor. Phys. (IT))

Session Classification: Morning news

Contribution ID: **61**

Type: **not specified**

Particle physics

Presenter: CHARLTON, Dave (University of Birmingham (GB))

Session Classification: High Energy Physics

Contribution ID: **62**

Type: **not specified**

Particle physics

Presenter: CHARLTON, Dave (University of Birmingham (GB))

Session Classification: High Energy Physics

Contribution ID: **63**

Type: **not specified**

Nanoscience

Presenter: YITAMBEN, Esmeralda

Session Classification: Nanoscience

Contribution ID: 64

Type: **not specified**

Mathématique financière

Presenter: TÉKOUTÉ, Gilbert

Session Classification: Mathematics in economics

Contribution ID: 65

Type: **not specified**

Africa and the Electron Ion Collider (EIC)

Presenter: Mr MULILO, Benard (University of Zambia)

Session Classification: Morning news

Contribution ID: 66

Type: **not specified**

Advanced accelerator concepts

Presenter: BISCARI, Caterina (CELLS (ES))

Session Classification: Accelerators

Contribution ID: 67

Type: **not specified**

Machine learning and Artificial intelligence

Presenter: GONSKI, Julia Lynne (SLAC National Accelerator Laboratory (US))

Session Classification: ML / AI

Contribution ID: **68**

Type: **not specified**

Machine learning and Artificial intelligence

Presenter: GONSKI, Julia Lynne (SLAC National Accelerator Laboratory (US))

Session Classification: ML / AI

Contribution ID: **69**

Type: **not specified**

Dark matter searches

Presenter: MOHLABENG, Gopolang (Simon Fraser University, Canada)

Session Classification: Dark sector states

Contribution ID: 70

Type: **not specified**

Advanced Compton light sources

Applications and Practical Implementations of Advancements in Compact Light Sources for X-ray Technologies

Presenter: BACCI, Alberto (INFN-Milan)

Session Classification: Light sources

Contribution ID: 71

Type: **not specified**

Mathématique financière

Presenter: TÉKOUTÉ, Gilbert

Session Classification: Mathematics in economics

Contribution ID: 72

Type: **not specified**

CERN-Africa programs

Session Classification: Morning news

Contribution ID: 73

Type: **not specified**

Radionuclide production

Presenter: SILARI, Marco (Politecnico di Milano (IT))

Session Classification: Medical physics

Contribution ID: 74

Type: **not specified**

Radiation measurements and dosimetry

Presenter: SILARI, Marco (Politecnico di Milano (IT))

Session Classification: Medical physics

Contribution ID: 75

Type: **not specified**

Dark matter searches

Presenter: MOHLABENG, Gopolang (Simon Fraser University, Canada)

Session Classification: Dark sector states

Contribution ID: 76

Type: **not specified**

Radiation source

Radiation sources - FEL's, ICS and photon-muons

Session Classification: Light sources

Contribution ID: 77

Type: **not specified**

African Physics Newsletter

Presenter: KENMOE, Stéphane (University of Duisburg-Essen, Germany)

Session Classification: Morning news

Contribution ID: 78

Type: **not specified**

Nuclear energy research and applications

Presenter: DENECKE, Melissa (IAEA)

Session Classification: Nuclear physics

Contribution ID: 79

Type: **not specified**

Physics at underground laboratories

Presenter: FERRONI, Fernando (Sapienza Universita e INFN, Roma I (IT))

Session Classification: Underground Laboratories

Contribution ID: **80**

Type: **not specified**

Neutrino physics

Presenter: BISHAI, Mary (Brookhaven National Laboratory (US))

Session Classification: High Energy Physics

Contribution ID: **81**

Type: **not specified**

Compton light sources for X-ray technologies

Applications and Practical Implementations of Advancements in Compact Light Sources for X-ray Technologies

Presenter: BACCI, Alberto (INFN-Milan)

Session Classification: Light sources

Contribution ID: **82**

Type: **not specified**

Electron Recovery LINAC

ERL's, energy sustainability
of particle accelerators

Presenter: SERAFINI, Luca (INFN-Milan)

Session Classification: Light sources

Contribution ID: **83**

Type: **not specified**

From Mohammed V University

Session Classification: Morning news

Contribution ID: **84**

Type: **not specified**

From Cadi Ayyad University

Session Classification: Morning news

Contribution ID: **85**

Type: **not specified**

From ASP IOC

Session Classification: Morning news

Contribution ID: **86**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: 87

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **88**

Type: **not specified**

Internet of Things

Wednesday, July 10, 2024 1:30 PM (1h 30m)

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **89**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **90**

Type: **not specified**

Particle physics workshop

Tuesday, July 9, 2024 1:00 PM (2 hours)

Introduction to Particle Physics: What do we know?

13:00 Greetings, Introductions, and Remarks

13:15 Shuffling the Particle Deck (Particle Cards)

14:00 Introduction to Standard Model

View this page: <https://cern.ch/asp2024t>

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: **91**

Type: **not specified**

Particle physics workshop

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 92

Type: **not specified**

Particle physics workshop

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 93

Type: **not specified**

Particle physics workshop

Friday, July 12, 2024 10:30 AM (1 hour)

Introduction to Particle Physics: Mini-Masterclass

10:30 Greetings, Introductions, and Remarks

10:35 Data Analysis Prep

10:45 Short low-p dimuon measurement

11:15 Discussion of Results

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 94

Type: **not specified**

Particle physics workshop

Wednesday, July 10, 2024 1:30 PM (1h 30m)

Introduction to Particle Physics: Experiment

13:30 Greetings, Introductions, and Remarks

13:35 Rolling with Rutherford

14:20 Introduction to Cosmic Ray Detector

14:40 CME Study

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 95

Type: **not specified**

Particle physics workshop

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 96

Type: **not specified**

Particle physics workshop

Thursday, July 11, 2024 10:30 AM (1 hour)

Introduction to Particle Physics: Data Analysis

10:30 Greetings, Introductions, and Remarks

10:35 Introduction to Cosmic Ray Detector

10:55 Simple Experiment

11:15 CME Study

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 97

Type: **not specified**

Particle physics workshop

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: **98**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: 99

Type: **not specified**

Internet of Things

Thursday, July 11, 2024 10:30 AM (1 hour)

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **100**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **101**

Type: **not specified**

Internet of Things

Friday, July 12, 2024 10:30 AM (1 hour)

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **102**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **103**

Type: **not specified**

Internet of Things

Friday, July 12, 2024 12:00 PM (1 hour)

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **104**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **105**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **106**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **107**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **108**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **109**

Type: **not specified**

Internet of Things

Tuesday, July 9, 2024 1:00 PM (2 hours)

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **110**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **111**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **112**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: **113**

Type: **not specified**

Internet of Things

Presenter: RAICH, Uli (retired)

Session Classification: Small detector labs

Contribution ID: 114

Type: **not specified**

Integration of scientific computing into math and science classes

Presenter: BIRSACH, Dave (Brookhaven National Laboratory)

Session Classification: Small detector labs

Contribution ID: 115

Type: **not specified**

Integration of scientific computing into math and science classes

Presenter: BIRSACH, Dave (Brookhaven National Laboratory)

Session Classification: Small detector labs

Contribution ID: 116

Type: **not specified**

Integration of scientific computing into math and science classes

Wednesday, July 10, 2024 1:30 PM (1h 30m)

Presenters: BIRSACH, Dave (Brookhaven National Laboratory); Prof. FASSI, Farida (Universite Mohammed V (MA))

Session Classification: Small detector labs

Contribution ID: 117

Type: **not specified**

Integration of scientific computing into math and science classes

Presenter: BIRSACH, Dave (Brookhaven National Laboratory)

Session Classification: Small detector labs

Contribution ID: **118**

Type: **not specified**

Integration of scientific computing into math and science classes

Presenter: BIRSACH, Dave (Brookhaven National Laboratory)

Session Classification: Small detector labs

Contribution ID: **119**

Type: **not specified**

Integration of scientific computing into math and science classes

Thursday, July 11, 2024 10:30 AM (1 hour)

Presenters: BIRSACH, Dave (Brookhaven National Laboratory); Prof. FASSI, Farida (Universite Mohammed V (MA))

Session Classification: Small detector labs

Contribution ID: 120

Type: **not specified**

Integration of scientific computing into math and science classes

Presenter: BIRSACH, Dave (Brookhaven National Laboratory)

Session Classification: Small detector labs

Contribution ID: 121

Type: **not specified**

Integration of scientific computing into math and science classes

Friday, July 12, 2024 10:30 AM (1 hour)

Presenters: BIERSACH, Dave (Brookhaven National Laboratory); Prof. FASSI, Farida (Universite Mohammed V (MA))

Session Classification: Small detector labs

Contribution ID: 122

Type: **not specified**

Particle physics workshop

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 123

Type: **not specified**

Integration of scientific computing into math and science classes

Presenter: BIRSACH, Dave (Brookhaven National Laboratory)

Session Classification: Small detector labs

Contribution ID: 124

Type: **not specified**

Particle physics workshop

Friday, July 12, 2024 12:00 PM (1 hour)

Wrap-up: Implementation Plans

Presenter: CECIRE, Kenneth William (University of Notre Dame (US))

Session Classification: Small detector labs

Contribution ID: 125

Type: **not specified**

Integration of scientific computing into math and science classes

Friday, July 12, 2024 12:00 PM (1 hour)

Presenters: BIRSACH, Dave (Brookhaven National Laboratory); Prof. FASSI, Farida (Universite Mohammed V (MA))

Session Classification: Small detector labs

Contribution ID: 126

Type: **not specified**

Integration of scientific computing into math and science classes

Tuesday, July 9, 2024 1:00 PM (2 hours)

Presenters: BIRSACH, Dave (Brookhaven National Laboratory); Prof. FASSI, Farida (Universite Mohammed V (MA))

Session Classification: Small detector labs