

# **AfricaConnect Meeting and Workshop on IoT-Based Acquisition of Research Data for Scientific Computing**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Welcome message

*Monday, 21 October 2024 09:15 (15 minutes)*

**Presenter:** Prof. SCANDOLO, S. (ICTP)

Contribution ID: 2

Type: **not specified**

## Overview/participants introduction

*Monday, 21 October 2024 09:30 (1h 15m)*

**Presenter:** Prof. ONIME, Clement (ICTP)

Contribution ID: 3

Type: **not specified**

## **IoT sensors kit for monitoring pollution of surface water bodies**

*Monday, 21 October 2024 11:20 (1h 10m)*

**Presenter:** Prof. PIETROSEMOLI, E. (ICTP)

Contribution ID: 4

Type: **not specified**

# Introduction to IoT

*Monday, 21 October 2024 13:30 (1 hour)*

**Presenter:** Mr ZENNARO, M. (ICTP)

Contribution ID: 5

Type: **not specified**

## General introduction to Arduino programming

*Monday, 21 October 2024 14:30 (1h 30m)*

**Presenter:** Mr BARUZZO, M. (ICTP)

Contribution ID: 6

Type: **not specified**

## **3D printing for rapid prototyping in environmental monitoring**

*Monday, 21 October 2024 16:30 (1h 30m)*

**Presenter:** Mr FONDA, C. (ICTP)

Contribution ID: 7

Type: **not specified**

## RECAP of Day 1

*Tuesday, 22 October 2024 09:00 (30 minutes)*



Contribution ID: 8

Type: **not specified**

## Introduction to IoT communications

*Tuesday, 22 October 2024 09:30 (1h 15m)*

**Presenter:** Prof. PIETROSEMOLI, E. (ICTP)

Contribution ID: 9

Type: **not specified**

## Introduction to MQTT protocol

*Tuesday, 22 October 2024 11:15 (1h 15m)*

**Presenter:** Dr PAŠKAUSKAS, R. (ICTP)

Contribution ID: **10**

Type: **not specified**

## **Introduction to IoT gateways**

*Tuesday, 22 October 2024 13:30 (1 hour)*

**Presenter:** Dr PAŠKAUSKAS, R. (ICTP)

Contribution ID: 11

Type: **not specified**

## **Hands-on: Installing an IoT platform for MQTT data collection**

*Tuesday, 22 October 2024 14:30 (1h 30m)*

**Presenter:** Prof. ONIME, Clement (ICTP)

Contribution ID: 12

Type: **not specified**

## Hands-on: From sensors to gateway to IoT platforms

*Tuesday, 22 October 2024 16:20 (1h 30m)*

**Presenters:** Prof. ONIME, Clement (ICTP); Dr PAŠKAUSKAS, R. (ICTP)

Contribution ID: **13**

Type: **not specified**

## Recap of Day 2

*Wednesday, 23 October 2024 09:00 (30 minutes)*

Contribution ID: 14

Type: **not specified**

## **Advance tasks and exercise on IoT platforms: high availability, data archival and extracting data from archival DB**

*Wednesday, 23 October 2024 09:30 (1h 15m)*

**Presenter:** Prof. ONIME, Clement (ICTP)

Contribution ID: 15

Type: **not specified**

## Powering IoT sensors, kits and gateways

*Wednesday, 23 October 2024 11:15 (1h 15m)*

**Presenter:** Prof. PIETROSEMOLI, E. (ICTP)



Contribution ID: **16**

Type: **not specified**

## Introduction to tinyML

*Wednesday, 23 October 2024 13:30 (1 hour)*

**Presenter:** Prof. ZENNARO, M. (ICTP)

Contribution ID: 17

Type: **not specified**

## **Basic Data Science: Introduction and best practices, data protection and ethical use of data**

*Wednesday, 23 October 2024 14:30 (1h 30m)*

**Presenter:** Mr GIZAW, S. (ICTP)

Contribution ID: **18**

Type: **not specified**

## **Hands-on: Working with data: cleanup, deduplication & scaling**

*Wednesday, 23 October 2024 16:30 (1h 30m)*

**Presenter:** Prof. ONIME, Clement (ICTP)

Contribution ID: 19

Type: **not specified**

# Recap of Day 3

*Thursday, 24 October 2024 09:00 (30 minutes)*

Contribution ID: 20

Type: **not specified**

## **Hands-on: Working with data: tools for graphing, A.I models**

*Thursday, 24 October 2024 09:30 (1h 15m)*

**Presenter:** Prof. ONIME, Clement (ICTP)

Contribution ID: 21

Type: **not specified**

# Introduction to Machine Learning and neural networks

*Thursday, 24 October 2024 11:15 (1h 15m)*

**Presenter:** Prof. ONIME, Clement (ICTP)

Contribution ID: 23

Type: **not specified**

## Recap of day 4

*Friday, 25 October 2024 09:00 (30 minutes)*

Contribution ID: 24

Type: **not specified**

## Forum discussion on open data: Publishing and sharing data

*Friday, 25 October 2024 09:30 (1 hour)*

**Presenter:** (WACREN & ICTP), All participants



Contribution ID: 25

Type: **not specified**

## **Forum Discussion: Addressing IoT security multi-layers**

*Friday, 25 October 2024 10:30 (1 hour)*

**Presenter:** ALL PARTICIPANTS

Contribution ID: 26

Type: **not specified**

## Feedback session and closing remarks

*Friday, 25 October 2024 11:30 (1 hour)*

**Presenter:** ALL PARTICIPANTS

Contribution ID: 27

Type: **not specified**

## Welcome and framing

*Thursday, 24 October 2024 16:15 (10 minutes)*

**Session Classification:** AfricaConnect High-level Meeting

Contribution ID: 28

Type: **not specified**

## **Building a landscape view of climate data infrastructure needs in Africa**

*Thursday, 24 October 2024 16:25 (40 minutes)*

**Presenters:** THANEY, Kaitlin (Executive Director, Invest in Open Infrastructure (IOI)); OAIYA, Omo (WACREN)

**Session Classification:** AfricaConnect High-level Meeting

Contribution ID: **31**

Type: **not specified**

## Exploring funding models and sources

*Thursday, 24 October 2024 17:05 (50 minutes)*

**Session Classification:** AfricaConnect High-level Meeting

Contribution ID: **32**

Type: **not specified**

## Conclusion

*Thursday, 24 October 2024 17:55 (5 minutes)*

Next steps on working together, building an understanding and shaping a climate fund

**Session Classification:** AfricaConnect High-level Meeting

Contribution ID: 33

Type: **not specified**

## **AfricaConnect and NREN Infrastructure for Climate**

*Thursday, 24 October 2024 14:00 (20 minutes)*

**Presenter:** OAIYA, Omo (WACREN)

**Session Classification:** AfricaConnect High-level Meeting

Contribution ID: 34

Type: **not specified**

## **Leveraging Regional Climate Data for Actionable Research: WASCAL's Role in Strengthening NREN Collaboration and Climate Resilience in West Africa**

*Thursday, 24 October 2024 14:20 (20 minutes)*

**Presenter:** Prof. OGUNJOBI, Kehinde (Research Director, WASCAL)

**Session Classification:** AfricaConnect High-level Meeting



Contribution ID: 35

Type: **not specified**

## **Advancing Earth Observation for Climate Research: AfriGEO's Vision for Strengthening Data Sharing and Regional Collaboration**

*Thursday, 24 October 2024 14:40 (20 minutes)*

**Presenter:** KASERA, Ken (Regional Centre for Mapping of Resources for Development (RCMRD)  
/AfriGEO Secretariat)

**Session Classification:** AfricaConnect High-level Meeting

Contribution ID: 36

Type: **not specified**

## Group Discussion

*Thursday, 24 October 2024 15:00 (45 minutes)*

**Session Classification:** AfricaConnect High-level Meeting