

# **DRD7: R&D Collaboration on Electronics and On-detector Processing. 3rd workshop**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Introduction

*Monday 9 September 2024 09:00 (30 minutes)*

**Presenters:** VASEY, Francois (CERN); SIMON, Frank (KIT - Karlsruhe Institute of Technology (DE))

**Session Classification:** Introduction

Contribution ID: 2

Type: **not specified**

## 7.1.a Silicon Photonics Transceiver Development

*Monday 9 September 2024 11:05 (25 minutes)*

**Primary author:** TROSKA, Jan (CERN)

**Presenter:** TROSKA, Jan (CERN)

**Session Classification:** WP 7-1

Contribution ID: 3

Type: **not specified**

## 7.1.b Powering Next Generation Detector Systems

*Monday 9 September 2024 11:30 (25 minutes)*

**Presenter:** MICHELIS, Stefano (CERN)

**Session Classification:** WP 7-1

Contribution ID: 4

Type: **not specified**

## **7.1.c Wireless Allowing Data and Power Transmission (WADAPT)**

*Monday 9 September 2024 11:55 (25 minutes)*

**Presenter:** BENHAMMOU, Yan (Tel Aviv University (IL))

**Session Classification:** WP 7-1

Contribution ID: 5

Type: **not specified**

## **Prospects on High data rate ASICs**

**Session Classification:** WP 7-1

Contribution ID: 6

Type: **not specified**

## **Discussion about R&D for Data Density**

**Session Classification:** WP 7-1

Contribution ID: 7

Type: **not specified**

## Coffee Break

*Monday 9 September 2024 10:30 (30 minutes)*



Contribution ID: **8**

Type: **not specified**

## Coffee Break

*Tuesday 10 September 2024 10:30 (30 minutes)*

Contribution ID: 9

Type: **not specified**

## 7.2.b Radiation Tolerant RISC-V SoC

*Monday 9 September 2024 14:05 (25 minutes)*

**Presenters:** CARATELLI, Alessandro (CERN); KLOUKINAS, Kostas (CERN)

**Session Classification:** WP 7-2

Contribution ID: **10**

Type: **not specified**

## **7.2.c Virtual Electronic System Prototyping**

*Monday 9 September 2024 14:30 (25 minutes)*

**Presenters:** SACCHETTI, Elio (Centre National de la Recherche Scientifique (FR)); BRAMBILLA, Francesco Enrico (KU Leuven (BE))

**Session Classification:** WP 7-2

Contribution ID: 11

Type: **not specified**

## **7.3.a High Performance TDC and ADC Blocks at Ultra-low Power**

*Monday 9 September 2024 15:35 (25 minutes)*

**Session Classification:** WP7.3

Contribution ID: 12

Type: **not specified**

## **7.3.b1 Strategies for characterizing and calibrating sources impacting time measurements**

*Monday 9 September 2024 16:00 (25 minutes)*

**Session Classification:** WP7.3

Contribution ID: 13

Type: **not specified**

## **7.4.a Device modeling and development of cryogenic CMOS PDKs and IP**

*Tuesday 10 September 2024 09:00 (25 minutes)*

**Presenter:** ROLO, Manuel (Universita e INFN Torino (IT))

**Session Classification:** WP 7-4

Contribution ID: 14

Type: **not specified**

## **7.4.b Radiation Resistance of Advanced CMOS Nodes**

*Tuesday 10 September 2024 09:25 (25 minutes)*

**Session Classification:** WP 7-4

Contribution ID: 15

Type: **not specified**

## 7.4.c Cooling and Cooling Plates

*Tuesday 10 September 2024 09:50 (25 minutes)*

**Presenter:** DE AGUIAR FRANCISCO, Oscar Augusto (The University of Manchester (GB))

**Session Classification:** WP 7-4



Contribution ID: 16

Type: **not specified**

## **On-detector cooling systems based on low-mass carbon dioxide evaporators**

**Session Classification:** WP 7-4

Contribution ID: 17

Type: **not specified**

## 7.5.a DAQoverflow

*Tuesday 10 September 2024 11:00 (25 minutes)*

**Presenters:** KESHAVARZI, Alex (University of Manchester); LAI, Yun-Tsung

**Session Classification:** WP 7-5

Contribution ID: **18**

Type: **not specified**

## **7.6.a Common Access to Selected Imaging Technologies**

*Tuesday 10 September 2024 13:30 (25 minutes)*

**Presenter:** SEDGWICK, Iain

**Session Classification:** WP 7-6

Contribution ID: 19

Type: **not specified**

## 7.6.b Shared Access to 3D Integration

*Tuesday 10 September 2024 13:55 (25 minutes)*

**Presenter:** Dr CASELLE, Michele (KIT - Karlsruhe Institute of Technology (DE))

**Session Classification:** WP 7-6

Contribution ID: 20

Type: **not specified**

## **7.5.b From FE to BE with 100GbE**

*Tuesday 10 September 2024 11:25 (25 minutes)*

**Presenters:** PELLEGRINO, Antonio (NIKHEF); BARON, Sophie (CERN)

**Session Classification:** WP 7-5

Contribution ID: 21

Type: **not specified**

## 7.2.a eFPGA - Programmable Logic Array IP

**Presenter:** KARAGOUNIS, Michael (Fachhochschule Dortmund Univ. of Applied Sciences and Arts (DE))

**Session Classification:** WP 7-2

Contribution ID: 22

Type: **not specified**

## **7.5.c Generic Backend Board**

**Session Classification:** WP 7-5

Contribution ID: 23

Type: **not specified**

## **7.6.a Common Access to Selected Imaging Technologies and IP Blocks: b) LFoundry**

**Presenter:** ROLO, Manuel (Universita e INFN Torino (IT))

**Session Classification:** WP 7-6



Contribution ID: 24

Type: **not specified**

## Discussion about R&D for Data Density

Contribution ID: 25

Type: **not specified**

# Discussion

Contribution ID: 26

Type: **not specified**

## Discussion

*Monday 9 September 2024 12:20 (10 minutes)*

**Session Classification:** WP 7-1

Contribution ID: 27

Type: **not specified**

## Discussion

*Monday 9 September 2024 14:55 (10 minutes)*

**Session Classification:** WP 7-2

Contribution ID: 28

Type: **not specified**

## Discussion

*Monday 9 September 2024 16:50 (15 minutes)*

**Session Classification:** WP7.3

Contribution ID: 29

Type: **not specified**

## Discussion

*Tuesday 10 September 2024 10:15 (15 minutes)*

**Session Classification:** WP 7-4

Contribution ID: **30**

Type: **not specified**

## **Discussion**

*Tuesday 10 September 2024 11:50 (15 minutes)*

**Session Classification:** WP 7-5

Contribution ID: **31**

Type: **not specified**

## **Discussion**

*Tuesday 10 September 2024 14:20 (15 minutes)*

**Session Classification:** WP 7-6



Contribution ID: 32

Type: **not specified**

## Coffe Break

*Monday 9 September 2024 15:05 (25 minutes)*

Contribution ID: **33**

Type: **not specified**

## **Coffe Break**

*Tuesday 10 September 2024 14:35 (25 minutes)*

Contribution ID: 34

Type: **not specified**

## **7.3.b2 Timing distribution techniques**

*Monday 9 September 2024 16:25 (25 minutes)*

**Session Classification:** WP7.3

Contribution ID: 35

Type: **not specified**

## **7.7: A Hub-based structure for ASICs development**

*Tuesday 10 September 2024 15:00 (45 minutes)*

**Presenters:** KLOUKINAS, Kostas (CERN); WILLOUGHBY, Mark; LLOPART CUDIE, Xavi (CERN)

**Session Classification:** WG7.7

Contribution ID: 36

Type: **not specified**

## Collaboration, working group and work package matters

*Monday 9 September 2024 09:30 (30 minutes)*

- Projects, Deliverables and Milestones
- MoU
- WWW site
- egroups

**Presenter:** SIMON, Frank (KIT - Karlsruhe Institute of Technology (DE))

**Session Classification:** Introduction

Contribution ID: 37

Type: **not specified**

## Collaboration chair candidates

*Monday 9 September 2024 10:15 (15 minutes)*

**Presenters:** Prof. ANDREAZZA, Attilio (Università degli Studi e INFN Milano (IT)); PALLA, Fabrizio (Universita & INFN Pisa (IT)); BAUDOT, Jerome (IPHC - Strasbourg)

**Session Classification:** Introduction

Contribution ID: **38**

Type: **not specified**

## **Web page and egroups**

*Monday 9 September 2024 10:00 (15 minutes)*

**Presenters:** SACCHETTI, Elio (Centre National de la Recherche Scientifique (FR)); BAUDOT, Jerome (IPHC - Strasbourg)

**Session Classification:** Introduction

Contribution ID: **39**

Type: **not specified**

## Closeout

*Tuesday 10 September 2024 15:45 (45 minutes)*

**Presenter:** RIVETTI, Angelo (INFN - National Institute for Nuclear Physics)

**Session Classification:** Closeout



Contribution ID: 40

Type: **not specified**

## **WP 7.1 Introduction**

*Monday 9 September 2024 11:00 (5 minutes)*

**Presenters:** TROSKA, Jan (CERN); PRINZIE, Jeffrey (KU Leuven (BE)); KULIS, Szymon (CERN)

**Session Classification:** WP 7-1

Contribution ID: 41

Type: **not specified**

## Introduction

*Monday 9 September 2024 14:00 (5 minutes)*

**Presenter:** CRESCIOLI, Francesco (Centre National de la Recherche Scientifique (FR))

**Session Classification:** WP 7-2

Contribution ID: 42

Type: **not specified**

## Introduction

*Monday 9 September 2024 15:30 (5 minutes)*

**Session Classification:** WP7.3