

AIDA-2020-MS48

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Advanced European Infrastructures for Detectors at Accelerators

Milestone Report

Simulation tutorial on HV/HR-CMOS TCAD and Geant4 simulations

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28 April 2017



The AIDA-2020 Advanced European Infrastructures for Detectors at Accelerators project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement no. 654168.

This work is part of AIDA-2020 Work Package 6: **Novel high voltage and resistive CMOS sensors.**

The electronic version of this AIDA-2020 Publication is available via the AIDA-2020 web site <http://aida2020.web.cern.ch> or on the CERN Document Server at the following URL: <http://cds.cern.ch/search?p=AIDA-2020-MS48>

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Grant Agreement No: 654168

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Advanced European Infrastructures for Detectors at Accelerators
Horizon 2020 Research Infrastructures project AIDA-2020

MILESTONE REPORT

SIMULATION TUTORIAL ON HV/HR-CMOS TCAD AND GEANT4 SIMULATIONS

MILESTONE: MS48

Document identifier:	AIDA-2020-MS48
Due date of deliverable:	End of Month 24 (April 2017)
Report release date:	28/04/2017
Work package:	WP6: Novel high voltage and resistive CMOS sensors
Lead beneficiary:	UBONN
Document status:	Final

Abstract:

A simulation workshop and a simulation tutorial were organized by WP6 (Novel high voltage and resistive CMOS sensors) in Marseille on 12-13 May 2016 (MS7 and MS48), focused on devices (TCAD) and detector systems (Geant 4).



AIDA-2020 Consortium, 2017

For more information on AIDA-2020, its partners and contributors please see www.cern.ch/AIDA2020

The Advanced European Infrastructures for Detectors at Accelerators (AIDA-2020) project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement no. 654168. AIDA-2020 began in May 2015 and will run for 4 years.

Delivery Slip

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Approved by	Scientific Coordinator		28/04/17



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1. WORKSHOP SUMMARY

1.1 OBJECTIVES

TCAD and Geant4 simulations are important tools widely used in the design of CMOS sensors. It is therefore critical that scientists, involved in sensor design, get familiar with simulation tools as soon as possible. Therefore, we decided to organize the Simulation Tutorial in month 13 rather than in month 24. The shift allowed us to merge two similar events: the Simulation Workshop and the Simulation Tutorial. This change brought several advantages. First of all, researchers became familiar with the simulation tools before starting their work on large designs. The change also allowed the participation of a larger audience. Finally, by merging the two events significant costs savings were achieved for the organization of the events and travel expenses.

Lecturers for the Simulation Tutorial were Fares Djama (University of Marseille), Jian Liu (CPPM), Mathieu Benoit (UNIGE) and Patrick Pangaud (CPPM). The University of Bonn (Tomasz Hemperek) prepared the simulation infrastructure and the material used for the tutorials.

The simulation tutorial included two sets of lectures:

- Fares Djama (University of Marseille) “Simulation of silicon detector with GEANT-4 (part1/2)”
- Jian Liu (CPPM), Mathieu Benoit (UNIGE) and Patrick Pangaud (CPPM); “Hands on TCAD simulation (part1/2)”

The timetable of the event is available at <https://indico.cern.ch/event/497449/timetable/>

1.2 DETAILS ABOUT THE MEETING

Type of activity	Thematic Workshop
Title	WP6 Simulations Tutorial
Date	12-13 May 2016
Place	Marseille (FR)
Type of audience	Scientific community, ESRs
Size of audience	25
Scope of the workshop	International
Link	https://indico.cern.ch/event/497449/

1.3 LIST OF PARTICIPANTS

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