

Preface

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Abstract. Brief description of the workshop

1 Foreword

These are the conference proceedings of the workshop "Connecting The Dots/ Intelligent Trackers 2017" that was held at Orsay from March 6 to March 9, 2017. The web site with all transparencies remains available at :

<http://ctdwit2017.lal.in2p3.fr>.

With the parallel progress in pattern recognition algorithms and microelectronic technology, the design and performance of tracking detector is rooted in the solid interplay of hardware and software: sensors, readout and trigger electronics, online and offline reconstruction software. The main focus of the workshop was on pattern recognition and machine learning algorithms devoted to the reconstruction of particle tracks in high energy physics experiments, and the hardware developments that enable them.

This 2017 edition was a merger of the Connecting The Dot series (see CTD 2015 Berkeley¹ and CTD 2016 Vienna²) with the Workshop on Intelligent Tracker series (see WIT 2010 Berkeley³, WIT 2012 Pisa⁴ and WIT 2014 Penn⁵).

The workshop was plenary sessions only, with a mix of invited talks and accepted contributions. There were 100 participants from 16 countries. 46 talks were given and one hackathon on a simplified 2D tracking problem took place, yielding in total 16 proceedings, edited by the authors of this preface. Each proceeding was peer-reviewed by at least two referees, selected from the Program and Local committees.

Next workshop of Connecting The Dots series will take place at the University of Seattle (USA), early 2018.

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¹<https://indico.physics.lbl.gov/indico/event/149/>

²<https://indico.hephy.oeaw.ac.at/event/86/>

³<https://indico.cern.ch/event/68677/>

⁴<https://indico.cern.ch/event/154525/>

⁵<https://indico.cern.ch/event/293354/>

2 Program committee

The Program Committee members were: Alberto Annovi (INFN Pisa), Marina Artuso (Syracuse U.), Richard Brenner (Uppsala U.), David Brown (LBNL), Paolo Calafiura (LBNL), Michel De Cian (Heidelberg U.), Markus Elsing (CERN), Rüdolf Frühwirth (HEPHY Vienna), Frank Gaede (DESY), Maurice Garcia-Sciveres (LBNL), Martin Heck (KIT Karlsruhe), Benedict Hegner (CERN), Alessandro Marchioro (CERN), Fabrizio Palla (INFN Pisa), Eugenio Paoloni (INFN Pisa), Mark Pesaresi (Imperial College), Luciano Ristori (Fermilab), David Rousseau (LAL Orsay), Andre Schöning (Heidelberg U.) and Ariel Schwartzman (SLAC).

3 Local committee

The Local Committee members were: Valérie Brouillard (LAL Orsay), Cécile Germain (LRI & LAL Orsay), Hadrien Grasland (LAL Orsay), Isabelle Guyon (U. Paris Saclay), Abdenour Lounis (LAL Orsay), David Rousseau (LAL Orsay) and Dimitris Varouchas (LAL Orsay).

4 Sponsors

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⁶<http://www.sciences.u-psud.fr/fr/index.html>

⁷<https://www.datascience-paris-saclay.fr>

⁸<http://www.labex-p2io.fr>

⁹<https://www.inria.fr>