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allpix squared

cern.ch/allpix-squared

Welcome to the 4th Allpix Squared User Workshop!

Stephan Lachnit
Sara Ruiz Daza
Paul Schütze
Simon Spannagel
Håkan Wennlöf

22/5 -23

The organising committee

Paul

Simon

Stephan

Håkan

Sara

Ask us if you have any questions!

Workshop statistics

- 62 registered participants
  - 33 in person (a new record!)
  - Participants from 17 different countries
- 22 talks
  - 17 in person, 5 remotely
- 3 coffee breaks
  - Useful both for energy refills and chatting

- Location: all talks take place in Seminar Room 4, and coffee breaks in the foyer outside of it

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Today's timetable

- Introduction to Allpix Squared, and releases since the last workshop

- Two sessions from users on applications, studies, and recent developments

13:00	**Welcome from the workshop organisers**	*Håkan Wennlöf*
	Seminar room 4, DESY, Hamburg, Germany	13:00 - 13:10
	Overview: Allpix Squared 2.x Releases	*Simon Spannagel*
	Seminar room 4, DESY, Hamburg, Germany	13:10 - 13:35
	The 100µPET project: Simulation of the next generation PET scanner with monolithic silicon pixel sensors	*Jihad Saidi*
	Seminar room 4, DESY, Hamburg, Germany	13:35 - 14:00
14:00	**Development and simulation of a new preshower detector for the FASER experiment at the LHC**	*Rafaella Eleni Kotitsa*
	Seminar room 4, DESY, Hamburg, Germany	14:00 - 14:25
	Deconvolution of Spectra of High-Flux Mixed Radiation Fields with Dosepix	*Mr Florian Beißer*
	Seminar room 4, DESY, Hamburg, Germany	14:25 - 14:50
15:00	**Simulation of sapphire micro-strip detectors with Allpix Squared for the LUXE's Gamma Beam Profiler detector** *Pietro Grutta*	
	Coffee break	
	Seminar room 4, DESY, Hamburg, Germany	15:15 - 15:45
	Simulation of laser-TCT experiments with Allpix^2	*Daniil Rastorguev*
16:00	*Seminar room 4, DESY, Hamburg, Germany*	15:45 - 16:10
	Test beam simulations of the ATLAS ITk Strip End-Cap detectors	*Radek Privara*
	Seminar room 4, DESY, Hamburg, Germany	16:10 - 16:35
	Simulation of Radial Strips for Comic Ray Studies	*Maximilian Caspar*
	Seminar room 4, DESY, Hamburg, Germany	16:35 - 17:00
17:00	**Deep learning for sub-micron UCN position resolution using CMOS sensor**	*Shanny Lin*
	Seminar room 4, DESY, Hamburg, Germany	17:00 - 17:25

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Tomorrow's timetable

- Two sessions from users on applications and studies

- Lunch tip:
  DESY canteen

  - It's a canteen, but it's conveniently located and they have Currywurst

  - Note: cash only

Morning coffee		
Seminar room 4, DESY, Hamburg, Germany		09:40 - 10:00
Simulation of hybrid pixels using precise TCAD simulations		*Keerthi Nakkalil*
Seminar room 4, DESY, Hamburg, Germany		10:00 - 10:25
Simulating monolithic active pixel sensors using generic doping profiles		*Adriana Simancas*
Seminar room 4, DESY, Hamburg, Germany		10:25 - 10:50
Transient Simulations: Weighting Potentials through Technology Computer-Aided Design		*Manuel Alejandro Del Rio Viera*
Seminar room 4, DESY, Hamburg, Germany		10:50 - 11:15
Beam Telescope Simulations in Allpix Squared		*Sara Ruiz Daza*
Seminar room 4, DESY, Hamburg, Germany		11:15 - 11:40
Hexagonal silicon pixel simulations		*Håkan Wennlöf*
Seminar room 4, DESY, Hamburg, Germany		11:40 - 12:05
Lunch		
		12:05 - 13:00

Times in left margin: 10:00, 11:00, 12:00

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Lunch

12:05 - 13:00

13:00

A Timepix3 front-end simulator plugin for Allpix2   *Pinelopi Christodoulou*

Seminar room 4, DESY, Hamburg, Germany   13:00 - 13:25

Assessing the Impact of Miscalibrating the RD53B-CMS Front End for the HL-LHC CMS Inner Tracker
Andreas Mastronikolis

Reconstruction of high track density beams in beam tests   *Christopher Krause*

14:00

Seminar room 4, DESY, Hamburg, Germany   13:50 - 14:15

Time Resolution Simulations for 4H-SiC PiN Detectors   *Andreas Gsponer*

Seminar room 4, DESY, Hamburg, Germany   14:15 - 14:40

A look to Charge carrier properties in single-crystal diamonds using the Allpix-squared simulation framework
Mr Faiz Ishaqzai

15:00

Coffee break

Seminar room 4, DESY, Hamburg, Germany   15:05 - 15:30

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Tomorrow's timetable

- After the final coffee break: a session on new features and developments

- Finally, a session with an open floor, for all remaining questions and discussions

Allpix Squared Website & Documentation		*Stephan Lachnit et al.*
Seminar room 4, DESY, Hamburg, Germany		15:30 - 15:50
New features in Allpix Squared 3.0		*Paul Schütze*
Seminar room 4, DESY, Hamburg, Germany		15:50 - 16:15
Upcoming features and current developments		*Paul Schütze et al.*
Seminar room 4, DESY, Hamburg, Germany		16:15 - 16:35
Discussion and open questions		
Seminar room 4, DESY, Hamburg, Germany		16:35 - 18:00

16:00

17:00

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For the speakers

- Please upload your slides to the Indico before your session starts
- Try to keep the allotted time; 20 minutes for the talk, and 5 minutes for questions
- The session chair will notify you when you have 2 minutes left

- Everyone: please help us improve by filling out the workshop survey here: https://indico.cern.ch/event/1252505/surveys

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Monday evening: workshop dinner

- We have booked a big table at Restaurant Blaue Blume

  - We'll have a choice of 1 meat dish, 2 fish dishes, and 2 veggie dishes

  - Each participant pays for themselves

- We'll make our way there together after the last talk of the day, catching Bus 3 at the DESY east entrance at 17:57

Harkortstr. 95, 22765 Hamburg

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Links and contact

- Workshop Indico: https://indico.cern.ch/e/apsqws4

- Timetable: https://indico.cern.ch/event/1252505/timetable/

- Zoom connection details:
  https://indico.cern.ch/event/1252505/videoconference/

- Workshop organisers email (for any questions concerning the workshop): allpix-squared-workshop@cern.ch

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Once again, welcome, and we look forward to an interesting workshop!

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