

# James Philip Iddon

[james.philip.iddon@cern.ch](mailto:james.philip.iddon@cern.ch) • +41 77 211 94 53 • [linkedin](#)

Applied physicist working the [ATLAS Pixel detector](#) as a CERN Senior Applied Fellow. Over 7 years experience within the field of silicon pixel tracking detectors for HEP experiments, specifically construction, system testing, commissioning and operation.

## Professional Experience

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### Senior Applied Fellow (Detector Operations)

[CERN](#) - Geneva, CH

Jul 2022 - present

- Responsible for the coordination of the operations of the [ATLAS Pixel detector](#).
- On-call detector expert, maximising system up-time and ensuring detector safety to acquire maximum physics data from the 24/7 LHC running schedule.
- Continuous development of the data acquisition software (C++), with continuous integration testing on a vertical slice of the detector in a test-bench setup.
- Designed a software package to increase the flexibility of the DAQ software and increase the speed with which detector experts can react to problems.
- **Positions held:** Pixel Run Coordinator (Oct 2023 - present), Pixel Deputy Run Coordinator (Apr 2023 - Oct 2023)

### PhD in Physics

University of Liverpool / CERN

Oct 2017 - Jul 2022

- Construction, commissioning and first performance measurements of the [Inner Tracking System Upgrade of ALICE](#) at the LHC, the largest and most granular Monolithic Active Pixel Sensor (MAPS) tracking detector ever built.
- Constructed and tested novel CMOS MAPS detector modules and staves in The University of Liverpool and Daresbury Laboratory clean rooms with a 98% yield.
- Wrote the system testing software for the fully integrated tracking system at CERN and verified the performance of its 13 billion channels before installation around the LHC beam pipe.
- Gathered the first real particle tracks (5 million cosmic muons) and used these to make the first measurement of the detection efficiency, verifying the capability of the final system.
- **Positions held:** Visiting PhD Candidate at Daresbury Laboratory (Jan 2018 - Apr 2019), CERN Doctoral Student (Apr 2019 - July 2021).

## Education

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### PhD in Physics

University of Liverpool / CERN

Oct 2017 - Jul 2022

- Title: [Construction, Commissioning and Performance Measurements of the Inner Tracking System Upgrade of ALICE at the LHC](#).
- Defended in June 2022. Shortlisted for ALICE thesis award.

### MPHYS Physics

University of Liverpool

Sep 2013 - Jul 2017

- Grade: First Class
- Masters project: 'Inner Tracking System Upgrade of the ALICE Experiment at the LHC', characterisation of silicon CMOS MAPS chips.

## Skills

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**Key skills:** Operations • Coordination • Silicon chip characterisation • DAQ system development • Software • Hardware • Technical writing • Data analysis • System testing

**Programming Languages:** Python • C++ • Bash

**Data visualisation:** Matplotlib • Plotly • Seaborn • Pandas • ROOT

**Platforms/Tools:** Linux (Arch, Debian, Ubuntu) • Git • LaTeX • Markdown • html • WinCC