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[Home](#) > About ICE-DIP jobs

ICE-DIP jobs ^[1]

ICE-DIP ^[2] is the Intel-CERN European Doctorate Industrial Programme, a Marie Curie Actions project within the European Union's 7th Framework Programme. For its newly opened research posts, ICE-DIP ^[2] is seeking to recruit 5 bright candidates (Early Stage Researchers - ESRs) in the areas of computer science and engineering to undertake doctoral training.

The Challenge

CERN is home to the largest machine ever built by man, the Large Hadron Collider (LHC). Every year, the four major LHC experiments collect over 25 petabytes of data. These collaborations are now planning upgrades which will increase data rates by as much as 100x within several years ? but computing facilities fit to handle such amounts of data don't exist yet.

How can you Help?

If you're an enthusiastic and talented student or young professional thinking of doing a doctorate, you can make a difference. If successful, you will be offered a CERN Fellowship contract with a maximum duration of 3 years.

Available Positions:

- Project 1: use of **silicon photonics** technology in data transfer systems ^[3]
- Project 2: a data pre-processing system closely integrating both **microprocessors and reconfigurable logic (FPGA)** ^[4]
- Project 3: **high speed networking** for data acquisition systems ^[5]
- Project 4: optimizing the latency and energy characteristics of **data transfer** in computing platforms and accelerators ^[6]
- Project 5: enabling efficient data processing on accelerators ? **optimization, parallelization, vectorization** ^[7]

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Links

- [1] <http://test-static-05.web.cern.ch/ice-dip-jobs>
- [2] <http://test-static-05.web.cern.ch/ice-dip>
- [3] <http://test-static-05.web.cern.ch/esr-1-position-silicon-photonics>
- [4] <http://test-static-05.web.cern.ch/esr-2-position-fpga>
- [5] <http://test-static-05.web.cern.ch/esr-3-position-high-speed-networking>
- [6] <http://test-static-05.web.cern.ch/esr-4-position-data-transfer>
- [7] <http://test-static-05.web.cern.ch/esr-5-position-optimization-parallelization-vectorization>