Luis Cebamanos

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Over 10 years of professional experience in writing, analysing and optimising software that solves some of the world's largest and most difficult scientific and industrial problems using massively parallel supercomputers. My main interest is the optimization of applications running on very large parallel supercomputers and achieving optimal performance for real scientific applications.

Previous Employment

EPCC Edinburgh, UK

Senior HPC Applications Analyst

2020-present

Leading HPC technical projects for industrial and academic clients. Provide expertise on architecture and software applications.

Edinburgh, UK

HPC Applications Analyst

2015-2020

Providing scientific, technical and programming HPC consultancy, support and training for academic and industrial clients of EPCC and the University. I provide HPC applications consultancy on academic and industrial projects using novel computing techniques to ensure that key project deliverables are met. As an applications consultant I debug, run, and optimize HPC applications, prepare applications to run on future architectures and provide expert advice on data management, software, compilers and tools.

HPC Applications Developer

Edinburgh, UK

2012–2015

Development, parallelization and optimization of scientific and technical applications. I was also providing end-user support on a broad range of projects including the UK National Supercomputing facility. I run benchmarks on different HPC systems and analised results to provided EPCC clients the best performance possible.

ZoneFox Edinburgh, UK

Software Engineer

2010-2012

My main role was the kernel development of data security solutions for multinational companies. However since we were a start-up company I also worked on multiple phases of our security solutions

Heriot Watt University

Edinburgh, UK

Scientific Computing Support

2009-2010

Parallelization and optimization of computational chemistry simulations.

Barcelona Supercomputing Center

Barcelona, Spain

Junior HPC Software Developer

2008-2009

Analysis, optimization and tuning of in-house parallel scientific software packages used by the centre.

The University of Manchester

Manchester, UK

Visiting Researcher

2007-2008

FDTD simulations of the electromagnetic fields behavior of a group antennas designed for space communication. I was a member of the Square Kilometer Array (SKA) software development team.

Education

Academic Qualifications.

	Edinburgh University	Edinburgh
O	MSc High Performance Computing, UK	2010–2011
0	Polytechnic University of Valencia MSc in Telecommunication and Computing Engineering, Spain	V alencia 2005–2008
0	Polytechnic University of Valencia BEng in Telecommunication Engineering, Spain	Valencia 2000–2005

Technical Skills

- **Programming languages:** C, C++, Fortran
- o **Scripting:** Shell, Python
- o Parallel Computing: MPI, OpenMP, CUDA, OpenACC, Coarray
- o Compilers: GNU, PGI, Intel, Cray, ARM
- o Debuggers: DDT, TotalView, Valgrind, gdb
- o Profilers: CrayPat, TAU, Scalasca, nvprof, MAP, VTune
- o Queuing systems: PBS, SLURM, LSF, SGE
- o HPC systems: Cray XT4, XE6/7, XC30/40/50, SGI UV 2000, BlueGene/Q
- o Parallel file systems: Lustre, GPFS

Personal Skills

- o Excellent team player
- Ability to work in group
- o Flexibility, adaptability and empathy