Christophe HAEN

40 avenue du Jura
01210 FERNEY-VOLTAIRE
✆ *+41-7-54-11-88-57*
✉ *christophe.haen@gmail.com*
Nationality : French
Age : 28

Computer Science PhD

Qualifications

2010-2013	**PhD student at university Blaise Pascal (Clermont-Ferrand) and CERN (Geneva)**, *Thesis in computer science and artificial intelligence.*
2007–2010	**Student at the ISIMA**, *(Institut Supérieur d'Informatique, de Modélisation et de leurs Applications)*, Clermont-Ferrand (63), a computer science college in Clermont-Ferrand, France, Option Software Engineering and Computing Systems. Diploma equivalent to a Master's Degree in Engineering.
2005–2007	**Classes préparatoires**, *specific advanced Maths and Physics classes towards competitive admission into French engineering colleges option computer science - equivalent to two years of university study*, Lyce Jean-Moulin, Forbach, France.

Languages

French	**Native Speaker**.
English	**Fluent in writing, reading and speaking**.
German	**Working knowledge**.

Skills

languages	**C, C++**, Java, **Python**, Perl, **shell script**, LaTeX
database	Oracle, **MySQL**
Tools and software	LibreOffice, Doxygen/Javadoc, SVN/**Git**, **Eclipse**, MySQL Workbench, Wireshark, iperf, fio, **Icinga**/Nagios, Ganglia, Quattor
systems	**Linux**/Unix, Windows, Mac OS X
various	Network knowledges, **system administration**, Storage technology, **database design, application design**, project management, **monitoring expert**

Academic Projects

2010	**ISIMA third year project**, *Study of the impact of the correlation of random sequences on Monte Carlo simulations (C/C++).*
2009	**ISIMA second year project**, *Development of an interactive program which graphically represents in 3D the Bin Packing Problem for LIMOS/CNRS (Java – Java3D).*
2008	**ISIMA first year project**, *Development of a program to generate statistics and spot problems on any user defined queuing network(C).*

Professional Experience

Nov. 2013 - Today **LHCb fellow in charge of Data Management**, *CERN*, Geneva.

My main responsibilities are maintenance and development of the DIRAC and LHCbDIRAC Data Management System (DMS), which is used for data handling on the Grid for LHCb and several other VOs.

These developments include the replacement of GFAL by GFAL2, development of new storage access plugins based on latest protocols (e.g. xrootd,http/webdav), re-eengineering of the DMS, replacement of FTS2 by FTS3 in DIRAC, and the design and development of, and migration to, the new DIRAC FileCatalog code and database to replace the LFC.

I participate to the daily operations, and take Offline and Online shifts. I kept the teaching and student supervision activities as well as the monitoring responsibility from my previous CERN position. Moreover, I now act as a liaison between the Online and Offline world.

(Python – MySQL – DataManagement – Distributed computing – Eclipse – Git – Jenkins)

Nov. 2010 - Oct. 2013 **LHCb doctoral student**, *CERN*, Geneva.

The aim of my thesis was to develop a method and implement a software based on artificial intelligence in order to support the LHCb Online administrator team. This software attempted to provide diagnosis and recovery solutions to system problems.

I became an active system administrator and helped in various aspects. I became an expert in monitoring and took the responsibility for it.

Besides these activities, I was supervising students, organizing training on Data Acquisition for summer students, teaching storage technologies at the International School of Trigger and Data Acquisition (ISOTDAQ), taking central shifts and on call duties, and frequently acting as an LHCb guide.

(C++ – Python – Bash – MySQL – Quattor – Storage system – Linux – ICINGA – Ganglia)

April-Sep. 2010 **ISIMA third year Internship for CERN, Geneva**, *I designed and developed a software able to dynamically discover any network, gather information about its equipments, draw a map of it, and perform monitoring tasks (Python – Networking – SNMP – LLDP – SVN – Eclipse).*

April-Sep. 2009 **ISIMA second year Internship for Genicad, Prague, Czech Republic**, *I implement advanced features for an existing 3D CAD sketcher. I also took part to the daily users support(C++ – MS Visual C++ – MS Visual SourceSafe).*

Activities and Interests

Interested in music(18 years practice guitar)

sport(table tennis, badminton, tennis)

Referees

Dr. Philippe Charpentier **LHCb Experiment Distributed Computing Coordinator at CERN**, *E-mail : philippe.charpentier@cern.ch.*

Dr. Niko Neufeld **LHCb Deputy Project Leader Physics Department at CERN**, *E-mail : niko.neufeld@cern.ch.*

Prof. Vincent Barra **Head of ISIMA, PhD professor**, *E-mail : vincent.barra@isima.fr.*

Publications

C Haen. Lhcb experience during the lhc 2015 run. In *Proceedings of the International Symposium on Grids and Clouds*. Proceedings of Science, 2016. URL: `https://pos.sissa.it/cgi-bin/reader/contribution.cgi?id=270/003`.

C Haen, V Barra, E Bonaccorsi, and N Neufeld. Artificial intelligence in the service of system administrators. *Journal of Physics: Conference Series*, 396(5):052038, 2012. URL: `http://stacks.iop.org/1742-6596/396/i=5/a=052038`.

C Haen, V Barra, E Bonaccorsi, and N Neufeld. Phronesis, a diagnosis and recovery tool for system administrators. *Journal of Physics: Conference Series*, 513(6):062021, 2014. URL: `http://stacks.iop.org/1742-6596/513/i=6/a=062021`.

C Haen, E Bonaccorsi, and N Neufeld. Distributed monitoring system based on icinga. In *Proceedings of ICALEPCS2011*, pages 1149–1152, 2011. URL: `http://accelconf.web.cern.ch/accelconf/icalepcs2011/papers/wepmu035.pdf`, `doi:http://accelconf.web.cern.ch/accelconf/icalepcs2011/papers/wepmu035.pdf`.

C Haen, E Bonaccorsi, and N Neufeld. Evolution of the monitoring in the lhcb online system. In *Proceedings of ICALEPCS2013*, pages 1408–1411, 2013. URL: `http://accelconf.web.cern.ch/AccelConf/ICALEPCS2013/papers/thcoba01.pdf`, `doi:http://accelconf.web.cern.ch/AccelConf/ICALEPCS2013/papers/thcoba01.pdf`.

C. Haen, Philippe Charpentier, Markus Frank, and Andrei Tsaregorodtsev. The dirac data management system and the gaudi dataset federation. *Journal of Physics: Conference Series*, 664(4):042025, 2015. URL: `http://stacks.iop.org/1742-6596/664/i=4/a=042025`.

Christophe Haen. Invited talk: Monitoring at cern. OSMC, 2012. URL: `https://www.netways.de/fileadmin/images/Events_Trainings/Events/OSMC/2012/Slides_2012/Christophe_Haen_Monitoring_at_CERN.pdf`.