Été Rémi
16/11/1990

135 Cours Tolstoï
69100 Villeurbanne (FRANCE)
+336 29 09 06 89
remi.ete@gmail.com

http://lyorete.sytes.net
https://github.com/rete

Licence A and B

PhD in High Energy Physics

Technical skills

- ✔ Capacity for analysis and synthesis on a research topic
- ✔ Ability to speak during international conferences
- ✔ Capacity for reporting work progress weekly
- ✔ Capacity for documenting in advance of a project
- ✔ Capacity for communicating pedagogically

Computing skills

- ✔ Development : C/C++, Python
- ✔ Versioning : Git, SVN
- ✔ Scripting : XML, Json, CMake, Yaml, UNIX shell
- ✔ Web : JavaScript, HTML, CSS, Node.js, Apache
- ✔ Design : Design patterns, refactoring, MVC
- ✔ Software and libraries : Qt, OpenMP, pthread, DIM, Geant4, Doxygen, PandoraSDK
- ✔ Other : UNIX systems, debian server admin, website hosting, continus integration (Travis CI)

Experiences and projects

2013 – 2017
PhD

IPNL – Institut de Physique Nucléaire de Lyon
Online data quality monitoring framework development for the high energy physics domain (DQM4HEP)

- ➢ Software architecture development
- ➢ Software development : network interface, graphical user interfaces (GUI), analysis user interfaces, DAQ interface, remote process managment
- ➢ Software validation using real test beam data at CERN (SPS)
- ➢ Deployment over multiple servers
- ➢ Presented at international conferences :
  - CALICE meeting (Japon, France) ~ 70 pers
  - IEEE Poster session (France)

C/C++, ROOT, Bash, XML, JSON, CMake, pthread, DIM, Qt, LaTeX, Beamer, Doxygen, Git, Yaml, Travis CI

2013 – 2017
PhD

IPNL – Institut de Physique Nucléaire de Lyon
Particle flow algorithm development (ArborPFA) in the ILD detector for the ILC project

- ➢ Oriented-tree graph pattern recognition algorithms development in the HEP context
- ➢ Applied in a study meant to separate nearby hadronic showers in the SDHCAL prototype
- ➢ Physics performances study for the ILC project using the ILD detector
- ➢ Presented at international conferences :
  - CALICE Meeting (Japan, USA, Spain, France, Germany) ~ 70 pers
  - Linear Collider Workshop (Japan, Canada) ~ 200 pers

C/C++, XML, CMake, Bash, PandoraSDK, OpenMP, ROOT, Geant4 LaTeX, Beamer, Git

2013
6 months
M2 internship

IPNL – Institut de Physique nucléaire de Lyon
Separation of nearby hadronic shower in the SDHCAL prototype for the ILC project

- ➢ Oriented-tree graph pattern recognition algorithms development for the SDHCAL prototype
- ➢ Algorithm purity and efficiency study using single hadron showers

C/C++, XML, CMake, Bash, ROOT, LaTeX, Beamer, Git

2012
3 months
M1 internship

CERN – Centre Européen pour le Recherche Nucléaire
Geant4 simulation of GEM detector for the CMS group of the LHC experiment

- ➢ Numerical simulation implementation
- ➢ Data analysis of simulated samples

C/C++, SVN, CMake, Geant4, Doxygen, ROOT

2011
1 month
L3 internship

CERN – Centre Européen pour le Recherche Nucléaire
Refactoring of the ILCDIRAC user interface for the LDC group at CERN

- ➢ Application workflow analysis
- ➢ User interface refactoring and implementation

Python, Bash, XML, Git, SVN, Doxygen

2011
1 month
L3 internship

CPPM – Centre de Physique des Particules de Marseille
Set of cut optimisation on B meson selection for the $B_s \rightarrow \mu^+\mu^-$ channel of the LHCb experiment at LHC

- ➢ LHCb data analysis

C/C++, ROOT, LaTeX

Other experiences and projects

Since 2013	Debian server admin at home. Website development and hosting	JavaScript, HTML, CSS, Node.js, Git, UNIX, Apache
2011 Master 1	Numerical simulation of the Ising model	C/C++, Bash, Make, Git

Education

2013 - 2017 PhD	**Université Claude Bernard Lyon 1** Particle flow algorithm development (ArborPFA) in the ILD detector for the ILC project. Online data quality monitoring framework development.	C/C++, ROOT, Python, Git, SVN, CMake,XML, Json, CMake, Shell UNIX, Apache, DIM, Qt, Geant4, Doxygen
2011 - 2013 Master	**Université Claude Bernard Lyon 1** Subatomic physics and astrophyscics	C/C++, Image processing, Statistical physics, Particle physics
2008 – 2011 Licence	**Université Aix Marseille II** Physics licence	C language, Numeric method for physics, Advanced mathematics

Complementary education

2014 PhD school	SOS : School Of Statistics – Autrans (France)	Multivariate analysis, neural network, Boosted decision tree
2014 PhD school	Subatomic physics school – Lyon (France)	Geant4, high energy physics
2013 PhD school	Architectures , tools and methodologies for developping efficient large scale scientific computing applications – Bertinoro (Italia)	C++ 11, OpenMP, GPU programming, Profiling tools
2012 Master school	CERN Summer school – Geneva (Switzerland)	Numerical simulation, Geant4, data analysis

Scientific notes, proceedings and papers

2016	DQM4HEP : A generic data quality monitoring for high energy physics	IEEE NSS/MIC Conference Proceeding (Poster N06-15)
2015	Separation of nearby hadronic showers in the CALICE SDHCAL prototype detector using ArborPFA `https://twiki.cern.ch/twiki/pub/CALICE/CaliceAnalysisNotes/CAN-054.pdf`	Calice analysis note (CAN)
2015	Construction and commissioning of a technological prototype of a high-granularity semi-digital hadronic calorimeter `http://dx.doi.org/10.1088/1748-0221/10/10/P10039`	Journal of Instrumentation (JINST)
2014	Tracking within Hadronic Showers in the SDHCAL prototype using Hough Transform Technique `https://twiki.cern.ch/twiki/pub/CALICE/CaliceAnalysisNotes/CAN-047.pdf`	Calice analysis note (CAN)