Franck TALBART
134, avenue de la Résistance 92350 LE PLESSIS-ROBINSON, France
Nationality : French
Driver's license

+33 6 88 12 29 06 http://franck.talbart.fr franck@talbart.fr

PROJECT MANAGER – SOFTWARE ENGINEER

WORK EXPERIENCE

Since 11-2015 DDN Storage, MEUDON (FRANCE), MD (USA)

Achievements : Design and development of a HPC (High Performance Computing) oriented framework to enable test automation in a distributed environment.
(Python, Flask, SQLite, JQuery) ~15 000 lines of code

- **Since 11-2015 : Quality Assurance engineer**
  I am in charge of the quality assurance of a burst buffer developed at DDN.

04-2010 , 10-2015 EXASCALE COMPUTING RESEARCH (Intel, CEA, GENCI, UVSQ), VERSAILLES

Achievements : The main purpose of my Team and I is the design and implementation of the Codelet Tuning Infrastructure (CTI) tool. It is a repository management system for performance experiments.

CTI is built around the idea of multiple people wishing to share data and data processing techniques. The tool automates the analysis of applications and provides a clustering approach (data mining) to give optimization hints for a set of loops. To do so, the target application is compressed with its environment and sent to a target machine (supported modes: SSH, Slurm and a generic mode to manage other job managers) or the local machine. Then, the experiment is performed and the results are sent back to the user's machine and imported into the repositories in a unified way.

It incorporates a variety of plugins enabling loop detection, navigation and performance analysis (static and dynamic analysis of the application). A clustering approach is used to group loops based on their characteristics. Doing so, previous optimization techniques can be retrieved from the repository. After the automatic profiler step is done, an application engineer could present a hotspot and retrieve a similar loop from the database. It can contain information on optimization hints that previously provided a benefit for another application engineer.
(C, Python, Bash, PHP, Elastic Search, SQLite) ~55 000 lines of code and 100 000 stored codelets
Website : https://github.com/franck-talbart/codelet_tuning_infrastructure/wiki

- **Since 08-2011 : Technical leader**
  I am in charge of the team management (engineers and interns, team size: 4 members), the executive recruitment and the research and development, in collaboration with Intel Research (Illinois) and CORIA (Rouen). We finished a stable release of CTI which is now publicly available as an open source software on the internet. The tool was deployed in the CORIA laboratory (Rouen) to provide performance monitoring (automatic generation of weekly reports presenting the last performance analysis of a combustion simulator). The results show the gradual impact of the latest updates for different datasets and architectures. The tool is also used internally for research purposes. A technical paper is being written on the latest results.
- **09-2010 , 07-2011 : Expert engineer**
  I designed and developed the repository infrastructure, and a first stable release was provided (analysis, design, implementation, maintenance).
- **04-2010 , 08-2010 : Internship**
  I studied the needs and implemented a first prototype of CTI. I had the opportunity to work with international researchers (Russian, American, Spanish).

Since 11-2009 ISTY, ENGINEERING SCHOOL, VERSAILLES

- **Since 12-2013 : Teaching assistant, System Administration and UNIX**
  I am responsible for the System Administration lectures at the ISTY school (final year of the engineering curriculum) and the UNIX tutorials at the ISTY school (first year of the engineering curriculum).
- **Since 03-2014 : Internship co-ordinator**
- **11-2009 , 01-2010 : C language tutor**

06-2009 , 09-2009 THALES SERVICES, SERVICE DESK, ELANCOURT

- **Internship**
  I developed a module for the automatic generation of resource planning and skills : design of an operational research algorithm. Research on user needs, specifications writing and software implementation.
  (PHP, MySQL, SQL Server) ~7 000 lines of code

08-2006 & 08-2008 ESPACE PUBLIC MULTIMÉDIA, MAIRIE, DESCARTES

➤ **Organizer**

I worked as a computer park network administrator and maintainer, and as a customer consultant.

04-2007 , 06-2007 THALES, SYSTÈMES AÉROPORTÉS, ELANCOURT

➤ **Internship**

I updated a tool (Digibus and Video Exploitation SubSystem) used for the Mirage 2000.
(Delphi) ~ 3 000 lines of code

➤ EDUCATION

2010 ISTY, VERSAILLES

Master degree in Computer Science

European master degree of computer science, **ranked first during the three years**

2007 IUT D'ORSAY, ORSAY

DUT Computer Science

Equivalent to second year of BSc Computer Science, **ranked 3/220**

2005 LYCÉE ST FRANÇOIS D'ASSISE, MONTIGNY-LE- BX

Baccalauréat Scientifique

High School Diploma equivalent to A-level, with honours

➤ LANGUAGES

- **French :** Mother tongue
- **English :** Fluent

➤ SKILLS

- **Tools :** GIT, SVN, CVS, Jenkins, Redmine
- **Databases :** SQL language, PL/SQL, Oracle, MySQL, SQLite
- **Languages :** C, C++, C#, Shell, Delphi, Java (Hibernate, JDBC …), Python, UML
- **Methodologies :** Agile , Merise
- **Operating systems :** GNU/Linux distributions (especially Debian), Windows

➤ MISCELLANEOUS

- **Sports :** Tennis, swimming
- **Others :** Design of an interactive webradio
  Design of a robot using the Raspberry Pi (C++)