Franck TALBART
134, avenue de la Résistance 92350 LE PLESSIS-ROBINSON
Nationality : French
French driving license (category B – car)

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

PROJECT MANAGER – SOFTWARE ENGINEER

WORK EXPERIENCE

Since 04-2010 EXASCALE COMPUTING RESEARCH (Intel, CEA, GENCI, UVSQ), VERSAILLES (78)

Achievements : I am currently working as an expert engineer and a project manager in Computer Science at the Exascale Computing Laboratory (Intel). The main purpose of my Team and I is the design and implementation of the CTI tool. CTI stands for Codelet Tuning Infrastructure. It is a repository management system for performance experiments.

CTI is built around the concept 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 analyzed 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 machine's user and imported into the repositories in a unified way.

It incorporates a variety of plugins enabling loops (codelets) detection, navigation and analysis. CTI supports many characterization tools such as MAQAO and DECAN. For example, the MAQAO plugin extracts low level assembly features from codelets binaries and stores the features vectors back into the repository database. A clustering approach is used to group codelets based on their assembly features and other characteristics. Doing so, previous optimization techniques could 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 :** **Project manager and Expert engineer**
  Team management (engineers and interns, team size: 2-6 members), executive recruitment, research and development, in collaboration with Intel US (Illinois) and CORIA (Rouen)
- **09-2010 , 07-2011 :** **Expert engineer**
  Tool research, design and development, first stable release (analysis, design, implementation, maintenance)
- **04-2010 , 08-2010 :** **Internship**
  Study and conception of a first prototype of CTI. Collaboration with international researchers (Russian, American, Spanish)

Since 11-2009 ISTY (INSTITUT DES SCIENCES ET TECHNIQUES DES YVELINES), ENGINEERING SCHOOL, VERSAILLES (78)

- **09-2014 :** **Teaching assistant, UNIX**
  In charge of the UNIX tutorials at the ISTY school (first year of the engineering curriculum)
- **Since 03-2014 :** **Internship co-ordinator**
- **Since 12-2013 :** **Teaching assistant, System Administration**
  In charge of the System Administration lectures at the ISTY school (final year of the engineering curriculum)
- **11-2009 , 01-2010 :** **Tutor C language**

06-2009 , 09-2009 THALES SERVICES, SERVICE DESK, ELANCOURT (78)

- **Internship**
  Module research and development for 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 (37)

- **Organizer**
  In charge of the computer park network and maintenance, and customer consultant

04-2007 , 06-2007 THALES, SYSTÈMES AÉROPORTÉS, ELANCOURT (78)

- **Internship**
  Update of a HMI software (Digibus and Video Exploitation SubSystem) for the Mirage 2000
  (Delphi) ~ 3 000 lines of code

EDUCATION

2010 ISTY, VERSAILLES (78)

Master degree in Computer Science

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

2007 IUT D'ORSAY, ORSAY (91)

DUT Computer Science

Equivalent to second year of BSc Computer Science at Orsay University Institute of Technology

2005 LYCÉE ST FRANÇOIS D'ASSISE, MONTIGNY-LE- BX (78)

Baccalauréat Scientifique

High School Diploma equivalent to A-level, with honours

LANGUAGES

- **French :** Mother tongue
- **English :** Proficient

SKILLS

- **Tools :** Eclipse, VIM, GIT, SVN, CVS, Jenkins, Redmine
- **Databases :** SQL language, PL/SQL, Oracle, MySQL, SQLite
- **Languages :** C, C++, C#, Shell, Delphi, Prolog, Java (Hibernate, JDBC …), Python, UML
- **Methodologies :** Merise, Agile
- **Operating systems :** GNU/Linux distributions (especially Debian), Windows
- **Assembly languages :** Z80, 68HC11, et 8086

MISCELLANEOUS

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