

Philippe Dumont

INRIA Saclay, Bâtiment N, 4 rue Jacques Monod, 91893 Orsay, FRANCE

WWW : <http://pro.dumontweb.com/pages/>

Email : philippe.dumont@inria.fr

Tel : 00 33 6 69 16 15 47

Date of birth : 9th of January, 1978 (32 years old)

Nationality : French, Marital status : Single, Driving licence

RESEARCH ENGINEER / TEACHING ASSISTANT

Parallel and system programming

EXPERIENCE

- 2009-2010 **Teaching assistant** at école Polytechnique - Paris Tech
Operating system : introduction (2 × 18h) and advanced (18h)
- 2008-2010 **PostDoc** INRIA Saclay (Albert Cohen - Alchemy Team)
Topic : programmation, compilation, execution of streaming applications : implementation
Keywords : runtime library, scalability and portability of performance
- 2006-2008 **PostDoc** NXP (Philips semi-conductors)
Topic : programmation, compilation, execution of streaming applications : theoretical part
Keywords : synchronous languages, dataflow model, streaming applications
- 2006
6 months **Research engineer** in the ICARE project at the University of Lille
– System administration, shell programming, Oracle database
- 2003-2005 **Ater (teaching and research assistant)** at the University of Lille 1
Teaching (2 × 96h) :
– Linux administration, C and shell programming, operating system development
– Supervision of 15 projects in Master (*network programming, web, 3D, ...*)

ACADEMIC BACKGROUND

- 2005 **PhD in Computer Science**, University of Lille - INRIA
Topic : Multidimensional specification for systematic signal processing
Keywords : dataflow, code transformation, multidimensional dependencies, loop fusions.
- 2001 **Master in Computer Science**, University of Bordeaux I (LaBRI)
- 1999 **Bachelor in Computer Science**, University of Limoges
- 1996 **French Baccalauréat** (Equivalent A levels - Major in science)

RESEARCHES

POSTDOC

PostDoc of 4 years at NXP (Philips semi-conductors) and INRIA

Supervisors : [Albert Cohen](#) (INRIA) and Marc Duranton (NXP)

Objectives : To ease the programmation, the compilation and the optimization of stream-based applications

European projects : ACOTES, TERAFLUX and Marie-Curie action PSYCHES

Theoretical part

Design of a « tag » based model of computation
Taking advantages of the synchronous approach and of the dataflow model
Intended to stream-based multimedia applications

Implementation	<ul style="list-style-type: none"> Creation of an intermediate representation for compilers Usable by advanced programmers Able to express data, task and pipeline parallelism Providing portability of performance thanks to a runtime library
-----------------------	---

PHD THESIS

Multidimensional specification for systematic signal processing.

Thesis performed at the LIFL in the INRIA DART team under the supervision of Prof. [Pierre Boulet](#).
 Defended on the 15th of December 2005 with high honours.

Motivation	<ul style="list-style-type: none"> Array-OL : a model of computation to express multidimensional dependencies Concrete use in industry (Thales)
Theory	<ul style="list-style-type: none"> Survey of many model of computations A loop nest vision of Array-OL applications Optimization to improve data parallelism and pipeline execution
Developments	<ul style="list-style-type: none"> Modelisation : 3D tool to specify and visualize data dependencies. Optimization : A transformation engine to optimize applications. Simulation : A Ptolemy II plugin to simulate Array-OL applications.

Publications list available on my [website](#).

TECHNICAL SKILLS

Procedural Languages	<ul style="list-style-type: none"> Pascal, Ada, C <i>C : used daily and taught to Bachelor's students for 2 years.</i>
Object Oriented Languages	<ul style="list-style-type: none"> Objective C, C++, Java <i>Java : several developments during my thesis.</i>
Parallel programming	<ul style="list-style-type: none"> Pthread, MPI, OpenMP <i>Pthread : used daily and taught many times.</i>
Others languages and API	<ul style="list-style-type: none"> Shell, Ruby, OpenGL, UML, GTK <i>Shell : used daily and taught to Bachelor's students.</i>
Web Developments	<ul style="list-style-type: none"> (X)HTML, PHP, SQL, Javascript/ECMAScript, CSS, DOM <i>Design and implementation of PhpGathering : a website dedicated to picture publications.</i>
OS	<ul style="list-style-type: none"> Unix/BSD, Linux, Android, Microsoft from Dos to Windows 7 <i>Linux : teaching of system administration and operating system to Master's students.</i>
Tools	<ul style="list-style-type: none"> L^AT_EX, emacs, Eclipse

MISCELLANEOUS INFORMATIONS

LANGUAGES

French	Mother tongue
English	Fluent
German	Basics

ACTIVITIES

Baking	<ul style="list-style-type: none"> Like to cook : cakes, pies, creams and other sweet things Several recipes are available on my website
Photography and travelling	<ul style="list-style-type: none"> Enjoy to travel abroad and to make pictures during the trip