

Thomas Preud'homme

PhD on multicore programming & compiler engineer

Think twice, code once.

Expertise Compilers, Managed Runtime Environments, Kernel development, Embedded systems, Debian packaging

Experience

- 2014–present **Senior compiler engineer**, ARM, Shanghai & Cambridge.
Ongoing development of GCC: optimizations, architecture enablement, bug fixes
- 2012–2013 **Research engineer**, LIP6, Paris.
Parallelization of a round-off error propagation detection library
- 2008–2013 **PhD researcher**, LIP6, Paris.
Optimization of inter-core communication for pipeline parallelism:
○ BatchQueue: a fast and memory-thrifty core-to-core communication algorithm;
○ Integration of BatchQueue in OpenMP stream-computing extension;
- 2008–2013 **Teaching assistant**, UPMC, Paris.
○ POSIX and C (processes, signals, shared memory, semaphores, pipes);
○ multitasking with shell and CGI scripts
○ recursive programming in Scheme
○ remoting (RPC, RMI, Corba)
○ web (HTML, CSS, SQL, PHP)
- 2008–2008 **Research engineer**, LIP6, Paris.
Creation of a coarse-grain, conservative garbage collector in the Linux kernel using hardware assistance to only browse newly modified objects
- 2007–2007 **Software engineer**, LIP6, Paris.
Development of a threading library providing preemptible user-level threads for multi-core systems

Education

- 2008–2013 **PhD**, UPMC, Paris.
Multi-core programming
- 2006–2008 **Master**, UPMC, Paris, *Magna cum laude*.
Distributed systems
- 2003–2006 **Bachelor**, Université René Descartes, Paris, *Magna cum laude*.
Computational and applied mathematics

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Computer skills

Programming	C, C++, Java, Caml, sh, x86 and ARM assembly, Scheme, Python
OS	GNU/Linux, Microsoft Windows, Mac OS X, *BSD
Network	SMTP, HTTP, UDP, TCP, IPv4, IPv6, ...
Web	PHP, HTML, CSS, SQL, JS
VCS	Git, Hg, SVN, CVS
Others	Debian packaging

Languages

French	Mother tongue	<i>Daily use</i>
English	Fluent	<i>Daily use</i>
Spanish	Intermediate	<i>7 years studying</i>
Chinese	Intermediate	<i>1 year studying + 2 years in China</i>

Community involvement

Packaging	Debian Developer	http://qa.debian.org/developer.php?login=robotux%40debian.org
Development	TinyCC	http://savannah.nongnu.org/projects/tinycc/
	Pstack	http://code.lm7.fr/p/pstack/
Miscellaneous	Blood donation	

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