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26 years old, Driving licence

Victor Allombert

Education

2017 **Phd in Computer Sciences from Université Paris Est (UPEC).**
Functional abstraction for programming Multi-level architectures: Formalisation and implementation

2013 **Master Degree in Computer Sciences**, *VIP*, with honours, in Orléans.
Visualisation **I**magerie **P**erformance: Parallel programming, GPU programming, visualization, graphical programming, image processing, security

2012 **Master Degree (1^{st} year) in Computer Sciences**, *IRAD*, with honours, in Orléans.
Informatique **R**épartition **A**ide à la **D**écision: Parallel programming, algorithmic, formal languages, compilation, graph theory, logic, artificial intelligence, security, networks

2011 **Bachelor Degree in Computer Sciences**, *STIC*, in Orléans.
Sciences et **T**echnologies de l'**I**nformation et des **C**ommunications

2010 **Higher Nationnal Certificate in 2 year**, in Orléans.

Research

2017 **Phd in Computer Sciences from Université Paris Est (UPEC).**
Functional abstraction for programming Multi-level architectures: Formalisation and implementation.
Phd. defense on 7 July 2017.
Referees :
Kevin HAMMOND, University of Saint Andrews, United-Kingdom
Christoph KESSLER, Linköping University, Sweden
Examiners :
Catherine DUBOIS, ENSIIE, France
Julia LAWALL, INRIA, France
Daniele VARACCA, Université Paris-Est Créteil, France
Advisor : Frédéric GAVA
Co-Advisor : Julien TESSON

2013 **Research Internship**, *6 months*, **B**ureau de **R**echerches **G**éologiques et **M**inières (*French Geological survey*).
- High performance matrix decomposition
- High performance Kriging on GPU using Out-of-Core algorithm

2012 **Internship**, *4 months*, **L**aboratoire d'**I**nformatique **F**ondamentale d'**O**rléans (*reseach laboratory*).
- Development and optimization of CPU/GPU algorithms
- Optimization of massively parralel matrix multiplication algorithm on CPU/GPU
- Optimization and parallelization of an astrophysical simulation :

2012 **Study of research related work**, *4 months*, during Master Degree, Orléans.
- Developing of multi-cores algorithm on GPU (CUDA)
- Developing a massively parallel stencil algorithm on CPU/GPU
- Developing a stencil algorithm apply to fluid dynamics

Publications

Journal

[J-1] Victor ALLOMBERT, Frédéric GAVA, and Julien TESSON. "Multi-ML: Programming Multi-BSP Algorithms in ML". in : *International Journal of Parallel Programming* (2016), p. 20. URL : `https://hal.archives-ouvertes.fr/hal-01160164`. Version étendue de [W-1]

International Conferences

[C-1] Victor ALLOMBERT, David MICHEA, Fabrice DUPROS, Christian BELLIER, Bernard BOURGINE, Hideo AOCHI, and Sylvain JUBERTIE. "An Out-of-Core GPU Approach for Accelerating Geostatistical Interpolation". In : *Procedia Computer*

Science. 2014 International Conference on Computational Science 29 (2014), pp. 888–896. ISSN : 1877-0509. DOI : 10.1016/j.procs.2014.05.080

International Workshops

[W-1] Victor ALLOMBERT, Frédéric GAVA, and Julien TESSON. "Multi-ML: Programming Multi-BSP Algorithms in ML". in : *8th International Symposium on High-Level Parallel Programming and Applications (HLPP 2015)*. Pisa, Italy, July 2015. DOI : https://doi.org/10.1007/s10766-016-0417-6

Thesis

[M-1] Victor ALLOMBERT. "Functional Abstraction for Programming Multi-Level Architectures: Formalisation and Implementation". PhD thesis. Créteil, France : Université Paris-Est, July 2017

[M-2] Victor ALLOMBERT. "Étude et Mise En Œuvre de l'inversion Haute Performance de Grosses Matrices". Master's thesis. Université d'Orléans, Sept. 2013

Teaching

2017-2018 **Temporary Assistant Professor**, *Orléans University*, 192h.
Advanced visualisation (M2), information systems (M1), high performance programming (Doct.), multitier architecture (L3), algorithmic and programming (L1), system architecture and shell (L1), *etc.*

2016-2017 **Temporary Assistant Professor**, *Orléans University*, 192h.
Advanced visualisation (M2), internship follow up (M2), replicated systems (M1), algorithmic and programming (L1), system architecture and shell (L1), application design and development (L1), *etc.*

2013-2016 **Teaching Assistant**, *Paris-Est-Créteil University*, 3 × 64h.
Data bases (L3), computer architectures (L2), functional programming (L2), C programming (L2), operating systems (L2), algorithmic (L1), programming (L1), *etc.*

Work Experience

2011 **Bachelor degree's internship**, *3 months*, *Conception Etude Programme Informatique*, Tours.
- Developing a distributed data management application
- Deploying a cross-platform architecture

2010 **HNC internship**, *3 months*.
- Developing an automated network management application
- Analysis of a data centralising tool

2012 **Programming and Algorithm tutor**, *University of Orléans*.
Bachelor Degree in Computer Sciences

2010–2012 **Private math lessons**.
Bachelor Degree

Skills

Research interests: Parallel programming, HPC, programming languages, type systems, semantics

Languages : **OCaml, C, C++**, *Prolog, Java, ADA, ASM, HTML, CSS, PHP, SQL, PL/SQL*.

Languages

English : **Certificat de Compétences en Langues de l'Enseignement Supérieur, B2**.
Equivalent to TOEIC 785 pts.

German : **School level, A1**.

Hobbies

Triathlon : Swimming, cycling and running (BF5 club coach)

Tennis : Individual and team championship

Piano : During 5 years