13 Bent Street
HD4 6NT Huddersfield, UK
+44 (0)7483223136
simon@vernhes.eu
www.vernhes.eu
simonvernhes
27 years old

Simon Vernhes

Research Assistant in Intelligent Robotics

Work experience

2015 - present **Research Assistant in Intelligent Robotics**, *University of Huddesrfield*.

2011 - 2014 **Ph.D. thesis**, *Onera Toulouse*,
Landmark-based planning problems decomposition
Development of a planner for autonomous system. This planner computes action sequences yielding to the expected goal using a combination of forward state space search and a higher level landmark-based search.

Feb. - July 2011 **Internship**, *Onera Toulouse*,
Comparative study of genetic algorithms and integer linear programs for ground movements optimization in airports.

June - August 2010 **Internship**, *LAAS, CNRS research unit*,
Development of a labeled Hamiltonian cycle solver using local branching and branch-and-cut methods, and CPLEX as a linear program solver.

July 2009 **Internship**, *SIA 12, software engineering company*,
Design and development of a management software under WinDev.

Education

2011 - 2014 **Ph.D. thesis**, *Onera Toulouse*.

2010 - 2011 **Research M.Sc specialized in Artificial Intelligence**, *Université Paul Sabatier*.

2008 - 2011 **Master's degree in Computer Engineering**, *INSA Toulouse*.

Jan. - June 2010 **Study abroad**, *Linköping's university (Sweden)*.

2006 - 2008 **Intensive studies in mathematics and physics**, *Polytech'Nice-Sophia*.

Skills

Languages Java, C++, Ada, C, Python, PHP, xHTML, CSS, JavaScript, Bash

Databases SQL, HyperFile, XQuery

OS GNU/Linux, Xen, Windows

French Mother tongue

English Fluent (895/990 at TOEIC - 2009)

Others Deutsch, Chinese, Swedish: beginner

Personal Interest

2014 Yanta - Development of an interactive notebook taking web-application (with an internal command shell)

2010 TacOS - Development of an operating system for x86 based computers

2009 Tutor of a first year student group at INSA de Toulouse

2004 - 2006 President of a computer science club

Contest France-IOI training (2006), Prologin finalist (2006), Cod'INSA finalist (2009)

Sports Squash, Climbing, Volleyball

References

Onera Vincent Vidal, research scientist - Ph.D. thesis supervisor
☎ +33 (0)5 62 25 27 74 ✉ Vincent.Vidal@onera.fr

Onera Guillaume Infantes, research scientist - Ph.D. thesis supervisor
☎ +33 (0)5 62 25 29 27 ✉ Guillaume.Infantes@onera.fr

LAAS Nicolas Jozefowiez, associate professor - internship supervisor
☎ +33 (0)5 61 33 69 08 ✉ nicolas.jozefowiez@laas.fr

Publications

Décomposition des problèmes de planification de tâches basée sur les landmarks

Simon Vernhes. "Décomposition des problèmes de planification de tâches basée sur les landmarks". PhD thesis. Université de Toulouse, 2014.

Segmentation de problèmes de planification de tâches à l'aide de landmarks

Simon Vernhes. "Segmentation de problèmes de planification de tâches à l'aide de landmarks". `http://vernhes.eu/bib/pdf/memoire_mithese.pdf`. Mid-term doctoral thesis — under the supervision of Guillaume Infantes, Gérard Verfaillie and Vincent Vidal.

Problem Splitting using Heuristic Search in Landmark Orderings

Simon Vernhes, Guillaume Infantes, and Vincent Vidal. "Problem Splitting using Heuristic Search in Landmark Orderings". In: *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI-2013)*. Beijing, China: AAAI Press, Aug. 2013.

Landmark-based Meta Best-First Search Algorithm

Simon Vernhes, Guillaume Infantes, and Vincent Vidal. *Landmark-based Meta Best-First Search Algorithm*. Presentation in the Congrès des doctorants EDSYS 2013. Best paper award. May 2013.

Landmark-based Meta Best-First Search Algorithm: First Parallelization Attempt and Evaluation

Simon Vernhes, Guillaume Infantes, and Vincent Vidal. "Landmark-based Meta Best-First Search Algorithm: First Parallelization Attempt and Evaluation". In: *Proceedings of the 5th ICAPS Workshop on Heuristics and Search for Domain-independent Planning (HSDIP-2013)*. Rome, Italy, June 2013, pp. 44–52.

The Landmark-based Meta Best-First Search Algorithm for Classical Planning

Simon Vernhes, Guillaume Infantes, and Vincent Vidal. "The Landmark-based Meta Best-First Search Algorithm for Classical Planning". In: *Proceedings of the 5th European Starting AI Researcher Symposium (STAIRS-2012)*. Vol. 241. Frontiers in Artificial Intelligence and Applications. Montpellier, France: IOS Press, Aug. 2012, pp. 336–347.

Parallel AI Planning on the SCC

Vincent Vidal, Simon Vernhes, and Guillaume Infantes. "Parallel AI Planning on the SCC". In: *Proceedings of the 4th Symposium of the Many-core Applications Research Community (MARC-2011)*. Best paper award. Potsdam, Germany: Hasso-Plattner-Institute Press, Dec. 2011, pp. 15–20.