# Henrick Deschamps

*Ph.D. student in Software architecture for simulation at Airbus*

## Key skills

***Programming*** C, C++, Haskell, Python, Bash, Java, Kotlin, Golang…

***Software design*** UML, SysML, AADL, static code analysis, code instrumentation

***Office softwares*** Word processor, spreadsheet, database, scientific writing, LaTeX

***Devops*** Versionning, virtualizing, containers, test automation

## Working experiences

***march 2016→ march 2019*** **Software Engineer, Ph. D. Candidate**, *Airbus, Aircraft simulation department*, Toulouse.
Implementation of a simulation scheduling formalism. Development of an allocation tool compatible with many simulators, and creation of a simulation framework based on HLA, implementation of data probes interface with Qt. Implementation and analysis of the results on industrial aircraft simulation.
*Architecture design, distributed systems, heuristics, C, C++, Qt5, CMake, python, SysML, HLA, git*

***december 2014→ february 2016*** **Software Engineer**, *Viveris Technologies*, Toulouse.
Confidential project in satellite communications ground segment for Thales Alenia Space.
*DVB-RCS2, C, kernel space, skb, UDP/IP, CMake, jenkins, libnl, python, wireshark, git*

***february 2014 →august 2014*** **Final year project**, *Airbus Group Innovations*, Toulouse.
Modelling and simulation of an Ethernet avionic communication network for QoS rules validation.
*C++, OMNest, python with dpkg, matplotlib, xlsxwritter and xmlTree*

***june 2013→ august 2013*** **4th year internship**, *LAAS CNRS*, Toulouse.
M2M energy efficient communication. Software defined radios for wireless sensors network, with consideration for home automation and avionics applications.
*C++, GNURadio, UDP/IP, python, whireshark, svn, ARM assembly, VHDL*

## Academic background

*(expected) **2019*** **Ph.D. in Networks, Telecoms, Systems and Architecture**, *Department of Complex Systems Engineering, ISAE-Supaéro*, Toulouse.
Ph.D. thesis entitled “Scheduling of a cyber-physical system simulation”, supervised by Pierre Siron and Janette Cardoso. Co-supervised with Airbus through a CIFRE.

***2014*** **Engineering Degree in Computer Science and Communication Networks**, *INSA*, Toulouse.
Major Communicative Distributed Systems, minor IT Security.

## Publications

***october 2018*** **Implementation of a Cyber-Physical System simulation components allocation tool**, *32nd European Simulation and Modelling Conf. - ESM'2018*, Ghent, Belgium.

***january 2018*** **Coincidence Problem in CPS Simulations : the R-ROSACE Case Study**, *Proceedings of the 9th European Congress Embedded Real Time Software and Systems ERTS² 2018*, Toulouse.

***november 2017*** **Distributing Cyber-Physical Systems Simulation : The Satellite Constellation Case**, *5th Federated and Fractionated Satellite Systems Workshop*, Toulouse.

***october 2017*** **Toward a formalism to study the scheduling of cyber-physical systems simulations**, *2017 IEEE/ACM 21st International Symposium on Distributed Simulation and Real Time Applications (DS-RT)*, Rome, Italy.

## Languages

***French*** Mother tongue

***English*** Fluent

***Chinese*** Elementary

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