Laurent Christophe

Research Software Engineer

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I hold a Ph.D. in Computer Science and I'm currently working as a Research Software Engineer at Sirris. My expertise includes: program analysis, language implementation, functional programming, and, more recently, generative AI.

After graduating in Civil Engineering from the Université Libre de Bruxelles (ULB) in 2012 with great distinction, I spent eight years conducting research at the Software Languages Lab (SOFT) of the Vrije Universiteit Brussel (VUB), focusing on dynamic program analysis. I have a strong publication record, with papers presented at established conferences such as ICSME, SANER, and GIPCE. With over 60 published npm packages and more than 650,000 total downloads, I have a proven track record of building open-source prototypes that are widely adopted and extended by others. My flagship project, Aran (a full-fledged JavaScript code instrumenter) has supported multiple publications, two Ph.D. theses, several industrial collaborations, and numerous bachelor's and master's theses.

Between 2020 and 2025, I have worked as a consultant for the Vrije Universiteit Brussel (VUB). For most of this time, I contributed to AppMap, a U.S.-based startup focused on runtime code analysis. There, I led the development of a JavaScript client for collecting large volumes of execution data, with seamless integration across server-side, client-side, and automated testing environments. I also contributed to several web- and mobile-based projects, including the development of the prototype for EasyWanit, a mobile application tasked with controlling a boiler via a custom Bluetooth protocol. Over five years of industry consulting, I have developed strong software engineering skills, including agile methodologies, Git-based workflows, release pipelines, and continuous integration practices.

Since July 2025, I have been working as a Research Software Engineer at Sirris. In parallel, I continued my Ph.D. on provenance-aware dynamic analysis of JavaScript, which I successfully defended in January 2026. At Sirris, I am currently leading three research projects: LISA, which focuses on the risk and reliability of generative AI; GENIUS, which aims to leverage generative AI during all phases of software development; and Antenna, which helps companies utilize AI Factories. I am also involved in several commercial projects. For instance, I had the opportunity to develop a multilingual conversational interface with custom intent detection and vector-based RAG. I also had the opportunity to develop a hierarchical MLP classifier, which achieved a 98% F1 score albeit with a 30% rate of inconclusive flagging.