

Guillaume Martres

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🎂 Birthdate: 19/05/1993

🇫🇷🇹🇳 Nationalities: French and Tunisian

Education

- 2016–2022 **Ph.D. in Computer Science**, *EPFL*, Lausanne, Switzerland
The subject of my PhD thesis was:
Type-Preserving Compilation of Class-Based Languages.
- 2013–2015 **Master in Computer Science**, *EPFL*, Lausanne, Switzerland
The subject of my Master thesis was:
Implementing [value classes](#) in Dotty, a compiler for Scala.
- 2010–2013 **Bachelor in Computer Science**, *EPFL*, Lausanne, Switzerland

Employment History

- 09/2023–Present **Staff Software Engineer**, *Arteris*, *EPFL*, Lausanne, Switzerland
R&D projects involving Domain Specific Language design and development for hardware construction in Scala, plus contributions to the development of the Scala language itself.
- 10/2022–09/2023 **Compiler Engineer**, *Scala Center*, *EPFL*, Lausanne, Switzerland
Scala language design and compiler implementation work.
- 09/2016–08/2022 **Doctoral Assistant**, *LAMP*, *EPFL*, Lausanne, Switzerland
I worked on the language design and compiler implementation of [Scala 3](#) as a core developer.
- 06/2016–08/2016 **Research Intern**, *Mozilla*, Mountain View, California
I participated in the development of the [AV1](#) video codec, notably by integrating features from [Daala](#).
- 10/2015–05/2016 **Compiler Engineer**, *LAMP*, *EPFL*, Lausanne, Switzerland
I worked on the Dotty research compiler that eventually became Scala 3.
- 07/2014–09/2014 **Software Engineering Contractor**, *Mozilla*, Remote
I worked on the research [Daala](#) video codec.
- 07/2013–10/2013 **Software Engineering Intern**, *Google*, Mountain View, California
I worked on the reference encoder for the [VP9](#) video codec.
- 05/2012–08/2012 **Student Developer**, *Google*
I took part in the [Google Summer of Code](#) by writing an [HEVC](#) decoder for [Libav](#) (this decoder was subsequently completed with the help of many contributors and also merged in [FFmpeg](#)).
- 07/2011–10/2011 **Student Developer**, *European Space Agency*
I participated in the [Summer of Code in Space](#) organized by the European Space Agency and contributed to the [Marble](#) virtual globe and atlas by adding support for satellites display.

Notable Open Source contributions (see also Github)

- Scala Besides my work on the compiler, I'm also a member of the [Scala Improvement Process](#) committee where we review and vote on proposed changes to the language.
- [rav1e](#) Improving encoding quality via better [Rate-Distortion Optimization](#).
- FFmpeg Initial version of the [HEVC](#) decoder.
- KDE I maintained the [Gluon game engine](#) audio subsystem, ported the [Kvkbd virtual keyboard](#) from KDE 3 to KDE 4, contributed to several projects including the [Muon package manager](#).
- Kubuntu I did [packaging](#) work.