

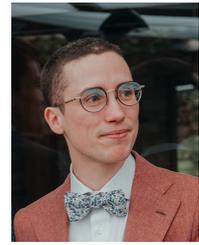
# Orégane Desrentes

## Curriculum Vitae

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25/02/1999



### Employer

- 2022-2025 **PhD Thesis**, CIFRE contract with Kalray.  
(20/09/2022-19/09/2025)
- 2018-2022 **Normalien Élève at ENS Lyon**, Public servant (fonctionnaire stagiaire), ranked 45th at the competitive examination.  
(1/09/2018-31/08/2022)

### Research Experience

- 2022-2025 **Kalray and EMERAUDE team, CITI, INSA Lyon**, *PhD supervised by Florent de Dinechin and Benoît Dupont de Dinechin*, Hardware Arithmetic : fused operators and their applications.
- 2021-2022 **EMERAUDE team, CITI, INSA Lyon**, *6 months internship supervised by Florent de Dinechin*, Master Thesis : Optimisation of Approximation and Evaluation of Elementary Functions in Hardware.
- 2021-2022 **Kalray**, *6 months internship supervised by Benoît Dupont de Dinechin*, Verification of Floating-Point operators.
- 2019-2020 **AVALON team, LIP, ENS Lyon**, *3 months internship supervised by Alain Tchana*, Hardware features for virtualization : Page Modification Logging and extensions, with SIMICS and Rocket Chip.
- 2018-2019 **SOCRATE team, CITI, INSA Lyon**, *6 weeks internship supervised by Florent de Dinechin*, Posit conversions, addition and exponential on FloPoCo.

### Education

- 2018-2022 **ENS Lyon diploma**, ENS Lyon.
- 2020-2022 **Communication System Master, Computer engineering minor**, *Double diploma with ENS Lyon*, EPFL, Lausanne, Obtained with 5.41 (Swiss), equivalent 17.6/20.
- 2019-2022 **Computer Science Masters**, ENS Lyon.
- 2018-2019 **Bachelor in Computer Science**, ENS Lyon, Obtained with 15.32/20.
- 2018-2019 **Bachelor in Mathematics**, Université Claude Bernard, Lyon, Obtained with 12.8/20.
- 2016-2018 **MPSI-MP\***, *Maths and Physics with Computer Science Option*, Lycée Thiers, Marseille.
- 2016 **Scientific baccalauréat**, Lycée Fourcade, Gardanne, Obtained with Honours.

### Teaching Positions

- 2024-2025 **TA for a Circuit Architecture and Computer Architecture course**, *L3 level, 28h*, INSA Lyon.
- 2022-2023 **TA for a Compilation Project**, *M1 level, 32h (x2)*, INSA Lyon.
- 2023-2024

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## Patents

- 2024 *Multiplieur d'opérandes à virgule flottante utilisant une décomposition des opérandes en nombres à virgule flottante de plus basse précision*, Orégane Desrentes, Benoît Dupont de Dinechin
- 2023 *Additionneur de multiples opérandes à virgule flottante avec arrondi correct*, Orégane Desrentes, Benoît Dupont de Dinechin

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## Publications

Orégane Desrentes, Benoît Dupont de Dinechin, and Florent de Dinechin. Double-Word Decomposition in a Combined FP16, BF16 and FP32 Dot Product Add Operator. In *32th Symposium on Computer Arithmetic (ARITH)*, page 8. IEEE, 2025. [hal-04982397v1](#).

Tom Hubrecht, Orégane Desrentes, and Florent de Dinechin. Activations in Low Precision with High Accuracy. page 8. HAL, 2024. [hal-04776745](#).

Orégane Desrentes, Benoît Dupont de Dinechin, and Florent de Dinechin. Exact Fused Dot Product Add Operators. In *30th Symposium on Computer Arithmetic (ARITH)*, pages 151–158. IEEE, 2023. [hal-04240762](#).

Orégane Desrentes, Benoît Dupont de Dinechin, and Julien Le Maire. Exact Dot Product Accumulate Operators for 8-bit Floating-Point Deep Learning. In *26th EUROMICRO Conference on Digital System Design (DSD)*, pages 642–649. IEEE, 2023. [hal-04240816v1](#).

Benoît Dupont de Dinechin, Julien Hascoët, and Orégane Desrentes. In-Place Multi-Core SIMD FFTs. In *2023 IEEE High Performance Extreme Computing Conference (HPEC)*, pages 1–6. IEEE, 2023. [hal-04240798](#).

Orégane Desrentes and Florent de Dinechin. Using integer linear programming for correctly rounded multipartite architectures. In *2022 International Conference on Field-Programmable Technology (ICFPT)*, pages 1–8. IEEE, 2022. [hal-03844218](#).

Orégane Desrentes, Diana Resmerita, and Benoît Dupont de Dinechin. A Posit8 decompression operator for deep neural network inference. In *Conference on Next Generation Arithmetic (CoNGA)*, pages 14–30. Springer, 2022. [hal-04240741](#).

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## Languages

French	Native	
English	Fluent	<i>C2 certified by the Cambridge Advanced Exam, Reference Number : 191FR0065048</i>
Italian	Fluent	
German	Intermediate	<i>B1 certified by the Deutsches Sprachdiplom I</i>

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## Interests

I like music and I played in ENS's band [La Fanfarovis](#) for 3 years. I now play in the university's orchestra [Amosud](#). I was in the editing team for the ENS's newspaper [La Tartine](#) for two years.