

# Tristan Stérin

Phd. Student in Molecular Programming

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📄 <https://dna.hamilton.ie/tsterin/>  
<https://github.com/tcosmo>

## Research Interests

My current research lies at the intersection of DNA Computing and the study of Models of Computation. This research is best embodied by the following question: « How to use the interaction between DNA strands in order to implement some models of computation ? »

In the past, my research has focused on Machine Learning, in particular the fields of Computer Vision, Music Generation and Finance.

## Publications

- 2019 **Collatz Predecessor Sets Partition into Regular Languages**, *T. Stérin*, [preprint](#).
- 2017 **Study of 6-bit Iterated Boolean Circuits**, *T. Stérin, D. Woods*, [poster](#), [writeup](#), DNA 23, Austin TX, U.S.A, September 24-28, 2017. **Best Poster Award**.
- RNNs: An Intrinsic Difference Between Vanilla And GRU Models.**, *T. Stérin, N. Farrugia, V. Gripon*, [paper](#), COGNITIVE@IARIA, Athens, Greece, February 19-23, 2017..

## Education

- 2018–now **Phd. in Computer Science**, *Maynooth University*, Ireland.  
Supervised by Prof. **Damien Woods**.
- 2017–2018 **Master 2 (M.Sc.)**, *École Normale Supérieure Paris-Saclay*, Paris, Highest Honors.  
**Mathematics, Computer Vision and Machine Learning.**  
*Master 'MVA'. This programme is considered the best machine learning master nationwide.*
- 2016–2017 **Master 1 (M.Sc.)**, *École Normale Supérieure de Lyon*, Lyon, Highest Honors.  
**Fundamental Computer Sciences.**  
*Vast range of fundamental topics: from Logic and Lambda-Calculus to Information Theory.*
- 2015–2016 **Bachelor (B.Sc.)**, *École Normale Supérieure de Lyon*, Lyon, Highest Honors.  
**Fundamental Computer Sciences.**  
*Fundamental and applied topics: from Networks to Formal Semantics.*  
*I prepared the selective exam for École Normale Supérieure de Lyon at Lycée Henri IV (Paris).*

## Work Experience

- 2018 **J.P. Morgan**, *Quant Intern*, London, ML applied to Automatic Market Making.
- 2017 **A7 Interactive**, *Research Intern*, Monaco, Fashion object retrieval from deep neural features.
- 2016 **IMT Atlantique**, *Research Intern*, Brest, RNNs, memory and music.

## Skills

- Topics Algebra, Analysis, Probabilities, Statistics, Machine Learning. Computer Vision. Molecular Programming, Algorithms, Information Theory, Logic.
- Languages French (mother tongue), English (fluent, C1 level, 197 CAE), Italian (good level).
- Code Python, C/C++, Rust, OCaml, Haskell, R, Coq, PHP, SQL, HTML, CSS, JS.
- ML Tools Tensorflow, PyTorch, Theano.