Eliot Tron

Curriculum vitae

✉ *eliot.tron@enac.fr*
`https://halva.ynh.fr/eliot.tron/cv.html`

Scholarship

2018–2022 **École Normale Supérieure**, *Lyon*, Computer Science and Mathematics Departments.

2021 **École Normale Supérieure**, *Lyon*, Master in Mathematics.

2019 **École Normale Supérieure**, *Lyon*, Bachelor's Degree of Theoretical Computer Science.

2019 **UCBL**, *Lyon*, Bachelor's Degree of Mathematics.

2016–2018 **CPGE**, *Lycée Condorcet*, Paris, MPSI-MP*.

2016 **Baccalaureat Série S**, *Lycée Condorcet*, Paris, *mention Très Bien*.

Professional Experiences

October 2022 - End of 2025 **PhD Candidate**, *ENAC, Toulouse*, Neural Network Robustness: a Riemannian Foliation Perspective, supervised by Nicolas Couellan, Rita Fioresi and Stéphane Puechmorel.

01 March 2022 - 30 June 2022 **Research Internship**, *Bologna University, Italy*, Deep Learning: Riemannian and subriemannian structures on the space of models and data manifolds, supervised by Rita Fioresi.
Keywords: Riemannian Geometry, Deep Learning, Information Geometry

Beginning of 2022 **Journal paper**, *Pre-print article following my internship at ENAC*, Title: *E. Tron, S. Puechmorel, and N. Couellan. Canonical foliations of neural networks: application to robustness*. Available at `https://hal-enac.archives-ouvertes.fr/hal-03593479`, 2022..

06 September 2021 - 28 January 2022 **Research Internship**, *ENAC, Toulouse*, Neural Networks input Foliations and Adversarial Attacks, supervised by Nicolas Couellan and Stéphane Puechmorel.
Keywords: Riemannian Geometry, Machine Learning, Adversarial attacks, Information Geometry

29 March 2021 - 18 July 2020 **Research Internship**, *Thales Research & Technology, Palaiseau*, Solving Partial Differential Equations with Equivariant Neural Network, supervised by Pierre-Yves Lagrave.
Keywords: Differential Geometry, Convolutional Neural Network, Equivariance, Information Geometry

20 April 2020 - 17 July 2020 **Research Internship**, *NII in Tokyo (remote)*, Machine Learning and Information Geometry: a link with Topological Data Analysis, supervised by Mahito Sugiyama.
Keywords: Information Geometry, Topological Data Analysis, Sufficient Statistic, Machine Learning

6 June 2019 – 13 July 2019 **Research Internship**, *DANTE team, IXXI, LIP, ENS de Lyon*, Featured network embedding using GCN Variational Autoencoders, supervised by Márton Karsai and Sébastien Lérique.
Keywords: Machine Learning, Data Science

Teaching

2022-2023 **Measure Theory**, *ENAC, Toulouse*, 17h lecture for L3 students.

Statistics, *ENAC, Toulouse*, 30h lecture for L3 students.

2021-2022 **Measure Theory**, *ENAC, Toulouse*, 17h lecture for L3 students.

Languages

English	C1 level	*Cambridge Advance English (CAE)*
German	A2 level	
Italian	A1 level	

Computer skills

Python	Good level	C/C++	Intermediate level
Bash	Good level	OCaml	Intermediate level
LaTeX	Good level	Coq	Basic level
html/CS	Basic level		

Interests

Music	Drummer, Electronic Music, Sound-engineering
Sport	Climbing, Snowboarding, Biking, Hiking
Other	Cooking, Movies