Stefano SPIGLER, Ph.D.

Resume

BIRTHPLACE	Padova, ITALY
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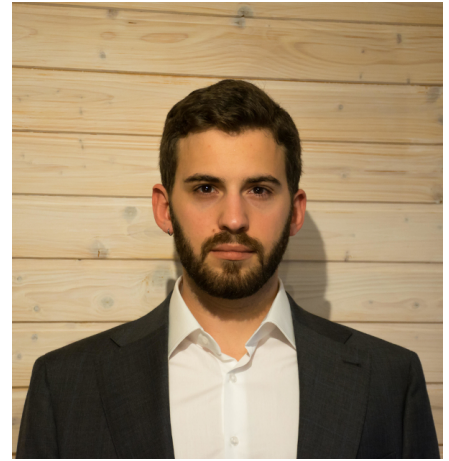
Key Strengths

- I consider myself a versatile person able to adapt to novel situations and to learn new concepts and acquire new skills in a short time. Indeed: I have lived in several countries (learning new languages) and I have been enjoying the challenge of building a life abroad; I can show a track of high-level scientific publications in two different research fields (statistical physics and machine learning).

- I strongly believe that a well-organized synergy is a great way to unlock the full potential of each individual. I am a team player and I am used to interactions with superiors and subordinates.

- My studies and my research prove that I have strong analytical and communication skills. I am used to modeling complex data and extracting information out of it. I have a broad experience in computer programming, data analysis and machine learning. I am proficient in several languages, and I can summarize and explain complex results in an easy-to-understand fashion.

Work Experience

2017–2020 **Postdoc** in **Deep Learning** at **EPFL** in the group of **Prof. Matthieu Wyart**

- During my stay at EPFL I conducted research on deep learning, both studying analytical models and performing numerical simulations.

- Brief summary of the main contributions: 1) The performance of deep neural networks increases with the number of parameters (there is no overfitting). However, averaging the prediction of two large networks is much better than training a network twice as big. 2) Kernel methods can be used efficiently on high-dimensional data, provided that the task depends effectively on a reduced number of variables.

- Besides research duties, the position involved teaching activities at the EPFL, the supervision of master students and public speaking at numerous international venues.

2014–2017 **Ph.D.** in **Physics** at **Université Paris Sud** under the supervision of **Prof. Silvio Franz**

- The research that I carried out for my Ph.D. revolved around the statistical physics of disordered systems, namely granular material and structural glasses.

- When subject to external perturbations, these systems tumble in avalanches, that are characterized by a critical exponent. My main result consisted in deriving this exponent both analytically and via numerical simulations.

EDUCATION

2012–2014	**M.Sc.** in **Physics of Complex Systems**. Joint programme involving: Politecnico di Torino, SISSA, ICTP; Université Pierre et Marie Curie, Université Paris Diderot, Université Paris Sud, ENS de Cachan.
	Ranked 1st among the whole class. Final grade 110/110 *cum laude*.
2009–2012	Italian *Laurea* (**B.Sc.**) in **Physics**, Università degli Studi di Padova, Padua. Final grade 107/110.
2009–2012	**Scuola Galileiana di Studi Superiori** of Padova, Padua.
	This college is affiliated with the University of Padova; students are required to pass all the exams each year with grade above 24/30 and average GPA above 27/30; attendance to additional courses is also required.

HONORS & AWARDS

2013	Scholarship awarded by the **Université Paris Sud**.
2009–2012	Full merit scholarship awarded by **Scuola Galileiana di Studi Superiori**. *Ranked 4th among over 600 candidates*
2009	Award for the results obtained in the National Mathematical Olympiad.

INFORMATICS & PROGRAMMING

- I know a variety of languages and I feel at ease with new challenges.
- I program in Python, especially to design and train neural networks with Pytorch, a popular framework for machine learning. − 4 YEARS
- I perform data analysis using the popular libraries Pandas, NumPy, SciPy. − 4 YEARS
- Data visualization with the business intelligence application Apache Superset. − 1 YEAR
- I have designed several websites using HTML, XML, CSS, PHP (personal projects only). I have basic knowledge of JavaScript (AJAX) and SQL. − 15 YEARS
- I have developed complex programs in C++, including all the code I wrote during my PhD. − 10 YEARS
- During my researched I have published several articles, all redacted in LaTeX. I am also accustomed to the Office suite (Word, Excel). − 10 YEARS
- I have experience working with Ubuntu and Windows operating systems. − 15 YEARS

LANGUAGES & COMMUNICATION

Italian (native language)	American **English** (full command)
French (fluent)	**German** (beginner)

- I write proficiently in Italian, English and French. In English, I have published numerous scientific articles in peer-reviewed journals and I have presented my work at international conferences.

OTHER PERSONAL INFORMATION

Swiss B permit
A and B driving licences
Italian citizenship