Julián M. Del Fiore

PhD, Electronics Engineer

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Argentinian/Italian
Born December 20, 1990

Research experience

2017 - 2021   **Researcher**, Network Research Team, ICube Laboratory, Strasbourg, France,
Worked in the area of **Core Networks** over 3 years and 5 months under the supervision of Cristel Pelsser and Pascal Merindol. Focus on Internet measurements and the development of methodologies to detect abnormal routing behaviours. Analysis of BGP and traceroute datasets gathered either using measurement platforms or publicly available.

2019   **Research Intern**, Telefónica I+D, Barcelona, Spain,
Internship of 3 months in the area of **Mobile Networks** under the supervision of Andra Lutu. The objective was to to assess network neutrality by exploring datasets gathered in IP Exchange Points.

2017   **Research Intern**, IMT Atlantique, Rennes, France,
Internship of 6 months in the area of **Wireless Networks** under the supervision of Georgios Z. Papadopoulos and Nicolas Montavont. The objective was to orchestrate the scheduling in 6TiSCH networks to achieve a high packet delivery ratio while minimizing the jitter, i.e., the delay's variance.

Teaching experience

2018 - 2020   **Assistant Teacher**, Télécom Physique Strasbourg, University of Strasbourg, France,
In-person and online lessons held in French/English in the "TCP/IP Computer Networking" and "Algorithms and Programming in C" master-courses in an Engineering school. Groups of 40 students.

2011 - 2017   **Instructor**, Buenos Aires, Argentina,
During my studies, I worked as a private teacher in a freelance fashion for university, secondary and primary school students on multiple subjects. Groups of up to 5 students.

Education

2017 - 2021   **PhD**, University of Strasbourg, France,
Subject: "Detecting Hidden Broken Pieces of the Internet: BGP lies, Detours and Failed IXPs"
Supervisors: Cristel Pelsser and Pascal Mérindol
Jury: Benoît Donnet, Clémence Magnien and Guillaume Urvoy-Keller.

2010 - 2017   **Electronics Engineer, Diploma of Honor**, University of Buenos Aires, Argentina,
I got my degree with a final Average of 8.73/10 without failing grades, in 3 years less than the average time taken by students. I specialized in communications and signal processing.

2004 - 2009   **English Bilingual Electronics and Electromechanical Technician**, Escuela Philips, Argentina,
I finished as standard bearer, with a final Average of 8.87/10. I also participated and received prices in multiple physics and chemistry competitions across Argentina.

Complementary Education

2020   **Deep Learning Specialization**, 5 courses of deeplearning.ai/Coursera on the foundations of DL, building ANNs such as CNNs, RNNs and LSTM with TensorFlow and Keras, and leading ML projects.

2020   **Introduction to TensorFlow**, taught by Laurence Moroney in deeplearning.ai/Coursera as an introduction of best practices in TensorFlow to build scalable AI-powered algorithms.

2018   **Machine Learning**, course taught by Andrew Ng in Coursera as an introduction to ML, data mining, and statistical pattern recognition. Implementation of algorithms from scratch with MATLAB.

Scholarships

2017 - 2020   **Initiative D'Excellence (IdEX)**, PhD funding provided by the French National Research Agency as part of the "Investments for the future" program.

2016 - 2018   **YPF Foundation**, granted to only 200 students across all Argentina, due to academic excellence.

References

Cristel Pelsser   **Professor**, *ICube Laboratory*, University of Strasbourg, France.
`pelsser@unistra.fr` - **PhD Supervisor**

Pascal Mérindol   **Associate Professor**, *ICube Laboratory*, University of Strasbourg, France.
`merindol@unistra.fr` - **PhD Advisor**

Andra Lutu   **Associate Researcher**, *Telefonica Research*, Madrid/Barcelona, Spain.
`andra.lutu@telefonica.com` - **Internship Supervisor**

Georgios Papadopoulos   **Associate Professor**, *IMT-Atlantique*, Rennes, France.
`georgios.papadopoulos@imt-atlantique.fr` - **Internship Supervisor**

Languages

Spanish - Mother Tongue , **English** - Advanced, **French** - Intermediate

Publications in Journals

2021   **The Art of Detecting Forwarding Detours**, <u>J. M. Del Fiore</u>, P. Mérindol, V. Persico, C. Pelsser, A. Pescape, in IEEE Transactions on Network and Service Management (TNSM) 2021.

2020   **A first look at the Latin American IXPs**, E. Carisimo, <u>J. M. Del Fiore</u>, D. Dujovne, C. Pelsser, I. Alvarez-Hamelin. In Computer Communications Review (CCR) 2020.

2018   **From Best-Effort to Deterministic Packet Delivery for Wireless Industrial IoT Networks**, R. A. Koutsiamanis, G. Z. Papadopoulos, X. Fafoutis, <u>J. M. Del Fiore</u>, P. Thubert, N. Montavont. In IEEE Transactions on Industrial Informatics (TII) 2018.

Publications in Conferences

2019   **"Filtering the Noise to Reveal Inter-Domain Lies"**, <u>J. M. Del Fiore</u>, P. Mérindol, V. Persico, C. Pelsser, A. Pescape. In Network Traffic Measurement and Analysis Conference (TMA) 2019.

2019   **Country-level influence of IXPs in Latin America**, E. Carisimo, <u>J.M. Del Fiore</u>, D. Dujovne, C. Pelsser, I. Alvarez-Hamelin. In LANCOMM 2019.

2017   **"Toward Deterministic Industrial Networks"**, M. Kersalé, G. Z. Papadopoulos, <u>J. M. Del Fiore</u>, P. Thubert, N. Montavont. In AlgoTel-CoRes 2017.

Presentations

2021   **PhD Defense**, Strasbourg, France. I presented the topics I studied during my PhD. The defense was held as a videoconference.

2020   **AIMS-KISMET Caida Workshop**, San Diego, USA. I presented the work related to BGP lies that I published in TMA 2019, putting emphasis on the measurement platform that was required.

2019   **TMA Conference and Poster**, Paris, France. I presented the paper I published in TMA 2019 and an early stage analysis of the work about detecting forwarding detours published later in IEEE TNSM.

2018   **TMA Poster**, Vienna, Austria. I presented a poster showing preliminary results on the BGP lies work that we published one year later on the same conference.

2017   **AlgoTel-Cores Conference**, Quiberon, France. I presented the results I achieved on my internship in a French national conference.

Organized Events

2018   **Cryptocurrency: Blockchain Technology**, I organized a seminar on Blockchain, Bitcoins and other Blockchain applications such as smart contracts.