

CONSTANTIN PHILIPPENKO

Ph.D student in Federated Learning, École Polytechnique, CMAP

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✉ 7 bis Allée Adolphe Dumas - 84000 Avignon

📍 Paris, France



RESEARCH EXPERIENCES

Ph.D. Student in Federated Learning

École Polytechnique, CMAP

📅 Dec 2019 – Ongoing

📍 Paris, France

👤 Under the supervision of Eric Moulines and Aymeric Dieuleveut

- Trade-offs of Federated Learning: Algorithms and Methods for Privacy Preserving Multi-Agent Learning.
- Collaboration with **Accenture Labs** in Sophia-Antipolis.

• Python Pytorch Linux GPU

R&D Internship in Machine Learning

Forecsys

📅 May 2017 – Jul 2017

📍 Moscow, Russia

👤 Under the supervision of Vadim Strijov

- Algorithms for time series recognition based on machine learning.

• Python Scikit-Learn Linux

R&D Internship on polymers

Conservatoire national des arts et Métier

📅 Spring 2015

📍 Paris, France

👤 Under the supervision of Cyrille Sollogoub

Research on the industrial use of polymers.

TEACHING EXPERIENCES

Tutoring in Probability (MAP361)

École Polytechnique

📅 2020

Remedial courses in Mathematics for Middle School

Lycée Stanislas

📅 2018 and 2019 (2x30 hours)

PROFESSIONAL EXPERIENCES

ActivePivot Consultant

Global Market Solution

📅 Feb 2018 – Dec 2019

📍 London (UK) and Paris (France)

Development of informatics tools devoted to extract valuable information from massive volume of financial data.

Consultant at:

- **Société Générale**, Jun 2019 – Nov 2019, Paris.
- **HSBC**, Oct 2018 – Jun 2019, London.
- **ActiveViam**, Feb - Jul 2018, London (Internship).

ActivePivot Java Maven Spark Spring OLAP Cube

WHO I AM ?

I am a Ph.D. student in Federated Learning. I analyse the trade-off of distributed learning with privacy constraints and heterogeneous data. I did on the Telecom-Paris blog a short presentation of Federated Learning that try to give the key concepts. I am curious, open-minded and I am a sport lover.

EDUCATION

Ensimag

Applied Mathematics, 3D Animation.

📅 2015 – 2018

📍 Grenoble, France

French engineering school "Grande École" in computer science and applied mathematics.

Moscow Institut of Pysics and technologies

Machine Learning, Statistiques.

📅 Spring 2017

📍 Moscow, Russia

Lycée Saint-Louis

Mathematics, Physics.

📅 2013 – 2015

📍 Paris, France

Preparatory classes for competitive entrance examinations to French "Grandes Écoles".

ASSOCIATIVE LIFE



Congress of Applied Mathematics

President of the CJC-MA 2021 (Congress of Young Researcher in Applied Mathematics), École Polytechnique, October 2021.



Phantasio - Theater company

President and Founder of a theater's company.



Water-Polo in competition

Nice, Grenoble, Moscou

LANGUAGES

French
English
Russian
German



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PUBLICATIONS

✍ Constantin Philippenko and Aymeric Dieuleveut, Preserved central model for faster bidirectional compression in distributed settings, 2021, *arXiv*: 2102.12528

✍ Constantin Philippenko and Aymeric Dieuleveut, Artemis: tight convergence guarantees for bidirectional compression in Federated Learning, 2020, *arXiv*: 2006.14591

TALK

🎤 Recent advances in machine learning and uncertainty, organizers: Josselin Garnier, CIRM, Marseille (France), June 2021

🎤 Journée des Statistiques de la Société Française de Statistique, Nice (France), June 2021

🎤 Misscausal Team at INRIA, organizer: Julie Josse, Paris (France), November 2020

🎤 SIMPAS Team at CMAP, organizers: Emmanuel Gobet and Erwan Le Pennec, Paris (France), November 2020