George Dasoulas

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EDUCATION

APRIL 2019 - Today	**École polytechnique**, Palaiseau, Paris, France. • PhD candidate in Computer Science, focused on machine learning and graph theory. • Laboratory: Data Science and Mining Team, LIX, 'École polytechnique • Form: CIFRE PhD. Collaboration with Huawei Technologies, France. • Thesis title: *"The expressive power of graph neural networks and its impact on structured representation learning".* • Thesis Supervision: Prof. Michalis Vazirgiannis (DaSciM), Dr. Aladin Virmaux (Huawei Technologies), Dr. Kevin Scaman (INRIA Paris)

OCTOBER 2012 - FEBRUARY 2018	**National Technical University of Athens**, Athens, Greece.
	• BSc & MSc in Electrical and Computer Engineering (5-year joint degree; 300 ECTS)
	  – Order of Entrance: 10th among undergraduate students
	  – Overall GPA: 9.06/10 (Excellent). Top 3% among graduate class
	  – Specialization: Computer Science (Major), Mathematics, Networks (Minor)
	• Thesis: *"Predictive Refueling - Combining machine learning algorithms with optimization calculations for operations planning.".* Grade: 10/10
	• Thesis Supervision: Prof.**Nectarios Koziris** (National Technical University of Athens) and Dr. **Florian Mittag** (TWT GmbH Science & Innovation)

JULY 2012	Nationwide University Entrance Examination score : 19.676/20.000 (top 1% nationwide)
SEPTEMBER 2009-JULY 2012	**Dodonea Ekpaideutiria**, Ioannina, Greece • General secondary education school-leaving certificate: 19.9/20 (1st of the class)

PROFESSIONAL EXPERIENCE

October 2018 - Today	**Huawei Technologies, Paris, France** • Doctoral researcher in artificial intelligence. • Laboratory: Noah's Ark Lab, AI department of Huawei R&D. • Research focus: Representation learning algorithms for static and dynamic graphs. • Project focus: Development of theoretical and practical methods for representation learning on structured data, specialized in telecommunication networks.

June 2017 - January 2018	**NIKI Ltd Digital Engineering**, Ioannina, Greece
	• MSc Thesis research in machine learning for prediction-based optimization.
	• Affiliated with **TWT GmbH Science** & **Innovation**, Stuttgart, Germany.
	• **Project**: *"Predictive Mechanism for optimal refueling strategies"*
	  – Investigation of ML algorithms for time series forecasting.
	  – Recommender system implementation for short-term prediction of fuel price schemes and decision making on optimal refueling.
	  – Application of modern ML frameworks (e.g scikit-learn, Tensorflow)

October 2013 - February 2016	**Software Engineering Laboratory** at NTUA, Greece • Laboratory Assistant in the course **"Computer Programming"** • Tasks: Part-time teaching (twice a week), supporting undergraduate students by answering questions and overseeing the final laboratory examination procedure. • Pertinent Professor: Nikolaos Papaspyrou
September 2014 - January 2017	**Private Tutoring**, Athens, Greece • Tutor for high-school and undergraduate students • Courses: Linear Algebra, Calculus, Electromagnetism, Computer Programming

PUBLICATIONS

- George Dasoulas, Kevin Scaman, Aladin Virmaux. Lipschitz Normalization for Self-Attention Layers with Application to Graph Neural Networks. In *International Conference on Machine Learning* (ICML), 2021.

- George Dasoulas, Johannes Lutzeyer, Michalis Vazirgiannis. Learning Parametrised Graph Shift Operators. In *International Conference on Learning Representations (ICLR)*, 2021.

- George Dasoulas, Giannis Nikolentzos, Kevin Scaman, Aladin Virmaux, Michalis Vazirgiannis. Ego-based Entropy Measures for Structural Representations on Graphs. In *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2021.

- George Dasoulas, Ludovic Dos Santos, Kevin Scaman, Aladin Virmaux. Coloring graph neural networks for node disambiguation. In *International Joint Conference on Artificial Intelligence (IJCAI)*, 2020.

- Giannis Nikolentzos, George Dasoulas, Michalis Vazirgiannis. k-hop Graph Neural Networks. *Neural Networks*, Volume 130, Pages 195-205, October 2020.

- Stratis Limnios, George Dasoulas, Dimitrios M. Thilikos, Michalis Vazirgiannis. Hcore-Init: A graph-based initialization method for neural networks. In *International Conference of Pattern Recognition (ICPR)*, 2020.

HONORS, AWARDS & CERTIFICATES

November 2020	**Eleftheria Barka Scholarship**. Scholarship for graduation excellence and pursuit of doctoral studies for the academic year 2020-2021.
November 2019	**Eleftheria Barka Scholarship**. Scholarship for graduation excellence and pursuit of doctoral studies for the academic year 2019-2020.
December 2015	**Papakyriakopoulos Award**. Award of excellence in **Mathematics** (corresponding subjects in Mathematics).
March 2014	**Silver Medal** in South Eastern **Mathematical** Olympiad for university students (aka. Seemous), Iasi, Romania.
October 2013	Participation in the **IEEExtreme 24-Hour Programming Competition**.
September 2012	"The Great Moment of Education" **award – scholarship** by Eurobank EFG, for achieving the highest rank in national qualifications exams in my school.
May 2010	**Certificate** for the theoretical and practical educational seminar for C.P.R - F.B.A.O - A.E.D knowledge, **Red Cross**, Greece
March 2009	**Bronze Medal** in National **Mathematical** Olympiad for high school students in Athens.

COMPUTER SKILLS

Operating Systems:	Ubuntu, Debian, Unix, Windows, MacOS
Programming Languages:	C, C++, Python, R, Java, SQL, Haskell, OCaml, Prolog, MATLAB, bash, Latex

SOCIETIES & AFFILIATIONS

- IEEE Computer Society, Member, 2013-2014.
- IEEE Transactions on Neural Networks and Learning Systems, Reviewer, 2020-Today.

TEST SCORES

- General GRE: Quantitative Score: 167/170, Verbal Score: 157/170, Essay: 4/6
- TOEFL iBT : 100/120

LANGUAGES

- **Greek** (Native speaker)
- **English** (Excellent - CEF:C2) : Examination for the Certificate of Proficiency in English (ECPE)
- **German** (Very good command - CEF :C1) : Goethe-Zertifikat B1, TestDAF Level C1
- **French** (Basic communication skills)