Emmanouil Theodosis

CONTACT
INFORMATION

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RESEARCH
INTERESTS

Theoretical machine learning, nonlinear algebras, sparse representations, algebraic geometry, digital signal processing, probabilistic graphical models, graph theory

EDUCATION

Harvard University   September 2019 - May 2024
PhD in Computer Science

National Technical University of Athens   October 2012 - October 2018
BSc & MSc in Electrical and Computer Engineering (5-year joint degree; 300 ECTS)

- **GPA**: 8.56/10 (top 10%)
- **Major**: Computer Science
- **Related Courses**: Pattern Recognition, Natural Language Processing, Digital Signal Processing, Computer Vision, Algorithms and Complexity, Compilers
- **Thesis**: "*Tropical Analysis of Algorithms on Graphs*"
  Supervisor: Prof. Petros Maragos

Nea Genia Ziridis, *Spata, Greece*   September 2006 - June 2012
High school diploma

- **Grade**: 20/20 (excellent)

RESEARCH
EXPERIENCE

National Technical University of Athens   October 2018 - June 2019
Computer Vision, Speech Communication, and Signal Processing Lab (CVSP)
Research Assistant

PUBLICATIONS

[1] THEODOSIS, E., AND MARAGOS, P. Analysis of the Viterbi Algorithm Using Tropical Algebra and Geometry. In *International Workshop on Signal Processing Advances in Wireless Communications* (2018)

[2] THEODOSIS, E., AND MARAGOS, P. Tropical Modeling of Weighted Transducer Algorithms on Graphs. In *International Conference on Acoustics, Speech, and Signal Processing* (2019)

[3] THEODOSIS, E., AND MARAGOS, P. A Robust Adaptive Pruning Algorithm based on Tropical Geometry. In *European Signal Processing Conference* (2019) (Under review)

HONORS AND
AWARDS

IEEE Xtreme   October 2017
Ranked 161st amongst over 4000 teams (top 5%).

Codechef SnackDown   July 2017
Ranked 615th amongst over 17000 teams (top 5%).

Google CodeJam   April 2017
Ranked in the top 3000 amongst over 65000 people (top 5%).

Google HashCode   February 2017
Ranked 170th amongst over 3500 teams (top 5%).

"**The Great Moment of Education**" **Eurobank EFG Scholarship**   2012
Achieved the highest score at the national exams amongst students of Nea Genia Ziridis.

PROJECTS   **SIP VoIP Application** ⬡   Fall 2016
A VoIP application based on the Session Initiation Protocol. Developed jointly with 3 other students for a course on software engineering.

Prescriptions R-X Application ⬡   Fall 2016
A database in MariaDB along with a user interface in HTML/CSS for a fictitious company. Developed for a course on database management systems.

Edsger Compiler ⬡   Summer 2016
A compiler for a fictitious C-like language called Edsger. Developed jointly with one other student for a course on compilers.

Greeklish to Greek Translator ⬡   Fall 2015
A translator and spellchecker application that converts text from greeklish (Greek using Latin characters) to Greek. Developed for a course on natural language processing.

ONLINE LEARNING   **Coursera**, *22 courses*   February 2015 - Present
- Machine Learning Specialization, *University of Washington* (4 courses)
- Fundamentals of Computing Specialization, *Rice University* (7 courses)
- Data Science at Scale Specialization, *University of Washington* (2 courses)
- Machine Learning, *Stanford University*
- Neural Networks and Deep Learning, *deeplearning.ai*
- Intro to RecSys: Non-Personalized and Content-Based, *University of Minnesota*
- Bayesian Statistics: From Concept to Data Analysis, *UC Santa Cruz*

A complete list of all the courses and their certificates can be found here.

COMMUNITY SERVICE   **The Smile of the Child**, *Volunteer*   September 2015 - Present
- Set up/take down event spaces.
- Participate at events as a seller.
- Tutor children on math and physics.

Coursera, *Mentor*   May 2017 - Present
- Answer students' questions about machine learning in the forums.
- Help students who are struggling with the assignments.

PROGRAMMING SKILLS   **Languages**: Python, MATLAB, C, HTML/CSS, Java, OCaml
Other: LaTeX, Unix, Git

LANGUAGES   Greek (*Native*), English (*Fluent*), French (*Basic*)

PERSONAL INTERESTS   Sailing, Soccer, Poetry, Writing