Emmanouil Theodosis

CONTACT
INFORMATION

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github.com/manosth
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RESEARCH
INTERESTS

Compressive sensing and representation theory, algebraic geometry, nonlinear optimization, tropical algebra, theoretical machine learning, probabilistic graphical models

EDUCATION

Harvard University   Sep 2019 - May 2024
PhD in Computer Science
GPA: 3.835/4.00—*Advisor*: Demba Ba

National Technical University of Athens   Oct 2012 - Oct 2018
BSc & MSc in Electrical and Computer Engineering
GPA: 8.56/10—*Advisor*: Petros Maragos

RESEARCH
EXPERIENCE

Harvard University   Sep 2019 - Present
Computation, Representations, and Inference in Signal Processing Lab (CRISP)
Research Assistant

National Technical University of Athens   Feb 2017 - Jun 2019
Computer Vision, Speech Communication, and Signal Processing Lab (CVSP)
Research Assistant

PUBLICATIONS

Conference papers

[1] MARAGOS, P. AND **THEODOSIS, E.** "Multivariate tropical regression and piecewise-linear surface fitting". In *International Conference on Acoustics, Speech, and Signal Processing* (2020)
[paper]

[2] RETSINAS, G., FILNTISIS, P., EFTHYMIOU, N., **THEODOSIS, E.**, ZLATINTSI, A., AND MARAGOS, P. "Person identification using deep convolutional neural networks on short-term signals from wearable sensors". In *International Conference on Acoustics, Speech, and Signal Processing* (2020)
[paper]

[3] **THEODOSIS, E.** AND MARAGOS, P. "Tropical modeling of weighted transducer algorithms on graphs". In *International Conference on Acoustics, Speech, and Signal Processing* (2019)
[paper] [poster]

[4] **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)
[paper] [poster]

Book chapters

[5] MARAGOS, P. AND **THEODOSIS, E.** "Tropical Geometry and Piecewise-Linear Approximation of Curves and Surfaces on Weighted Lattices". In *Shape Analysis: Euclidean, Discrete and Algebraic Geometric Methods*, edited by M. Breuss, A. Bruckstein, C. Kiselman, and P. Maragos, Springer, to appear.
[paper]

Preprints

[6] TASISSA, A., **THEODOSIS, E.**, TOLOOSHAMS, B., AND BA, D. "Dense and Sparse Coding: Theory and Architectures". *In submission* (2020)
[paper]

[7] MARAGOS, P., CHARISOPOULOS, V., AND **THEODOSIS, E.** "Tropical Geometry and Machine Learning". *In submission* (2020)
[paper]

[8] **THEODOSIS, E.** AND MARAGOS, P. "A Robust Adaptive Pruning Algorithm Based on Tropical Geometry". In *arXiv* (2019)
[paper]

HONORS AND AWARDS	**Gerondelis Foundation Scholarship**	May 2020

Awarded to Greek students pursuing graduate studies in the United States.

Robert L. Wallace Prize Fellowship   Sep 2019

Awarded to outstanding candidates whose research is focues on subjects related to the study of acoustics and noise.

"The Great Moment of Education" Eurobank EFG Scholarship   Oct 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.
[code]

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.
[code]

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.
[code]

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.
[code]

PROFESSIONAL SERVICE

Invited Reviewer: EUSIPCO 2020

PROGRAMMING SKILLS

Languages: Python, C, MATLAB, HTML/CSS
Other: LaTeX, Unix, Git

LANGUAGES

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

PERSONAL INTERESTS

Cinema, Soccer, Hiking