Maria Despoina Siampou

1031 Downey Way, GCS 5th Floor Los Angeles, CA 90089, United States ✓ siampou@usc.edu♦ msiampou.github.io

EDUCATION

University of Southern California (USC)

08/2022-Present

Ph.D. in Computer Science Advisor: Cyrus Shahabi

National & Kapodistrian University of Athens

10/2020 - 07/2022

M.Sc. in Computer Science, GPA: 9.67/10

Advisor: Manolis Koubarakis

National & Kapodistrian University of Athens

09/2016 - 09/2020

 $B.Sc.\ in\ Computer\ Science,\ GPA:\ 8.50/10$

Advisor: Manolis Koubarakis

EXPERIENCE

Google Research, Mountain View, CA

05/2025 - 08/2025

Student Researcher, Spacetime Team

- Spatially grounded multimodal alignment of visual and geospatial data
- Hosts: Neha Arora, Shushman Choudhury

National & Kapodistrian University of Athens

03/2021 - 07/2022

Research Associate, AI Team leb by Prof. Manolis Koubarakis

• Focused on interlinking geospatial data on the semantic web by leveraging topological relationships and optimizing the pipeline with supervised methods.

Amazon Web Services (Redshift), Berlin, Germany

09/2020 - 02/2021

 $Software\ Development\ Engineer\ Intern,\ Redshift\ Database$

- Implementation of spatial window functions (e.g. ST_Kmeans)
- Manager: Hinnerk Gildhoff

HONORS & AWARDS

Philomela Myronis Endowed Ph.D. Dissertation Fellowship

Gerontelis Foundation Scholarship for Ph.D. studies

USC Annenberg Fellowship for Ph.D. studies

Greek State National Scholarship for Top Undergraduate Students

HelleniQ Energy Award for Outstanding Performance in Panhellenic Exams 2016

PUBLICATIONS

- 12. M.D. Siampou, S. Choudhury, S-L. Hsu, N. Arora, C. Shahabi. "Mobility-Embedded POIs: Learning What a Place Is and How It's Used from Human Movement." Under Review
- 11. M.D. Siampou, J. Li, J. Krumm, C. Shahabi, L. Hu. "Poly2Vec: Polymorphic Fourier-Based Encoding of Geospatial Objects for GeoAl Applications." ICML 2025
- 10. M.D. Siampou, S.-L. Hsu, S. Choudhury, N. Arora, C. Shahabi. "Toward Foundation Models for Mobility Enriched Geospatially Embedded Objects." SIGSPATIAL 2025 (Vision Track)
- 9. B. Azarijoo, M.D. Siampou, J. Krumm, C. Shahabi. "ICAD: A Self-Supervised Autoregressive Approach for Multi-Context Anomaly Detection in Human Mobility Data."

 SIGSPATIAL 2025
- 8. M.D. Siampou, C. Anastasiou, J. Krumm, C. Shahabi. "TrajRoute: Rethinking Routing with a Simple Trajectory-Based Approach Forget the Maps and Traffic!" MDM 2025

- M. Papamichalopoulos, G. Papadakis, G. Mandilaras, M.D. Siampou, N. Mamoulis, M. Koubarakis. "Three Dimensional Geospatial Interlinking with Jedai-Spatial." Journal of Web Semantics 2024
- A. Hajisafi, M.D. Siampou, B. Azarijoo, C. Shahabi. "WaveGNN: Modeling Irregular Multivariate Time Series for Accurate Predictions."
 Arxiv Pre-print 2024
- M.D. Siampou, L. Nocera, J. Oh, B. Smith, C. Shahabi. "An Algorithmic Approach for Detecting Neuromotor Developmental Disabilities in Infants from Wearable Sensor Data."
 EMBC 2024 (Oral)
- A. Hajisafi, M.D. Siampou, J. Bi, L. Nocera, C. Shahabi. "Wearables for Health (W4H) Toolkit for Acquisition, Storage, Analysis, and Visualization of Data from Various Wearable Devices." ICDE 2024 (Demo Track)
- M.D. Siampou, G. Papadakis, N. Mamoulis, M. Koubarakis. "Supervised Scheduling for Geospatial Interlinking." SIGSPATIAL 2023
- A. Hajisafi, H. Lin, S. Shaham, H. Hu, M.D. Siampou, Y-Y. Chiang, C. Shahabi. "Learning Dynamic Graphs from All Contextual Information for Accurate Point-of-Interest Visit Forecasting." SIGSPATIAL 2023
- M.D. Siampou, N. Karalis, M. Koubarakis. "Extending YAGO4 Knowledge Graph with Geospatial Knowledge."
 Geospatial Linked Data Workshop (GeoLD) @ ESWC 2022

TEACHING EXPERIENCE

University of Southern California (USC)

Head Teaching Assistant

- Geospatial Information Management (Fall 2024, Spring 2025)
- Responsibilities: Designed assignments, graded assignments and exams, delivered guest lectures on routing, location encoding, and Geo-Foundation Models

National & Kapodistrian University of Athens

Teaching Assistant

- Data Structures & Algorithms (Spring 2020, 2021), Artificial Intelligence (Fall 2020, 2021), Systems Programming (Spring 2021)
- Responsibilities: Graded assignments, answered questions on Piazza

National & Kapodistrian University of Athens

 $Undergraduate\ Lab/Teaching\ Assistant$

- Data Structures & Algorithms (Spring 2018–2020), Object-Oriented Programming (Fall 2018), Computer Architecture (Spring 2018)
- Responsibilities: Supported lab sessions, answered questions on Piazza

PROFESSIONAL SERVICE

Reviewer: ICLR 2026, KDD 2025, TKDE 2024–2025

Student Volunteer: ACM SIGSPATIAL 2023, ICDE 2023 & 2024

Mentorship: USC Viterbi CURVE Program (2 undergraduate mentees); USC Viterbi SHINE Program (1 high school mentee)

SKILLS

Tools and Libraries: Python, C, C++, Java, I^AT_EX, Git, Jupyter, PyTorch, Pandas, Scipy, scikit-learn, OpenCV, Transformers, OSMnx, GeoPandas, shapely

Languages: Greek (native), English (proficient), German (intermediate)