

# Thaleia Dimitra Doudali

*Assistant Professor at IMDEA Software Institute*

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## EDUCATION

### **Ph.D. in Computer Science**

*Georgia Institute of Technology (Georgia Tech)*

Atlanta, GA, USA

2015 - 2021

Advisor: Ada Gavrilovska

### **Diploma in Electrical and Computer Engineering**

*National Technical University of Athens (NTUA)*

Athens, Greece

2010 - 2015

Advisor: Nectarios Koziris

## PROFESSIONAL EXPERIENCE

- **IMDEA Software Institute**

*Assistant Professor*

Madrid, Spain

Oct. 2021 - Present

- **IIT NCSR Demokritos**

*Visiting Researcher*

Athens, Greece

Summer 2022

- **Advanced Micro Devices**

*Intern at AMD Research*

Bellevue, WA, USA

Summer 2018

- **VMWare**

*Intern at the Distributed Resource Scheduler Team*

Palo Alto, CA, USA

Summer 2017

- **Dell EMC**

*Intern at the Data Domain File System - Garbage Collection team.*

Santa Clara, CA, USA

Summer 2016

## AWARDS

- Juan de la Cierva Postdoctoral Fellowship. 2021-2023
- Best Paper Award Finalist and Best PhD Forum Poster with Research Paper Award at HPDC 2019.
- Selected to participate in the Rising Stars in EECS 2020 academic workshop.
- Travel Grant Awards at OSDI 2021/2020/2016, ATC 2021/2020/2017, IEEE TCPP award for IPDPS 2019, SoCC 2018.
- A.G. Leventis Foundation Fellowship. 2018 - 2021

## STUDENT SUPERVISION

### **PhD Students:**

Georgia Christofidi

Fall 2022 - Current

Konstantinos Papaioannou

Fall 2022 - Current

### **Master's Thesis:**

Javier Galindos (UPM) at IMDEA.

Spring 2022

### **Undergraduate Diploma Thesis:**

Aristotle Sibetheros (NTUA) at IMDEA.

Spring 2022

## THESIS COMMITTEES

Remote substitute member for the Ph.D. defense of Alejandro J. Calderón at Universitat Politècnica de Catalunya (UPC), July 2022.

## TEACHING EXPERIENCE

Delivered guest lectures, designed and graded projects, interacted with students during office hours and on-line discussions for the Advanced Operating Systems graduate-level class (CS6210) at the Georgia Institute of Technology during the Spring 2017, 2019 semesters.

## PUBLICATIONS

- Cronus: Computer Vision-based Machine Intelligent Hybrid Memory Management.  
**Thaleia Dimitra Doudali**, Ada Gavrilovska. To appear in the Proceedings of the 2022 International Symposium on Memory Systems (MEMSYS 2022).
- Coeus: Clustering (A)like Patterns for Practical Machine Intelligent Hybrid Memory Management.  
**Thaleia Dimitra Doudali**, Ada Gavrilovska. In Proceedings of the 22nd IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGrid 2022).
- Toward Computer Vision-based Machine Intelligent Hybrid Memory Management.  
**Thaleia Dimitra Doudali**, Ada Gavrilovska. In Proceedings of the 2021 International Symposium on Memory Systems (MEMSYS 2021).
- Cori: Dancing to the Right Beat of Periodic Data Movements over Hybrid Memory Systems.  
**Thaleia Dimitra Doudali**, Daniel Zahka, Ada Gavrilovska. In Proceedings of the 35th IEEE International Parallel and Distributed Processing Symposium (IPDPS 2021).
- The Case for Optimizing the Frequency of Periodic Data Movements over Hybrid Memory Systems.  
**Thaleia Dimitra Doudali**, Daniel Zahka, Ada Gavrilovska. In Proceedings of the 2020 International Symposium on Memory Systems (MEMSYS 2020).
- Unexpected Performance of Intel DC Persistent Memory.  
Tony Mason, **Thaleia Dimitra Doudali**, Margo Seltzer, Ada Gavrilovska. In IEEE Computer Architecture Letters, vol.19, no.1, pp.55-58, 1 Jan.-June 2020.
- Kleio: a Hybrid Memory Page Scheduler with Machine Intelligence.  
**Thaleia Dimitra Doudali**, Sergey Blagodurov, Abhinav Vishnu, Sudhanva Gurumurthi, Ada Gavrilovska. In Proceedings of the 28th International Symposium on High-Performance Parallel and Distributed Computing (HPDC 2019).
- Mnemo: Boosting Memory Cost Efficiency in Hybrid Memory Systems.  
**Thaleia Dimitra Doudali**, Ada Gavrilovska. In proceedings of the 5th IEEE International Workshop on High-Performance Big Data, Deep Learning, and Cloud Computing (HPBDC 2019). In conjunction with the 33rd IEEE International Parallel and Distributed Processing Symposium (IPDPS 2019).
- CoMerge: Toward Efficient Data Placement in Shared Heterogeneous Memory Systems.  
**Thaleia Dimitra Doudali**, Ada Gavrilovska. In Proceedings of the 2017 International Symposium on Memory Systems (MEMSYS 2017).

## SERVICE

### **Program Committees:**

- EuroSys 2023, ASPLOS 2023, ATC 2023.
- **PC Chair** of the COMPSYS 2022, 2023 workshop, co-located with IPDPS 2022, 2023.
- Selection committee for the 2022 EuroSys Needham dissertation award.
- SPMA and EuroSysML workshops, co-located with EuroSys 2022.
- MLArchSys workshop, co-located with ISCA 2022.
- PhD Symposium of EuroPar 2022.
- Shadow PC member at EuroSys 2020.

### **External Reviewing for Journals:**

- IEEE Transactions on Computers (TC).
- ACM Transactions on Architecture and Code Optimization (TACO).

### **Conference Organization:**

- Publicity team member for IC2E 2022 2023.

- Social media chair for HPDC 2022.
- Session co-chair for DATE 2022.
- Session co-chair for one of the Ask Me Anything sessions at EuroSys 2021.

## INVITED TALKS

- **Building Smart and Fast Systems Using Machine Learning and Computer Vision.**
  - Invited talk at the Systems Seminar at Stanford University, California, USA. November 2022.
  - Invited talk at IBM Research, Zurich, Switzerland. June 2022.
  - Invited talk by the Swiss chapter of Women in HPC at PASC 2022 in Basel, Switzerland. June 2022.
  - Invited talk at IIT NCSR Demokritos in Athens, Greece. June 2022.
  - Invited talk at the Barcelona Supercomputing Center, Spain. June 2022.
  - Invited talk at Huawei Research Center in Zurich, Switzerland. May 2022.
  - Invited talk at the Conferencias de Posgrado at UCM, Madrid, Spain. November 2021.
  - Talk at the Software Seminar Series (S3) at IMDEA Software Institute, Madrid, Spain. October 2021.
- **A picture is worth 1000.. features! Using Computer Vision alongside Machine Learning in Computer Systems.** Selected talk at the Wild and Crazy Ideas (WACI) session of ASPLOS 2022, Lausanne, Switzerland, March 2022.
- **Adding Machine Learning to the Management of Heterogeneous Resources.**
  - Invited talk at the HMEM workshop on Heterogeneous Memory Systems co-located with ICS 2022.
  - Invited talk at the International Workshop on Distributed Cloud Computing (DCC) 2021. June 2021.
  - Invited talk at Illinois Institute of Technology, Chicago, USA. April 2021.
  - Invited talk at IMDEA Software Institute, Madrid, Spain. March 2021.
- **Kleio: a Hybrid Memory Page Scheduler with Machine Intelligence.**
  - Invited talk at the Grascomp/EuroSys SPC joint workshop at UC Louvain, Belgium. February 2020.
  - Invited talk at the 5th Computing Systems Research Day at NTUA, Athens, Greece. January 2020.
  - Conference talk at the HPDC 2019 conference. June 2019.

## DIVERSITY AND MENTORING

- **Panelist on how to get the most out of mentorship.** October 2022  
Panel discussion organized for the Students and the Early Career Program at Supercomputing (SC) 2022.
- **How to ride the research roller coaster: Effective Presentation Skills.** May 2022  
Seminar on how to give engaging presentations, including practical tips and tricks on creating slides, structuring a talk and being confident presenting and answering questions.
- **Mentor at a conference mentoring program.** March 2022  
Organized by the Computer-Architecture Student Association (CASA) during ASPLOS 2022.
- **Discussion with female researchers: why to consider a career in research.** February 2022  
Lead a panel discussion at IMDEA for the 2022 international day of women and girls in science.
- **Interview on current research agenda and inclusion efforts in academia.** December 2021
- **Mentor at a Speed Mentoring event.** December 2021  
Hosted by the ACM-W chapter of the Aristotle University of Thessaloniki, Greece.
- **Interview on how to bridge the gender gap in STEM.** November 2021
- **How to ride the research roller coaster: Managing emotional challenges.** November 2021  
Mentoring talk at IMDEA on how to deal with common challenges of working in research.
- **Interview on my academic job experience for the GAP Interview Series.** November 2021  
Hosted on YouTube by Manuel Rigger.
- **Panelist in an info session on how to apply to PhD programs.** April 2021  
Hosted by UC San Diego Computer Science.
- **The Four Life Quotes that Shaped my PhD Journey.** April 2020  
At "Illuminate Tech", an inspirational talk series organized by Georgia Tech SGA.
- **Executive board member of the Georgia Tech SCS Graduate Student Association.** 2020-2021
- **Executive board member of the Hellenic Society at Georgia Tech.** 2017-2021
- **Executive board member of the IEEE NTUA Student Branch.** 2012-2015

## **PATENTS**

- **Techniques for Container Scheduling in a Virtual Environment.**  
Thaleia Dimitra Doudali, Zhelong Pan, Pranshu Jain. VMware, Inc. (Palo Alto, CA, USA). Publication date: Sep 21, 2021. Publication number: 20200019426.
- **Multi-instance Recurrent Neural Network Prediction.**  
Sergey Blagodurov, Thaleia Dimitra Doudali, Amin Farmahini Farahani. Advanced Micro Devices, Inc. (Santa Clara, CA, USA). Publication Date: Jun 18, 2020. Publication number: 20200193268.
- **Computer Resource Scheduling Using Generative Adversarial Networks.**  
Sergey Blagodurov, Abhinav Vishnu, Thaleia Dimitra Doudali, Jagadish B. Kotra. Advanced Micro Devices, Inc. (Santa Clara, CA, USA). Publication date: Dec 3, 2020. Publication number: 20200379814.