

# George Christodoulou

 George Christodoulou |  giorgoschristodoulou.github.io |  g.c.christodoulou@tudelft.nl

## Education

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### Ph.D. in Database Systems

*University of Ioannina*

Mar 2020 - Sep 2023

*Ioannina, Greece*

**Topic:** “Interval Data Management in Main Memory”

**Supervisor:** Nikolaos Mamoulis

### M.Sc. in Software Engineering

*University of Ioannina*

Sep 2018 - Feb 2020

*Ioannina, Greece*

**Thesis:** “A Prefix-based Hybrid Solution for Main Memory Indexing”

**Supervisor:** Nikolaos Mamoulis

GPA: 9.1/10

### Diploma (M.Eng.) in Computer Science & Engineering

*University of Ioannina*

Sep 2011 - Sep 2017

*Ioannina, Greece*

**Thesis:** “Routing Methods with Machine Learning on Delay Tolerant Networks.”

**Supervisor:** Evangelos Papapetrou

GPA: 6.74/10

## Experience

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### Postdoctoral Researcher

*Delft University of Technology*

Oct 2023 – Present

*Delft, Netherlands*

- Working on stream processing and serverless computing.

### Research Assistant

*Research & Technology Hellas (CERTH)*

May 2019 – Sep 2019

*Thessaloniki, Greece*

- worked on designing and developing an Anomaly detector based on machine learning techniques for the “Secure and Safe IoT (SerIoT)” project.
- used Python, PyTorch, Tensorflow.

### Software engineer Intern

*Natech S.A.*

Jul 2016 – Aug 2016

*Ioannina, Greece*

- worked on designing and developing a ASP.NET MVC web application.
- used C#, MVC

### Research Program Scholar

*Organization of Special Account of Research Funds, University of Ioannina*

May 2020 - Jul 2023

*Ioannina, Greece*

- Smart City Bus Project (IoT Platform for Transportation)
- ProximIoT Project (IoT Platform for Proximity Marketing)

## Internships

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### Research Intern

*University of Mainz (JGU)*

Feb 2022 - Apr 2022

*Mainz, Germany*

working with Prof. Panagiotis Bouros.

## Research Intern

Hong Kong University of Science and Technology (HKUST)

working with Prof. Dimitris Papadias.

Jan 2023 - Feb 2023

Hong Kong

## Teaching

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University of Ioannina

Department of Computer Science and Engineering

Sep 2017 - July 2023

Ioannina, Greece

- Fall 2017, 2018, 2019: Networks lab assistant.
- Spring 2018: Java lab assistant.
- Fall 2020,2021,2022: Python lab assistant.

## Student Supervision

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### Master Theses Supervision

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- Giorgos Kotsinas, Querying intervals (working title), Master thesis, Department of Computer Science and Engineering, UoI

### Bachelor Theses Supervision

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- Jan Raider, A user interface for visualizing interval indexing (working title), Bachelor thesis, Insitute of Computer Science, JGU
- Vasileios Georgoulas, Bachelor thesis, A web application for passenger movement with public transport, Department of Computer Science and Engineering, UoI
- Danae Tsaousi, Bachelor thesis, Visualization and analysis of public transport data, Department of Computer Science and Engineering, UoI
- Penelope Eleftheriadi, Bachelor thesis, Visualization and analysis of public transport data, Department of Computer Science and Engineering, UoI
- Filippos-Apostolos Papachristou, Bachelor thesis, Implementation and evaluation of a main memory temporal index, Department of Computer Science and Engineering, UoI

## Publications

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### International Journals

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- **HINT: A Hierarchical Interval Index for Allen Relationships**  
G. Christodoulou, P. Bouros, N. Mamoulis.  
International Journal on Very Large Databases (VLDBJ) 2023.

### International Conferences

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- **Evaluating Stream Processing Autoscalers**  
G. Siachamis, G. Christodoulou, K. Psarakis, M. Fragkoulis, A. van Deursen, A. Katsifodimos.  
International Conference on Distributed and Event-based Systems (DEBS) 2024.
- **HINT on Steroids: Batch Query Processing for Interval Data**  
P. Bouros, A. Titkov, G. Christodoulou, C. Rauch, N. Mamoulis.  
International Conference on Extending Database Technology (EDBT) 2024.
- **LIT: Lightning-fast In-memory Temporal Indexing**  
G. Christodoulou, P. Bouros, N. Mamoulis.  
ACM International Conference on Management of Data (SIGMOD) 2024.
- **SmartCityBus - A Platform for Smart Transportation Systems.**  
G. Bouloukakis, C. Zeginis, N. Papadakis, K. Magoutis, G. Christodoulou,  
C. Kosyfaki, K. Lampropoulos, N. Mamoulis, P. Bouros, N. Mamoulis.  
ACM International Conference on Web Search and Data Mining (WDSM) 2023 (abstract).
- **HINT: A Hierarchical Index for Intervals in Main Memory**  
G. Christodoulou, P. Bouros, N. Mamoulis.

## International Workshops

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- **Efficient And Scalable Management Of Interval Data**  
**G. Christodoulou**

International Conference on Extending Database Technology PhD Workshop (EDBT PhD Workshop) 2023.

## Under review but not yet accepted

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- **Styx: Transactional Stateful Functions on Streaming Dataflows**  
K. Psarakis, G. Siachamis, **G. Christodoulou**, M. Fragakoulis, A. Katsifodimos  
arXiv preprint.

## Service

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- Reviewer for PAKDD 2021, ICDE 2024, DEBS 2024, VLDB 2025, Frontiers in Big Data Journal
- External Reviewer for ICDE 2019-2023, VLDB 2020-2024, SIGMOD 2020, EDBT 2020, DASFAA 2023

## Volunteer Experience

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- Conference Technical Support Volunteer at EDBT 2023, Ioannina, Greece

## Technical Skills

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Programming Languages: C/C++ (intermediate), Java (intermediate), Python (intermediate).

Other Skills: Complex data management, Complex data indexing, Scalable Data Management, Query Processing, Stream Processing, Machine learning techniques, Tensorflow, PyTorch, ASP.NET MVC

## Languages

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Greek (native speaker), Dutch (native speaker), English (B2 Degree).