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Google Scholar https://scholar.google.com/citations?user=7p_28KEAAAAJ&hl=el&oi=ao
arXiv <https://arxiv.org/search/cs?searchtype=author&query=Tzachristas%2C+I>

EDUCATION

09/2024 - present

**PhD candidate at the
Chair of Transportation Systems Engineering,
School of Engineering and Design,
Technical University of Munich (TUM), Germany**

PhD topic:

“Privilege Management of LLM-based AI-agents and Applications in Transportation Systems”
supervised by **Prof. Constantinos Antoniou – TUM**

co-supervised by **Dr. Aifen Sui – Huawei Munich Research Center**

09/2019 – 07/2024

**M.Sc. & MEng. at the
School of Electrical and Computer Engineering,
National Technical University of Athens, Greece
(ECE-NTUA Diploma in Electrical and Computer Engineering)**

- **GPA 9.02/10.00 (Excellent)**
- **Master’s Thesis Grade 10.00/10.00 (Excellent)**
<http://artemis.cslab.ece.ntua.gr:8080/jspui/handle/123456789/19180>
- Member of “NTUA Microprocessors Laboratory & Digital Systems Laboratory”
(recent projects: Alarm with password and smoke detector, Oscilloscope)
- Selected representative student at “ECE external evaluation & accreditation” (February 2021)
- European Workshop on Distance Learning "What is the New Normal in Distance Learning in European Universities"
- Attended Seminar on Applied and Industrial Mathematics – FEMO
- Attended “Research Challenges in Computer Science” (CoReLab & CSLab)
- Attended the CoReLab Seminar (Computation and Reasoning Laboratory)
- Attended the CSLab Seminar (Computing Systems Laboratory)
- Attended “Mathematical Thinking” Seminar (by Professor Themistocles M. Rassias)
- Co-assistant at CoReLab & CSLab (towards helping first graders)

09/2016 – 06/2019

General Lyceum of Zosimaia School, Ioannina, Greece

- **GPA 20.0/20.0 (Excellent)**

WORK EXPERIENCE

09/2024 – present

“Fixed Term PhD Contract” at Huawei Munich Research Center –
Trustworthy Technology and Engineering Laboratory

Identity & Access Management group - supervised by **Dr. Aifen Sui**

PhD topic:

“Privilege Management of LLM-based AI-agents and Applications in Transportation Systems”
supervised by **Prof. Constantinos Antoniou – TUM**

01/2024 – 08/2024

“Master Student Contract” at Huawei Munich Research Center –
Trustworthy Technology and Engineering Laboratory

Identity & Access Management group - supervised by **Dr. Aifen Sui**

Master’s Thesis topic:

“Creating an LLM-based AI-agent: A high-level methodology towards enhancing LLMs with APIs”
supervised by **Prof. Nikolaos Papaspyrou – NTUA**

<http://artemis.cslab.ece.ntua.gr:8080/jspui/handle/123456789/19180>

07/2023 – 01/2024

“Internship Contract” at Huawei Munich Research Center –
Trustworthy Technology and Engineering Laboratory

Identity & Access Management group - supervised by **Dr. Aifen Sui**

Projects related to **“Formal Methods for Security”**

AWARDS & ACADEMIC ACTIVITIES

2019-present

Mathematical Competitions and Team Leadership

- **Gold Medal and unique problem 8 solver** at the 28th International Mathematics Competition for University Students (IMC 2021) <https://www.ece.ntua.gr/gr/article/464>

- **Bronze Medal** at the 15th SEEMOUS 2021 <https://www.ece.ntua.gr/gr/article/462>
- **Gold Medal** at the 4th Open Mathematical Olympiad for University Students 2021 (IUHD) <https://www.ece.ntua.gr/gr/article/452>
- **Honorable Mention** at the 27th International Mathematics Competition for University Students (IMC 2020) <https://www.ece.ntua.gr/gr/article/424>
- **Gold Medal** and **1st Place (absolute winner)** at the 3rd Open Mathematical Olympiad for University Students 2020 (IUHD) <https://www.ece.ntua.gr/gr/article/409>
- **Bronze Medal** at the 14th SEEMOUS 2020 <https://www.ece.ntua.gr/gr/article/406>
- **3rd Greek Place** at the Mediterranean Mathematical Competition MMC 2019
- **Bronze Medal** at the 36th National Mathematical Olympiad (2019) <http://www.hms.gr/?q=node/1514>
- NTUA-NKUA coordinator/team leader at the 4th Open Mathematical Olympiad for University Students 2021 (IUHD)
- Organising committee member at 13th Mathematical Summer School (2019) of Hellenic Mathematical Society (HMS)
- Invigilator of HMS at “Thales” Mathematical Competition (2019)
- ELSEVIER “Certificate of Reviewing” in recognition of the review contributed to the journal “Transportation Research Part A: Policy and Practice”

AWARDS & SCHOOL ACTIVITIES

<http://www.kizoa.com/Movie-Video-Slideshow-Maker/d162088822k3281783011/photo-album>

2010- 2019

Annual Distinction at:

- “Kangaroo” Mathematical Competition
- “Thales” Mathematical Competition
- “Euclides” Mathematical Competition
- “Vraveio” and/or “Aristeio” (high school GPA awards)

Scientific groups, Clubs, Blogs & Presentations:

- Attended 11th (2017) and 12th (2018) Mathematical Summer Schools of Hellenic Mathematical Society (HMS)
- “M.A.T.H.= Mathematics Applied To Hypotheses” <http://mathjt.blogspot.com/>
- “The Mathemagician”: Blog presentation at the 7th Greek School DigiFest 2017 <http://jtmaths.blogspot.com/>
- Participated in Erasmus+, eTwinning projects and various extra-curriculum school scientific groups
- Implemented (using the “Glossa” interpreter) a personal Euclidean Division-based Number Theory Algorithm
- Implemented and generalised (using GeoGebra) a “triangle similarity” problem

DIGITAL & LANGUAGE SKILLS

Computer Experience

- C++, Python, MatLab, TinkerCad, Arduino, LTspice, GNU Octave, PicoScope, MathWorks, GeoGebra, Ms Office, NuSMV, SPIN, Maude, Z3-Prover

Languages

- English (Michigan ECCE - 1000/1000 in Speaking), German (B1 Staatszertifikat über Sprachkenntnisse), Greek

SCIENTIFIC INTERESTS

- Discrete Mathematics (Combinatorics, Algorithms, Graph Theory, Number Theory, Automata Theory)
- Cyber Security (especially **Information Security**)
- Formal Methods, **Formal Verification & Model Checking**
- Geometry

HOBBIES

www.youtube.com/user/dimigoum

Music

www.youtube.com/watch?v=13Zj6UqBi1E&t=6s

- Piano and Music Theory & Harmony education at the Municipal Conservatory of Ioannina
- Participated in concerts as a pianist (soloist as well), e.g. <https://www.youtube.com/watch?v=KAd2iilME1o>
- Participated as a baritone at the NTUA chorus
- Participated in poetry galas as a pianist

Chess

- Participated in local (Ioannina) and national tournaments and has been awarded several medals, e.g.:
Gold Medal at School Chess Tournament for individuals – Prefecture of Ioannina, 2016
Bronze Medal at School Chess Tournament for teams – West Greece, 2015

Dancing

- Latin dancing and Greek traditional dancing (e.g. [Tsamikos](https://www.youtube.com/watch?v=8oHxOGfcOA4))
- Participated in Salsa Guinness World Record in 2017 <https://www.youtube.com/watch?v=8oHxOGfcOA4>

Sports

- “Lake Run” 30km Marathon (2019)
- Member of the local (Ioannina) rowing team “NOI” (2016-2018)
- Member of the local (Ioannina) basketball teams “Kronos” and “AGSI” and basketball summer camps (2008-2017)