

Matheos Giakoumi

[ResearchGate](#), [Google Scholar](#), [LinkedIn](#)

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Year of birth: 1997 | Nationality: Cypriot

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EDUCATION

PhD Petroleum and Geosystems Engineering - PGE	2024 – 2029
<i>Hildebrand Department of Petroleum and Geosystems Engineering / Cockrell School of Engineering / The University of Texas at Austin</i>	
MBA Energy and Environmental Management and Economics – MEDEA	2022 – 2023
<i>Department of Economics and Management & ENI Scuola Mattei / University of Pavia</i>	
MEng Natural Gas in Energy Transition - NGE (Highest Honors)	2021 – 2023
<i>Department of Civil and Environmental Engineering / Faculty of Engineering / University of Cyprus</i>	
BS Mechanical Engineering and Materials Science and Engineering (Highest Honors)	2017 – 2021
<i>Department of Mechanical Engineering and Materials Science and Engineering / Faculty of Engineering and Technology / Cyprus University of Technology</i>	

PUBLICATIONS

1) Giakoumi, M. , Stephanou, PS., Kapnisis, KK., Anayiotos, A. “On the Development of Physiologically Based Toxicokinetic Models (PBTK) for Cardiovascular Implants”. Regulatory Toxicology and Pharmacology . 2023 Sep 1;144:105489. DOI: 10.1016/j.yrtph.2023.105489 . PMID: 37659713.	Published
2) Giakoumi, M. , Konstantinou, C., Ehlig-Economides, C., Papanastasiou, P. “A Screening Tool for Carbon Dioxide Injection in Gas Reservoirs with Water Influx Based on the Material Balance Approach”. Geomechanics for Energy and The Environment . 2023 Dec 23, ISSN 2352-3808, DOI: 10.1016/j.gete.2023.100532 .	Published
3) Giakoumi, M. , Stephanou, PS., Kokkinidou, D., Papastefanou, C., Anayiotos, A., Kapnisis, KK. “A Predictive Toxicokinetic Model for Nickel Leaching from Vascular Stents”. ACS Biomaterials Science & Engineering 2024 10 (4), 2534-2551, DOI: 10.1021/acsbiomaterials.3c01436 .	Published
4) Giakoumi, M. , Konstantinou, C., Papadimitriou, N., Panagiotou, F. C., Tsangarides, A., Iosif, G., Stasis, N., Finiris, S., Georgiou, V., Papanastasiou, P. “Mathematical Tools for Advances in the Field Development Plans (FDPs)”. Gas Science and Engineering .	Under Review (Phase 2)
5) Giakoumi, M. , Stephanou, PS., Kapnisis, KK., Anayiotos, A. “Analytical solutions to PBKT (or simply biokinetic) models using the matrix exponential”.	In Preparation

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- 6) **Giakoumi, M.**, Konstantinou, C., Burdeau, P., Papanastasiou, P., Pontoni, P. “From Waste to Commodity: Leveraging Game Theory in the CCUS – Driven CO₂ Market - A Case Study in Cyprus”. **In Preparation**
- 7) Konstantinou, C., **Giakoumi, M.***, Angastiniotis, N., Papanastasiou, P. “HydrogenLAB: A Computational Framework for Simulating Geological Underground Hydrogen Storage”. **In Preparation**
*Corresponding Author
- 8) **Giakoumi, M.**, Zanini, S., Agathokleous, R., Pontoni, F. (2024). “Pimp my House: A Stochastic Framework for Evaluating Energy Retrofit Investments”. **In Preparation**

CONFERENCE PRESENTATIONS

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- 1) **Giakoumi, M.**, Konstantinou, C., Burdeau, P., Papanastasiou, P., Pontoni, P. (2024). “From Waste to Commodity: Leveraging Game Theory in the CCUS – Driven CO₂ Market - A Case Study in Cyprus”. Accepted for presentation at the [45th IAEE International Conference](#), Istanbul, Turkey, 25 – 28 June 2024.
- 2) **Giakoumi, M.**, Stephanou, PS., Kapnisis, KK., Anayiotos, A. (2024) “Incorporating Confidence Intervals in Physiologically Based Toxicokinetic (PBTK) Modeling”. Accepted for presentation at the [Fourteenth Panhellenic Scientific Conference of Chemical Engineering](#), Thessaloniki, Greece, 29 – 31 May 2024.
- 3) **Giakoumi, M.**, Zanini, S., Agathokleous, R., Pontoni, F. (2024). “Pimp my House: A Stochastic Framework for Evaluating Energy Retrofit Investments”. Accepted (not presented due to medical emergency) for presentation at the [Twelfth IAERE Annual Conference](#), Pescara, Italy, 22 – 23 February 2024.
- 4) Konstantinou, C., Papadimitriou, N., **Giakoumi, M.**, Tsangarides, A., Iosif, G., Stasis, N., Finiris, S., Georgiou, V., Panagiotou, F. C., Papanastasiou, P. (2023). “Advancements in Field Development Plans: Applicability of the Frigg field findings in the Eastern Mediterranean analogues”. [Fourth EAGE Eastern Mediterranean Workshop](#), Athens, Greece, 04 – 06 December 2023. [DOI: 10.3997/2214-4609.202330028](https://doi.org/10.3997/2214-4609.202330028).
- 5) Konstantinou, C., **Giakoumi, M.**, Tsangarides, A., Iosif, G., Stasis, N., Finiris, S., Georgiou, V., Panagiotou, F. C., Papadimitriou, N., Papanastasiou, P. (2023). “Lessons learned from the Frigg Field: Applicability of the findings in the Eastern Mediterranean analogues”. Presentation at the [AAPG Europe Regional Conference](#), Larnaca, Cyprus, 23 – 24 May 2023.

RESEARCH EXPERIENCE

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| Technologies for the Energy Transition - Fondazione Eni Enrico Mattei (FEEM) | Sep 23 – Now |
| Geomechanics Research for Energy and Environment - University of Cyprus (UCY) | Jan 23 – Now |
| Biomechanics and Living Systems Analysis - Cyprus University of Technology (CUT) | July 20 – Now |
| Materials Thermodynamics Laboratory – Cyprus University of Technology (CUT) | July 21 – Now |
| Device Technology & Chemical Physics Lab – Cyprus University of Technology (CUT) | Oct – Dec 19 |
| Research Unit for Nanostructured Materials Science – Cyprus University of Technology (CUT) | July – Aug 18 |

TEACHING EXPERIENCE

Instructor, Master on Natural Gas in Energy Transition (UCY)	Sep 23 – May 24
Visiting Instructor, Master on Environmental and Food Economics (UNIMI)	Dec 23
University Tutor, Center of Student Development (CUT)	Sep 18 – Dec 22
Mathematics Tutor for High School Students	Sep 19 – June 22

OTHER SKILLS

IT/Software: MATLAB & Simulink, Python, HTML, Solidity, C++, PLEXOS, Petrel, OriginLab, SolidWorks.

Languages: Greek (Native), English (C1), Italian (A2).

Hobbies & Interests: Basketball, Full Stack Development (proficient at Back End Development and beginner at Front End Development), Web3 applications (developing and deploying smart contracts on the Ethereum blockchain), Exploring geopolitics of energy.