ATHANASIOS ANASTASIOU

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Date of birth: 22/2/1984
Marital status: Married
Nationality: Greek
Military service: fulfilled 2010 – 2011

EDUCATION

2016 – Today

University of Ioannina
Department of Materials Science & Engineering
PhD Candidate
Thesis: **Flow Properties of Magnetic Nano-fluids in Porous Media using Nuclear Magnetic Resonance (NMR) Methods**
NCSR 'Demokritos'

2016

University of Ioannina
Department of Materials Science & Engineering
MSc in Chemistry and Materials Science
Thesis: **Synthesis and Characterization of Magnetic Nanoparticles for Reservoir Characterization**
NCSR 'Demokritos'

2012

National Technical University of Athens
Bachelor of Science in Applied Mathematical & Physical Sciences (SAMPS) with integrated Master of Science
Thesis: **Design and building of a Vibrating Sample Magnetometer**
NCSR 'Demokritos'

ACADEMIC & RESEARCH POSITIONS

11/2022 – today

Researcher, Indigo Lab, School of Production & Management Engineering, Technical University of Crete.

Indicative projects: TREEADS (H2020), IMPETUS (H2020), Parkin (Green Fund Greece).

- Project management
- Proposal preparation

9/2020 – 4/2022

Research Associate, Research Project: 3DmicroPores – Micro/Macro scale couplings in reactive transport process in porous materials. Realistic 3D experiments towards rigorous upscaled models.

General Secretariat for Research and Innovation, Greece

EREL, INRASTES, NCSR "Demokritos"

- Project management
- Study of low pressure, two phase flow (oil/water) in Plexiglas micromodels
- Programming in Matlab and Python
- Results processing through Adobe Photoshop and Matlab

9/2021

Visitor researcher in Technical University of Crete, Chania

- Micromodel manufacturing using CNC router with high speed spindle on Plexiglas and Aluminium
- Programming in Matlab

7/2014 – 12/2019

Research assistant NMR group, INN, NCSR 'Demokritos'

- Nuclear Magnetic Resonance NMR / Magnetic Resonance Imaging MRI
- International Project Proposals / Project Coordination
- Synthesis & Characterization of Magnetic Nanoparticles (MNPs)
- Rheological studies of Ultra-Dense Dispersions of MNPs
- Built of a Core Flooding Machine and Rock Core Samples Characterization
- Ultra low temperature systems (liquid Nitrogen and liquid Helium)
- Laboratory teaching of BSc & MSc students of SAMPS NTUA on NMR spectroscopy

2015 – 2018

Research Associate, International Research Project: **Magnetic Nanoparticles (MNPs) for Reservoir Characterization**

- Project Management / Scientific Experiments Supervision

2/2018

Visitor Researcher in Khalifa University, Abu Dhabi, UAE

2011 – 2015

Private sector tutor for BSc and MSc students

2009 – 2015

Founding member and web developer for T|S|G|P|I.eu work team

Indicative web pages: www.nobs.gr www.vpack.gr georgadas.gr

2002 – 2010

Private sector tutor for high school students

INDICATIVE PUBLICATIONS – PATENTS

- **Fluid flow monitoring in hydrocarbon reservoirs using magnetic nanoparticles**

S. Alhassan, V. Tzitzios, G. Papavassiliou, M. Karagianni, **A. Anastasiou**, S. Orphanides, M. Fardis, D. Gournis, M. Subratı.

U.S. Patent pending

- **"Experimental study of steady state flow paths during the immiscible flow of ganglia in stochastic porous media micromodels."**

A. Anastasiou, I. Zarikos, A. Giotis, L.Talon, D.Salin. (submitted)

- **"The peculiar size and temperature dependence of water diffusion in carbon nanotubes studied with 2D NMR diffusion-relaxation D-T2eff spectroscopy"**

L. Gkoura, G. Diamantopoulos, M. Fardis, D. Homouz, S. Alhassan, M. Beazi-Katsioti, M. Karagianni, **A. Anastasiou**, G. Romanos, J. Hassan and G. Papavassiliou.
Biomicrofluidics

- **"1H NMR tests on damaged and undamaged XLPE and SiR samples"**

L. Gkoura, T. Wang, **A. Anastasiou**, N. Harid, H. Griffiths, M. Haddad, M. Fardis, M. Karayianni.
High Voltage IET Journals

- **"^{31}P NMR Nanocrystallography: Visualizing the size-induced structural and electronic changes at the surface of the HER nanocatalyst Ni_2P"**

N. Panopoulos, M. Fardis, S. M. Alhassan, M. S. Katsiotis, V. Tzitzios, H. J. Kim, W. Papawassiliou, **A. Anastasiou**, D. Gournis, R. E. Taylor, D. Koumoulis, N. Boukos, M. Karagianni, V. Pillai, T. Karagiannis, S. Stephen, T. G. Maris and G. Papavassiliou (submitted).

- **"The Peculiar Size Dependent Ultrafast Water Flow in Carbon Nanotubes: A Combined 2D NMR Diffusion-Relaxation (D-T_2) and Molecular Dynamics Simulations Study"**

Gkoura, L.; Diamantopoulos, G.; Homouz, D.; Alhassan, S.; Beazi-Katsioti, M.; **Anastasiou, A**.; Karagianni, M.; Romanos, G.; Fardis, M.; Hassan, J.; Papavassiliou, G.

The Journal of Physical Chemistry

- **"Temperature study of ionic liquid, confined in 2 mesoporous systems using Nuclear Magnetic Resonance spectroscopy"**

Gkoura, L., Papavassiliou, G., Hassan, J., Romanos, G., **Anastasiou, A.,** Karagianni, M., Fardis, M., Karonis, D. and Beazi-Katsioti, M.

12th Panhellenic Scientific Conference on Chemical Engineering

ATTENDED CONFERENCES / SEMINARS / WORKSHOPS

- **Interpore 2021**

  June 2021, Oral presentation: Experimental study of steady state flow paths during the immiscible flow of ganglia in stochastic porous media micromodels.
- **Artificial Intelligence in Nanotechnology and Nanoelectronics**

  March 2019, National Centre for Scientific Research ‘‘DEMOKRITOS’’
- **Microscopy seminars**

  November 2018, National Centre for Scientific Research ‘‘DEMOKRITOS’’
- **Labview Workshop**

  24 January 2017 El. Eng, Technical Sales, Epsilon Metrisys
- **Sixth North America-Greece-Cyprus Workshop on Paramagnetic Materials NAGC 2015**

  Athens Greece 3-6 June 2015 Acropolis Museum
- **Summer School 2013 8-19 July at N.C.S.R. “Demokritos”**

  National Centre for Scientific Research ‘‘DEMOKRITOS’’
- **1st Hellenic Forum for Science, Technology and Innovation at N.C.S.R. “Demokritos”**

  National Centre for Scientific Research ‘‘DEMOKRITOS’’

LANGUAGES

ENGLISH	- English Terminology for Physics and Mathematics (NTUA) - First Certificate in English, (University of Cambridge).
GREEK	- Native speaker
FRENCH	- Elementary Proficiency

SKILLS

Programming	Java, Visual Basic, Pascal, Fortran.
Databases	MySQL, Firebird, Access
Software packages	LabView, Matlab, Microsoft Office, Mathematica, WordPress(CMS), Joomla(CMS), Dreamweaver, Premier, AutoCAD 2D/3D.
Operating systems	Microsoft Windows, Linux, DOS.
Musical Studies	Pre-Diploma piano studies.