

Dr. Ernestos Sarris

Curriculum Vitae



PERSONAL INFORMATION

Address: Thessalonikis 6, Agios Pavlos,
Nicosia, Cyprus, Europe. P.O.Box 2363.

E-mail: sarris.e@unic.ac.cy

Nationality: Greek-Cypriot.

Telephone: 00357-99450772.

Date of Birth: October 8, 1978.

Marital Status: Married with 1 child (male).

AREAS OF SPECIALIZATION

Computational Methods: Coupled finite elements, finite volumes, differential equations, singular integral equations.

Applied Mechanics: Poromechanics with applications in transport phenomena in porous media, fracture mechanics, plasticity theory, nano-indentation, analytical methods, aquifer recharge in hydrology.

Petroleum Geomechanics: Petroleum rock mechanics which includes problems in hydraulic fracturing, sanding prediction and control, wellbore stability, multiphase flows with applications in the CO₂ geological storage, compaction and enhanced oil recovery EOR.

EDUCATION

University of Cyprus, Nicosia, Cyprus

Ph.D. in Petroleum Geomechanics, (9/2005 – 4/2011)

Department of Civil and Environmental Engineering

Thesis: *“Modelling of fluid driven fractures in cohesive poroelastoplastic formations”*

Technical University of Crete, Chania, Greece

Master of Science in Environmental Geomechanics, (10/2004 - 8/2005)

Department of Mineral Resources Engineering

Thesis: *“Numerical and theoretical investigation of the stress and strain fields in Brazilian discs with cracks and notches”*

Technical University of Crete, Chania, Greece

Bachelor of Science in Mineral Resources Engineering, (10/1999 - 9/2004)

Department of Mineral Resources Engineering

Thesis: *“Blasting waves modelling in mining operations with finite elements”*

PROFESSIONAL AND TEACHING EXPERIENCE

(07/2021 – Present:
Tenure Associate
Professor) **University of Nicosia. Department of Engineering (Position:
Associate Professor)**

(09/2015-07/2021:
Tenure Track Assistant
Professor) **Undergraduate courses offered/prepared for the Oil and Gas
Engineering Program**

- Rock and Fluid Properties/ Petrophysics (OGEE-220/OGEE-225)
- Drilling Engineering (OGEE-320)
- Well Construction and Completion Design (OGEE-350)
- Hydrocarbon Recovery Techniques (OGEE-430)
- Physical Geology (GEOL-110/ OGAS-211)
- Petroleum Geology (GEOL-210/ OGAS-212)
- Special topics in Oil and Gas Engineering (OGEE-490)
- General Physics I (PHYS-150)

(2013-2015: Adjunct
Lecturer)

(2011-2013: Post-doc
Researcher)

Undergraduate courses offered/prepared for the Civil and Environmental Engineering Program

- Soil Mechanics (with Laboratory) (CEE-330)
- Foundations and Retaining Structure Design (CEE-431)
- Geotechnical Engineering (CEE-430)
- Engineering Geology (GEOL-121)
- Strength of Materials (MENG-270)
- Fluid Mechanics (MENG-280)

Undergraduate courses offered/prepared for the Oil and Gas Management Program

- Fuels Science and Technology (OGAS-215)
- Petroleum Engineering Essentials (OGAS-425)

Post-graduate courses offered/prepared

- Petroleum Geology (OGEE-510)
- Drilling Engineering (OGEE-520)
- Well Engineering (OGEE-524)
- Hydrocarbon Flow in Porous Media (HGC-7.2)

Director of Laboratories

- Drilling and Completion fluids
- Rock and Soil Mechanics
- Petrophysics

01/2015 - Present

**Aristotle University of Thessaloniki (AUTH)
(Position: Visiting Associate Professor)**

Hydrocarbon Flow in Porous media (HGC-7.2)

10/2014 - 10/2017

**Intercollege of Nicosia. Gas Fuel Technicians Program (Position:
Assistant Professor)**

Courses offered/prepared

- Hydrocarbons Characterization
- Soil Mechanics (with Laboratory)

08/2012

Intercollege

Consulting and Preparation of the Path and Syllabus of the Gas Fuel Technicians Program (Operated from Fall 2013 until Spring 2016).

RESEARCH PROJECTS

(Enterprises: 2022 – Contract Preparation)	Latouros Quarries LTD (Coordinator- Principal Researcher- Consultant) Coordinator in the following research project funded R.I.F. Title: “ <i>Drilling Fluid Systems with Cyprus Bentonites</i> ”
(Enterprises: 2022- Ongoing)	Advanced Materials Design and Manufacturing LTD (AmaDema) (Principal Researcher- Consultant) <ul style="list-style-type: none">● Researcher in the following research project funded R.I.F. Title “<i>Development of enhanced fuel filtering systems using electrospun nanofibers</i>”. Acronym: NanoFilter
(Enterprises 2018- 2021: Completed)	<ul style="list-style-type: none">● Researcher in the following research project funded R.I.F. Title: “<i>Intelligent Roll-to-Roll Processing of Advanced Carbon Fabrics based on Machine Learning and Non-Linear Automatic Control</i>”
(PostDoc in Enterprises: 2018 – 2022: Completed)	<ul style="list-style-type: none">● Researcher in the following research project funded R.I.F. Title: “<i>Nano-Controlled Porosity for Multifunctional Fibre Reinforced Polymer Composites</i>”
06/2012 - 04/2015	University of Cyprus as Principal Researcher Principal Researcher, 30 month research project funded by the Research promotion Foundation (R.P.F). Title: “ <i>The Risk of Formation Fracturing in CO₂ Geological Storage</i> ”
10/2011 - 06/2012	University of Cyprus (Principal Researcher) Research fellow (Nireas International Water Research Centre)
05/2011 – 01/2012	Cyprus University of Technology (Principal Researcher) Research fellow (Research Unit for Nanostructured Materials Systems)
09/2010 – 12/2011	Research associate (Scaling of plastic zones in hydraulic fracturing)
05/2006 - 05/2009	Principal Researcher, three year research project funded by the Research promotion Foundation (R.P.F). Title: “ <i>Numerical Simulation of the Hydraulic Fracturing Technique for Applications in Soils Remediation</i> ”

INDUSTRIAL EXPERIENCE

04/2018 - 06/2022	Cyprus Aggregates Producers Association C.A.P.A (Consultant) Principal Researcher, research project funded by CAPA. Title: “ <i>PM10 measurements at aggregates producing quarries of Cyprus – Stage II</i> ”
09/2017 - 09/2018	Cyprus Aggregates Producers Association C.A.P.A (Consultant) Principal Researcher, research project funded by CAPA. Title: “ <i>PM10 measurements at aggregates producing quarries of Cyprus– Stage I</i> ”
05/2010 - 08/2010	Hellenic Technical Enterprises Ltd Technical Report: “Tailings Dam Stability Analysis with Finite Elements at Mitsero ‘Open Pit’ Mine Facility”

OTHER INFORMATION

Awards

- Performance Award from the Technical Chamber of Greece (Academic Year of 2003-2004)
- Performance Award from the Technical Chamber of Greece (Academic Year of 2004-2005)

Scientific Committees and Memberships

(A) National and International Committees

- Member of the National Hydrocarbons Committee CYS/TC22
- Member of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)
- Member of the board of directors in the Cypriot Society of Soil Mechanics and Geotechnical Engineering (CSSMGE)
- Member of the European Technical Committee on Numerical Methods (ERTC7)

(B) Department of Engineering

- BSc and MSc Oil, Gas and Energy programs coordinator (2021-Present)
- Associate Head of the Department of Engineering (2018-2020, position via elections)
- Department Postgraduate Programs Committee (DPPC): member (2018-2021)

(C) Professional Bodies

- Chair of the Mineral and Mining Engineering Committee of the Technical Chamber of Cyprus
- Member of the sub-committee for registering new Oil and Gas engineers at the Technical Chamber of Cyprus
- Member of the sub-committee for registering new Mining and Mineral Resources engineers at the Technical Chamber of Cyprus
- Member of the Scientific and Technical Chamber of Cyprus - Ref. Number: A099707
- Member of the Society of Petroleum Engineers (SPE) - Ref. Number: 3579797
- Member of the American Rock Mechanics Association (ARMA) Ref. Number: 3020359
- Member of Evaluation Committee for Environmental Reports appointed by the Technical Chamber of Cyprus
- Member of the professional research committee of the Technical Chamber of Cyprus
- Member of the Scientific Committee for Water issues in Cyprus appointed by the Technical Chamber of Cyprus (2018-2021)

(D) Service to Governmental and NGO's

- Reviewer of proposals for industrial applications submitted to the Ministry of Energy, Commerce, Industry and Tourism
- Partner with the Cyprus Energy Agency for regarding energy auditor all three levels
- Examiner for energy auditors all three levels at the Ministry of Energy, commerce and industry

Journal Reviewer (Manuscripts)

- International Journal for Numerical and Analytical Methods in Geomechanics (IF: 2.814) **(M:9)**
- Applied Mathematical Modelling (IF: 3.633) **(M:1)**
- Simulation Modelling Practice and Theory (IF: 2.219) **(M:2)**
- International Journal of Solids and Structures (IF: 3.213) **(M:4)**
- Petroleum Science (IF: 2.034) **(M:2)**
- Computers and Geotechnics (IF: 3.818) **(M:1)**
- Geomechanics for energy and the Environment (IF: 2.077) **(M:3)**
- Journal of Petroleum Science and Engineering (IF: 3.706) **(M:6)**
- European Journal of Environmental and Civil Engineering (IF: 1.832) **(M:2)**
- Rock Mechanics and Rock Engineering (IF: 5.252) **(M:5)**
- Energies (IF: 2.702) **(M:6)**
- International Journal of Engineering Science (IF: 9.219) **(M:1)**

Doctoral Dissertations

- 1) Mr. Demetris Photiou (Nationality: Greek-Cypriot)
Title: “*Computational Modelling of Nano-Indentation on Emerging materials: Auxetics, hard thin film cohesive-frictional solids*”.
Role: Co-supervision with Prof Constantinides, Department of Mechanical Engineering -CUT
Status: *Graduated:* June 2019.
- 2) Mr. Panos Kakonitis (Nationality: Greek-Cypriot)
Title: “*A Novel Model for Predicting Sand Production from Oil and Gas Reservoirs*”.
Under Scholarship from the Ministry of Energy, Commerce, Industry and Tourism (30.000 Euro).
Role: Main Advisor
Status: Started September 2022.
- 3) Mrs. Ioustina Ramsis (Nationality: Greek-Egyptian)
Title: “*The Use of Cyprus Bentonites as Low Density Solids in Environmental Drilling Fluids*”.
Under Scholarship from the Ministry of Energy, Commerce, Industry and Tourism (30.000 Euro).
Role: Main Advisor
Status: Started September 2022.

Master of Sciences

- 1) Mr. Benson Chizubem (Nationality: Nigerian)
Title: “*Finite Element Analysis of the Stress Field around Deep Wellbores for Fracture Onset Prediction*”.
Role/Status: Main Advisor-UNIC, ***Graduated:*** November 2016.
- 2) Mr. Yasir Shahzad (Nationality: Iranian)
Title: “*The Influence of Proppants in Hydraulic Fracture Design For Optimum Production Unconventional Horizontal Gas Wells Using A Classical Field Simulator*”.
Role/Status: Main Advisor-UNIC, ***Graduated:*** September 2017.
- 3) Mr. Aladeyelu Abdullahi Shola (Nationality: Nigerian)
Title: “*The Influence of Diffusion in Wellbore Strengthening: A Rock Mechanics Approach*”.
Role/Status: Main Advisor, ***Graduated:*** February 2018.
- 4) Mr. Vincent Okoampah-Apau (Nationality: Nigerian)
Title: “*Poroelastic Stress Analysis For Wellbore Stability With the Finite Element Method*”.
Role/Status: Main Advisor-UNIC, ***Graduated:*** March 2018.
- 5) Mrs. Anna Solomou (Nationality: Greek-Cypriot)
Title: “*Experimental and Numerical Investigation of Sorptivity and Drying Characteristics of Rocks*”.
Role/Status: co-advisor with UCY. ***Graduated:*** January 2019.
- 6) Mrs. Georgina Apostolidou (Nationality: Greek-Cypriot)
Title: “*Theoretical and Experimental Investigation of the Influence of Capillary Pressure in Fluid Flow in Porous Media During Imbibition and Desaturation*”.
Under Scholarship from the Ministry of Energy, Commerce, Industry and Tourism (20.000 Euro).
Role/Status: Main Advisor-UNIC, ***Graduated:*** March 2020.

- 7) Mr. Ahmad Muazu (Nationality: Nigerian)
Title: “*Constraining the In-Situ Stresses in the Offshore Benin Basin With Finite Elements*”.
 Role/Status: Main Advisor-UNIC, **Graduated:** June 2020.
- 8) Mr. Murtala Namakka (Nationality: Nigerian)
Title: “*A Computational Study of Hollow Cylinder Tests on Weak Unconsolidated Sandstones for Sand Production Prediction*”.
 Role/Status: Main Advisor-UNIC, **Graduated:** June 2020.
- 9) Mr. Sofronis Severis (Nationality: Greek-Cypriot)
Title: “*A Computational Methodology for Constructing the Synthetic Wetting Capillary Curve of Rocks*”.
Under Scholarship from the Ministry of Energy, Commerce, Industry and Tourism (20.000 Euro).
 Role/Status: Main Advisor-UNIC, **Graduated:** June 2020.
- 10) Mr. Peleg Kuflig (Nationality: Israeli)
Title: “*Fracture Toughness Analysis Around a Crack Tip: A Rock Mechanics Approach*”.
 Role/Status: Main Advisor-UNIC, **Graduated:** June 2020.
- 11) Mr. Theodoros Cheimonas (Nationality: Greek-Cypriot)
Title: “*Modeling Formation Stability after Hydraulic Fracturing in Weak Reservoirs*”.
Under Scholarship from the Ministry of Energy, Commerce, Industry and Tourism (20.000 Euro).
 Role/Status: Main Advisor-UNIC, **Graduated:** January 2021.
- 12) Mr. Alexandros Alexiou (Nationality: Greek)
Title: “*Numerical Analysis of Poroelastoplastic effects in Wellbore Stability with the Finite Element Method*”.
 Role/Status: Main Advisor-UNIC, **Graduated:** July 2022.
- 13) Mr. Prokopis Alexandrou (Nationality: Greek-Cypriot)
Title: “*Modelling CO₂-Induced Uplift of Caprocks for the Various Flow Regimes in the CO₂ Sequestration Problem*”.
 Role/Status: Main Advisor-UNIC, **Graduation Estimation:** January 2023.
- 14) Mrs. Evangelia Tzoumani (Nationality: Greek)
Title: “*Heave Analysis Caused from CO₂ Injection in geologic formations*”.
 Role/Status: Main Advisor-AUTH, **Graduation Estimation:** June 2023.
- 15) Mr. Stelios Papadimitriou (Nationality: Greek)
Title: “*Investigation of the Viability of the East Med Pipeline Design with PipeSim*”.
 Role/Status: Main Advisor-AUTH, **Graduation Estimation:** June 2023.
- 16) Mr. Dimitris Karayiannis (Nationality: Greek)
Title: “*Optimum Perforation Design of North Sea Well With PipeSim*”.
 Role/Status: Main Advisor-AUTH, **Graduation Estimation:** June 2023.

Bachelor of Sciences

- 1) Miss Marianna Stavrinides (Civil Engineering)
Title: “*An Experimental Analysis of Sorptivity in Natural Building Sedimentary Rocks*”.
 Role/Status: Main Advisor-UNIC, **Graduated:** February 2018.
- 2) Mr. Phanourios Theodotou (Civil Engineering)
Title: “*Finite Element Modelling of Water Transport in Natural Building Stones*”.
 Role/Status: Main Advisor-UNIC, **Graduated:** January 2019.

3) Mr. Samson Balde (Civil Engineering)

Title: “*The Comparison of Various Methods of Calculating The Pile Capacity*”.

Role/Status: Main Advisor-UNIC, **Graduated:** May 2019.

4) Mrs. Marwa Manwar (Civil Engineering)

Title: “*The Effect of Seismic Soil-Structure Interaction on the Response of a Building*”.

Role/Status: Main Advisor-UNIC, **Graduated:** January 2020.

Collaborations

1. Aristotle University of Thessaloniki (AuTH), School of Applied Sciences, Department of Geology. (Research/teaching partnership)
2. National Technical University of Athens (NTUA), School of Mining and Metallurgical engineering.
3. University of Cyprus (UCY), School of Engineering, Department of Civil Engineering (Research partnership)
4. Cyprus University of Technology (CUT), School of Engineering, Department of Civil Engineering and Department of Mechanical Engineering (Research partnership)
5. University of Kentucky (UK), School of Engineering, Department of Mining Engineering (Research partnership)
6. Schlumberger Research Centre at Cambridge Gould (Research partnership)
7. SINTEF Petroleum (Research partnership)
8. Research Unit for Nanostructured Materials Systems of CUT (Research partnership)
9. Halliburton Drilling and Completion Fluids (collaboration-student internships)

Computer Experience and Skills

Programming

Mathematica, Maple, Fortran, Matlab, Mathcad.

Operating Systems

Windows, Unix, Microsoft Office.

Designing Software

Autocad, Cad Overlay, Solid works

Finite Element Software

Abaqus, MSC. Marc-Mentat, Plaxis geotechnical package, Franc2D fracture mechanics finite element code.

Computational Fluid Dynamics

Ansys – Fluent, Ansys- CFX

Petroleum Related Analysis Software

Petrel-Reservoir Engineering, Eclipse-Blackoil Reservoir Simulation, Pipe-sim, CMG.

Languages

	Reading	Writing	Speaking
Greek	Native	Native	Native
English	Excellent	Excellent	Excellent

Army service (Compulsory and Completed)

Special Forces (1996-1998). Navy U.D.T (Underwater Demolition Teams).

PUBLICATION LIST

Journal Papers

- [J22]. Kakonitis P., Gravanis E. and **Sarris E.** (2022). “A simplified hydro-mechanical framework for predicting sand production in hollow cylinder tests”. *International Journal for Numerical and Analytical Methods in Geomechanics*. (Under review)
- [J21]. Gravanis E. and **Sarris E.** (2022). “A new analytical method for calculating subsidence resulting by fluid withdrawal from disk-shaped confined aquifers”. *Advances in Water Resources*. (Under review)
- [J20]. Gravanis E. and **Sarris E.** (2022). “A working model for estimating CO₂-induced uplift of cap rocks under different flow regimes in CO₂ sequestration”. *Geomechanics for Energy and the Environment*. (Under review)
- [J19]. Kakonitis P., **Sarris E.** and Gravanis E., (2022). “On the stress dependency of sand production coefficient in hydro-dynamical sanding criteria”. *International Journal of Rock Mechanics and Mining Sciences*. (Under review)
- [J18]. **Sarris E.** and Gravanis E., (2022). “A hydrodynamic model for analyzing the closure stresses in the wellbore strengthening problem”. *International Journal for Numerical and Analytical Methods in Geomechanics*. Vol. 46(9), pp. 1705–1728.
- [J17]. Apostolidou C., **Sarris E.** and A. Georgakopoulos (2022). “Dynamic thermal aging of water-based drilling fluids with different types of low-rank coals as environmental friendly shear thinning additives”. *Journal of Petroleum Science and Engineering*. Vol.208, article no. 109758.
- [J16]. Evangelou A., Loizou K., Georgallas M., **Sarris E.**, Marangos O., Koutsokeras L., Yiatros S., Constantinides G., Doumanides C., and V., Drakonakis (2021). “Evaluation of a thermal consolidation process for the production of enhanced technical fabrics”. *Machines*. Vol. 9(8), article no.143.
- [J15]. Papaloizou, L., **Sarris, E.**, Polycarpou, P., & Komodromos, P. (2020). “Earthquake vulnerability of ancient multi-drum columns with a single epistyle”. *Procedia Structural Integrity*, Special Vol. 29, pp. 111-117.
- [J14]. **Sarris E.** and Gravanis E. (2019) “Flow regime analysis of the pressure build-up during CO₂ injection in saturated porous rock formations”. *Energies*, Vol.12 (15), article no. 2972. <https://doi.org/10.3390/en12152972>.
- [J13]. **Sarris E.** and Gravanis E., (2019) “A novel methodology for synthesizing the wetting capillary pressure curve of rocks through sorptivity data” *Journal of Petroleum Science and Engineering*. Vol.180. pp. 413-423.
- [J12]. Photiou D., **Sarris E.**, and Constantinides G. (2017). “Erratum to “on the conical indentation response of elastic auxetic materials: effects of Poisson’s ratio, contact

- friction and cone angle [Int. L. Solids Struct. (2016) Vol. 81, pp.33-42]”, *International Journal of Solids and Structures*.
- [J11]. Papanastasiou P., Kyriakou, A., **Sarris E.** (2017). “Constraining the in-situ stresses in a tectonically active offshore basin in Eastern Mediterranean” *Journal of Petroleum Science and Engineering*, vol.149 (20), pp. 208-217.
- [J10]. Photiou D., Prastiti N., **Sarris E.**, and Constantinides G. (2016) “On the conical indentation response of elastic auxetic materials: Effects of Poisson’s ratio, contact friction and cone angle”, *International Journal of Solids and Structures*, vol.81 (1), pp. 33-42.
- [J9]. Atkinson C., **Sarris E.**, Gravanis E., and Papanastasiou P. (2016). “On certain integral equations arising in the analysis of wellbore recharge in anisotropic formations”, *Applied Mathematical Modelling*, vol.40 (1), pp. 343-362.
- [J8]. Gravanis E., **Sarris E.**, and Papanastasiou P. (2015). “Hydro-mechanical erosion models for sand production”, *International Journal for Numerical and Analytical Methods in Geomechanics*, vol.39 (18), pp. 2017-2036.
- [J7]. **Sarris E.**, Papanastasiou P. (2014). “The influence of pumping parameters in fluid-driven fractures in weak porous formations” *International Journal for Numerical and Analytical Methods in Geomechanics*, vol.39 (6), pp. 635-654.
- [J6]. **Sarris E.**, Gravanis E., Papanastasiou P. (2014). “Investigation of the self-similar interface evolution in carbon dioxide sequestration in saline aquifers”, *Transport in Porous Media*, vol.103(3), pp. 341-359.
- [J5]. **Sarris E.**, Constantinides G. (2013). “Finite element modeling of nano-indentation on C-S-H: effect of pile-up and contact friction”, *Cement and Concrete Composites*, vol. 36, pp. 78-84.
- [J4]. **Sarris E.**, Papanastasiou P. (2012) “Numerical modeling of fluid-driven fractures in cohesive poroelastoplastic continuum”, *International Journal for Numerical and Analytical Methods in Geomechanics*, vol.37 (12), pp. 1822-1846.
- [J3]. **Sarris E.**, Papanastasiou P. (2012). “Modeling of hydraulic fracturing in a poroelastic cohesive formation”, *International Journal of Geomechanics*, vol.12 (2), pp. 160-167.
- [J2]. **Sarris E.**, Papanastasiou P. (2011). “The influence of cohesive process zone in hydraulic fracturing modelling”, *International Journal of Fracture*, Springer, vol. 167 (1), pp. 33-45.
- [J1]. **Sarris E.**, Agioutantis Z. (2004). “Numerical simulation of the dynamic phase during rock blasting”, *Mineral Wealth*, vol. 133, pp. 9-18 (in Greek).

Book Chapters

- [BC3] Papanastasiou P. and **Sarris E.** “Cohesive Zone Models”, *Porous Rock Failure Mechanics: with application to hydraulic fracturing, drilling and structural engineering*. Eds. Sojaei A., and J Shao. Woodhead Publishing-Elsevier (2017).
- [BC2] **Sarris E.**, **Agioutantis Z.**, **Kaklis K.** and **Kourkoulis S. K.**, “Numerical simulation of the cracked Brazilian disk under diametrical compression”, *Bifurcations, Instabilities, Degradation in Geomechanics*, Springer-Verlag, (2007).
- [BC1] **Markides Ch.**, **Sarris E.**, **Pazis D.N.**, **Agioutantis Z.**, **Kourkoulis S. K.**, “Marble discs under distributed loading: theoretical, numerical and experimental

analysis”, *Fracture of Nano and Engineering Materials and Structures*, Springer-Verlag, (2006).

Edited Books

[ED1]. Papanastasiou P., Roussis P., Loukidis D., Katsikadelis J. and **E. Sarris** (Editors) Proceedings of the 9th HSTAM-International Congress on Mechanics, Limassol, Cyprus, July 12-14, (2010).

Papers in Refereed Conference Proceedings

[C48]. **Sarris E.**, Gravanis E. and P. Papaloizou (2022). “A simplified model for predicting the CO₂-induced deflections of cap rocks in the low and high buoyancy flow regimes”. *3rd International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling and Application*. 14-16 November, Berkeley-California. USA.

[C47]. Papaloizou L., **Sarris E.**, Polycarpou P. and M. Kyriakides (2022). “Can ancient multi-drum columns be used as “stone” seismometers?”. *3ECEES, 3rd European Conference on Earthquake Engineering and Seismology*. 4-9 September, Bucharest-Romania.

[C46]. Gravanis E, **Sarris E.** and S. Patruno (2022). “A simplified hydro-mechanical model for sanding from hollow cylinder tests”. *American Rock Mechanics Association (ARMA)*, June 26-29, New Mexico-USA.

[C45]. Patruno S., Abdallah I., Olanrewaju O., Scisciani V. and **E. Sarris** (2021). “The Zohr play in the Cyprus EEZ: geological observations from Miocene reef outcrops and offshore seismic”. In *3rd EAGE Eastern Mediterranean Workshop*. Vol. 2021, No. 1, pp. 1-3.

[C44]. Abdallah I., Patruno S., **Sarris E.**, Scisciani V. and F. Colantonio (2021). Characterization of fractured carbonate reservoirs: preliminary data from Miocene reef outcrops of Cyprus. In *82nd EAGE Annual Conference & Exhibition*. Vol. 2021, No. 1, pp. 1-5. European Association of Geoscientists & Engineers.

[C43]. Patruno S., Abdallah I., Scisciani V., **Sarris, E.** and F. Colantonio (2021). “The anatomy of a fractured reef from Cyprus: a possible analogue for the Eastern Mediterranean carbonate reservoirs”. In *EGU General Assembly Conference Abstracts*. April, pp. EGU21-6485.

[C42]. Savva I., Loizou K., **Sarris E.**, Koutsokeras L., Marangos O., Constantinides G., Yiatros S., Sofocleous K. and V. Drakonakis (2021). “Nano-reinforced epoxy foaming systems for the development of multifunctional fiber reinforced polymer composites”. *European Congress and Exhibition on Advanced Materials and Processes*. EUROMAT-2021, Austria-Europe, 12-16 September.

- [C41]. **Sarris E.**, Gravanis E. and L. Papaloizou (2021). “A Hydro-dynamical constitutive law for modelling sand production”. *55th American Rock Mechanics Association (ARMA)*. June 18-25, Houston Texas-USA.
- [C40]. **Sarris E.**, Gravanis E. and L. Papaloizou (2020). “Pressure build-up analysis in the flow regimes arising in the CO₂ sequestration problem”. *2nd International Conference on Energy Geotechnics (ICEGT-2020)*. La Jolla, San Diego, California, USA, postpone due to Covid-19 for March 28-31, 2021.
- [C39]. **Sarris E.**, Gravanis E. and L. Papaloizou (2019). “On the poroelastic closure stress on particles for wellbore strengthening applications”. *Hellenic Society for Theoretical and Applied Mechanics (HSTAM)*. Thessaloniki-Greece, Aristotle University of Thessaloniki, September 22-25.
- [C38]. **Sarris E.**, Gravanis E. and L. Papaloizou (2019). “A computational methodology to reconstruct the capillary pressure vs saturation curve of rocks through sorptivity tests”. *American Rock Mechanics Association (ARMA)*. New York-USA, June 23-26.
- [C37]. Photiou D., **Sarris E.** and G. Constantinides (2018). “Finite element modeling of nanoindentation on thin films”. *XXXIII Panhellenic Conference on Solid State Physics and Material Science*. University of Cyprus, Nicosia, Cyprus, September 17-19.
- [C36]. Photiou D., **Sarris E.** and G. Constantinides (2018). “Finite element modeling of nanoindentation on super-hard materials”. *XXXIII Panhellenic Conference on Solid State Physics and Material Science*. University of Cyprus, Nicosia, Cyprus, September 17-19.
- [C35]. Papaloizou L., Polycarpou P., **Sarris E.** and P. Komodromos (2018). “Computer-aided investigation of the seismic response of ancient columns”. *36th General Assembly of the European Seismological Commission (GAESC)*. Valletta, Malta, September 2-7.
- [C34]. **Sarris E.** and E. Gravanis (2018). “Investigation of the influence of diffusion on the closure stress on particles for wellbore strengthening applications”. *International Symposium on Energy Geotechnics*. Lausanne, Switzerland, September 25-28.
- [C33]. **Sarris E.** Aladeyelu, A., and E. Gravanis (2018). “The influence of diffusion in the fracture resistance method for wellbore strengthening: A Rock Mechanics Approach”. *14th International Conference of Computational Methods in Sciences and Engineering*. Thessaloniki, Greece, March 14-18.
- [C32]. **Sarris E.**, Cheimonas, T., and Gravanis E., (2017). “The influence of pore pressure on formation stability after hydraulic fracturing”. *5th International Conference on Computational Modeling of Fracture and Failure of Materials and Structures*. Nantes, France, June 14-16.

- [C31]. Daria K. and **E. Sarris** (2017). “CFD analysis of the interface evolution from carbon dioxide sequestration for EOR”. *East Meets West Congress*. Cracow, Poland, April 4-6.
- [C30]. Gravanis E. **Sarris E.**, and P. Papanastasiou (2016). “A hydro-mechanical erosion analytical model for sand prediction”. *50th US Rock Mechanics/Geomechanics Symposium (ARMA)*. Houston-TX, June 26- 29.
- [C29]. Photiou D., **E. Sarris**, and G. Constantinides (2016). “Indentation resistance of elastic and elastic-plastic auxetic materials: A finite element study”. *13th International Conference on Nanosciences & Nanotechnologies (NN16)*. Thessaloniki, Greece, 5-8 July.
- [C28]. Photiou D., Prastiti N., **Sarris E.** and G. Constantinides (2015). “Indentation resistance enhancement of auxetic materials: A numerical investigation”. *XXXI Panhellenic Conference on Solid State Physics and Materials Science*. Thessaloniki, Greece, 20-23 September.
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- [C1]. **Sarris E. and Z. Agioutantis** (2005). “**Numerical investigation of damping in rock blasting operations**”. *International Conference for MSC Users*. Patras, Greece.

Invited Speaker in Seminars

- [S12]. **Sarris E.**, “Air Quality In Quarries and Nearby Communities”, UEPG: Union Européenne des Producteurs de Granulats, 16 June, Larnaka-Cyprus (2022).
- [S11]. **Sarris E.**, “PM10 Dust Emission Measurements – Second Phase”, UNIC: University of Nicosia, 15th of December, Public Online streaming presentation (2021).
- [S10]. **Sarris E.**, “Fluid Flow in Porous Media - Capillary Mechanics”. Aristotle University of Thessaloniki, Department of Applied Sciences. Invited lecture. Thessaloniki-Greece (2019).
- [S9]. **Sarris E.**, “PM₁₀ Measurements at Aggregate Producing Mines of Cyprus”. Department of Labour Inspection DLI. Public Lecture. Nicosia-Cyprus (2018).
- [S8]. **Sarris E.**, “PM₁₀ Measurements at Aggregate Producing Mines of Cyprus”. Cyprus Chamber of Commerce and Industry (CCCI). Public Lecture. Nicosia-Cyprus (2018).
- [S7]. **Sarris E.** & A. Aladeyelu. “The Influence of Diffusion in the Fracture Resistance Method for Wellbore Strengthening: A Rock Mechanics Approach”. SPE/AAPG Student Chapter Presentation, University of Nicosia, Department of Engineering, Oil, Gas and Energy program, Nicosia-Cyprus, November 28, (2018).
- [S6]. **Sarris E.** “Advanced Numerical Methods in Rock Engineering”. Civil and Environmental Engineering Department seminars, invited speaker at Chalmers Technical University, Sweden September 22, (2016).
- [S5]. **Sarris E.** “Geology of Carbonate Rocks”, in the: *Third Licensing Round: Game-Changing Possibilities*, University of Nicosia, June 9, (2016). Under the auspices of the Minister.
- [S4]. **Sarris E.**, Gravanis, E., and Papanastasiou, P., “The Risk of Formation Fracturing from CO₂ Sequestration in Geological Formations”, Technical University of Crete, Department of Mineral Resources Engineering, Chania, Crete, (2015).
- [S3]. **Sarris E.**, “Modelling of Fluid Driven Fractures in Cohesive Poroelastoplastic Formations”. SPE Chapter Presentation, University of Nicosia, Department of Oil and Gas Energy Engineering, Nicosia, Cyprus, April 10, (2014).
- [S2]. **Sarris E.**, “Hydrocarbon (Petroleum and Gas) System in Marine Environments”. Seminar Presentation, University of Nicosia, Department of Oil and Gas Energy Engineering, Nicosia, Cyprus, September 11, (2014).
- [S1]. **Sarris E.**, “The Risk of Formation Fracturing from CO₂ Sequestration”. SPE Student Chapter Presentation, University of Nicosia, Department of Engineering Oil, Gas and Energy program, Nicosia, Cyprus, December 5, (2014).

Abbreviations

- [J]: Journal paper
 [C]: Conference or extended abstract
 [BC]: Book chapter
 [ED]: Edited books
 [S]: Seminars

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