

Curriculum Vitae

Vassilios C. Kelessidis, Professor

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SPE # 1355155

Education

- 1980 Diploma Chemical Eng., Aristotelian Univ. of Thessaloniki, GREECE
Thesis: *New canning techniques; Aseptic Canning*
GPA: 8.0 / 10.0
- 1982 Master of Science, Chemical Eng., Oregon State Univ. USA
Thesis: *Biofouling characteristics of cooling tower water*
GPA: 3.9 / 4.0
- 1985 Doctor of Philosophy, Chemical Eng., Univ. of Houston, TX, USA
Thesis: *Vertical Upward Gas Liquid Two Phase Flow in Concentric and Eccentric Annuli*
GPA: 3.9 / 4.0

Professional Experience

- 1986-1990 Project Leader, Senior Development Engineer, Senior Engineer, ANADRILL SCHLUMBERGER, Houston, USA
System development for drilling services support involving multiphase flows and rheology, bench scale, pilot and field testing, gas kick detection and analysis, collection and quantification of gas hydrocarbons while drilling (one patent granted).
- 1990-1993 Section Head, Senior Development Engineer, DOWELL SCHLUMBERGER, Saint Etienne, FRANCE
Study, development, application of optimal techniques for cement placement in oil wells, optimization of mud removal, generation of mud removal log, data analysis with statistical techniques, pilot and field testing, onshore and offshore. Supervised a team of 5 senior engineers, strategic directions, performance assessment, implementation of 1 million US\$ field testing program with Agip.
- 1993-1994 Programme Leader, SCHLUMBERGER CAMBRIDGE RESEARCH, Cambridge, GREAT BRITAIN
Development of novel drilling techniques with high pressure fluid and asymmetrical bit cutters for inclined and horizontal drilling. Supervising a team of 4 senior researchers, implementing strategic research directions and research programs both in-house and through contract work.
- 1994-2000 HEAD Technology Transfer, THESSALONIKI TECHNOLOGY PARK & Chemical Process Research Engineering Institute, GREECE
Management of Incubator, Development of the Technology Transfer Center. Implementation of many development projects on technology transfer, promotion of innovation, University – Industry liaison. Created the Center with up to 7 professionals, managing project proposals, project implementation, budgeting, people assessment, strategic directions.
- 2000-today Assistant, Associate Professor, Professor, TECHNICAL UNIVERSITY OF CRETE, Dept. Mineral Resources Engineering, GREECE

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| | <i>Teaching and research on drilling engineering and fluid mechanics</i> |
| 2011-Today | NEXT, Instructor on Drilling Engineering related issues |
| 2014-Today | MOGL, Mobility Oil & Gas UK, Instructor on: Drilling Engineering, Advanced Deep Water Drilling |
| 2012-2015 | Professor, TEXAS A&M UNIVERSITY AT QATAR, Petroleum Engineering, QATAR |
| | <i>Teaching and research on drilling engineering and fluid mechanics. During the period August 2012 - August 2014 served as the Program Chair of 6 Faculty and 6 staff members, with student enrollment of approximately 100.</i> |

PROFESSIONAL AND SCIENTIFIC EXPERIENCE

Technical University Of Crete

TEACHING ACTIVITIES

I have been at the Mineral Resources Engineering Department of Technical University of Crete, Greece in the positions of Assistant, Associate and Professor in Drilling Engineering and Fluid Mechanics. Over these years I have developed and I have been teaching the undergraduate and graduate courses of:

- Drilling Engineering, 3 credit hrs, taught at the 9th semester of a 10 semester study curriculum of the undergraduate program, covering all aspects of drilling engineering for oil and gas. Implementation of three laboratory exercises, non-Newtonian fluid rheology, filtration properties and monitoring and measuring fluid flow of non-Newtonian fluid in a concentric annulus. Implementation of a term paper based on successful execution and simulation of drilling of an oil well using the PAYZONE simulator.
- Fluid Mechanics, 3 credit hrs, taught at the 6th semester of the undergraduate program, covering all aspects of fluid flow and of fluid statics, the basic and essential elements for fluid mechanics for every engineer. Implementation of 3 laboratory exercises, measuring fluid viscosity, monitoring and measuring pressure drop for flow of water in an annulus flow system, monitoring and measuring settling velocities of solids in Newtonian fluids.
- Elements of Coring for mineral exploration, water-well and geothermal drilling, 2 credit hrs, taught in the 7th semester of undergraduate program, covering all aspects of shallow drilling and coring activities. A book has been written (in Greek), published in 2011, "*Shallow and Specific Well Drilling*".
- Advanced Fluid Mechanics, 3 credit hrs, taught in the spring semester of the graduate program, covering non-Newtonian fluid flow with application in oil well drilling, fluid rheology of non-Newtonian fluids, measurements and monitoring, pressure drop estimation using in-house developed models and methodology.
- Advanced Drilling Engineering, 3 credit hrs, taught in the fall semester of the graduate program, covering issues of advanced drilling techniques, coil-tubing drilling, underbalanced drilling and environmental aspects of drilling applications.

DRILLING ENGINEERING & FLUID MECHANICS LAB at TUC

We have constructed a flow loop, a 5 m horizontal annulus, with capabilities for inclination from horizontal to vertical, with inner pipe diameter 40 mm and outer pipe diameter 70 mm, made of Plexiglas, allowing optical observations. It has capabilities for hydraulic and pressure drop measurements and for measurements for cuttings transport. The system is equipped with a mass flow meter and pressure transducer for DP measurements. All data is integrated into the PC for further analysis. The lab is equipped with a multi-point Couette Fann type viscometer and an API filter press, a rheometer for measuring yield stress, a rolling oven, a mud balance, a Marsh funnel and a tank system for measuring solid settling velocities.

RESEARCH PROJECTS - CURRENT

1. Implementing one project as co-Principal Investigator in 2014/15: Development of novel self-healing oil-well cements for use in oil-gas-geothermal drilling. Started July 2014.

RESEARCH PROJECTS - PAST

1. AIGEO (completed), A study for minimization of the reduction of core permeability from drilling fluids in oil-wells with the addition of Greek lignite. Duration: 2005-2006, Budget 50.000 €, Funding, Ministry of Education, Pythagoras II

The work aimed to determine the properties of drilling fluids that are responsible for the reduction of core permeability, at high temperatures, and develop proper additives with Greek lignites.

USE OF GREEK LIGNITES IN PREPARATION OF HIGH TEMPERATURE DRILLING FLUIDS (Completed). Duration: 2002-2005, Budget 78.000 €, Funding IGME

The aim of the project was the study of the use of Greek lignites to control rheological and filtration properties of high temperature drilling fluids.

Texas A&M University at Qatar (TAMUQ)

PROFESSOR-RESEARCHER

Between 2012-2015 I have been teaching Drilling Engineering and Advanced Drilling Engineering to senior students. I have been working as a researcher towards establishing at PETE-TAMUQ a Drilling Hydraulics, Drilling Fluid, Cementing and Drilling Engineering laboratory. The aim was to excel in research on fluid mechanics and multiphase flows, hydraulics and cuttings transport capacity of drilling fluids, on drilling fluid development and drilling fluid rheology, on formation damage by drilling fluids, on optimization of drilling process studying rock-bit interaction, and on elastic and self-healing cement formulation and cement slurry characterization using multiple experimental techniques, including low frequency Nuclear Magnetic Resonance techniques.

PROGRAM CHAIR

I chaired the Program of Petroleum Engineering for two years (August 2012 - August 2014), with six faculty members, six staff members, between 25 to 30 research associates/post-docs while total undergraduate student count was between 85 to 110 (there is not a graduate program in PETE TAMUQ). As significant achievements for the program in this post in the past two years, besides the successful running of the program operations, I note:

- The securing of funding of over 450,000 US\$ for the next three years from industry sponsors to cover a multitude of student activities.
- The revitalization of the Drilling Simulator, inactive for several years, with offering student training, and starting to offer training to industry professionals (additional effort must though be devoted to make it fully operational).
- The delivery of 13 seminars to students, faculty and staff throughout 2013 by academic/industry leaders in various areas of petroleum engineering.
- The commissioning of the rock-NMR unit (at atmospheric conditions).
- The acquisition of the Foam Rheometer/Acid core flooding unit (Grace Instruments) at the cost of 750.000 US\$
- The acquisition of Benchtop Magnetic Resonance Imaging (MRI), at a cost of ~ 650.000\$ for use in core flooding / EOR studies.

TEACHING ACTIVITIES

Teaching undergraduate courses, Drilling Engineering and Advanced Drilling Engineering.

- a) Drilling Engineering (previously PETE 405 / currently PETE 355), with contents, the design and evaluation of well drilling systems; identification and solution of drilling problems; wellbore hydraulics, well control, casing design; well cementing, wellbore surveying. Covering the book, Fundamentals of Drilling Engineering, by R.F. Mitchell and S.Z. Miska, 2011, SPE Textbook Series No. 12.
- b) Advanced Drilling Engineering (PETE 406), covering advanced drilling fluids; advanced drilling hydraulics; advanced well control; underbalanced drilling; coil tubing drilling; advanced drilling technologies; special topics, environmental aspects of drilling applications. Utilization of the Drilling Systems Drilling Simulator for Well Control applications and Hydraulic calculations.

RESEARCH ACTIVITIES

We study the rheology of non-Newtonian fluids and their filtration properties which enables us to work on additive development for use for e.g. in high temperatures and with made to order properties. We develop rheological models, using mainly Herschel-Bulkley model, having developed techniques for improving but also understanding rheological measurements. An in-house developed stand alone simulator is available for choosing the best rheological model of given viscometer (Fann) data.

For drilling hydraulics we have developed phenomenological models and we perform experiments for single phase and multiphase non-Newtonian flow, primarily Herschel-Bulkley fluids, in horizontal concentric and eccentric annuli. An integrated approach has been developed for predicting pressure losses in annuli for Herschel-Bulkley fluids flowing in laminar, transitional and turbulent flows, which has evolved into an in-house stand alone simulator utilized to predict pressure losses of non-Newtonian fluids in pipes and annuli.

We develop models of gas-liquid-solid flow in annuli for use in underbalanced drilling and for production engineering. We perform measurements for determining optimum conditions for cuttings transport in horizontal concentric and eccentric annuli. We develop models for settling velocities of solid particles in various non-Newtonian fluids and for bubble velocities in non-Newtonian fluids and develop theoretical models.

We are establishing a flow loop system, consisting of a horizontal, with capability to be inclined, transparent annulus of 4.5X2.5-in, with inner pipe rotational capabilities to study single- and multiphase flow phenomena in concentric and eccentric annuli, like study of single phase flows of non-Newtonian fluids and establishing frictional loss relationships, study of three/four phase flows for cuttings transport (expected to be commissioned by February 2015).

We work with our own PAYZONE simulator for optimizing drilling process regarding Weight on Bit, Torque and Rotational Speed and bit condition, using field data for adjusting the simulator and thus allowing optimization of the drilling process in future drilling campaigns in similar areas. We work currently to update the simulator.

We are developing integrated techniques of analyzing cement property measurements in order to identify significant effects of given additives to cement mechanical properties, utilizing sonic-tools (MPRO analyzer) and combining with NMR measurements.

We have a state-of-the-art foam rheometer and core flooding unit which allows for foam rheometry, formation damage studies with foam or standard drilling fluids, as well as for multitude type of experiments for core flooding using acid and non-acid fluids, at high pressures and high temperatures.

The lab is equipped with Anton-Paar MCR 302 rheometer, as well as a Grace Instruments M3500 viscometer and a Brookfield Rheometer, for studying rheological behavior of drilling fluids as well as magnetorheological fluids and developing additives for improved drilling fluid performance.

Research Projects

QATAR

2013

1. Awarded one project as Lead-Principal Investigator and one project as co-Lead Principal Investigator from the 6th National Priorities Research Projects cycle (NPRP-cycle) from Qatar National Research Fund (QNRF):
Development and testing of smart drilling fluids for resolving oil and gas drilling problems in the State of Qatar and for reducing environmental footprint. Three year program, Started January 1, 2014.
2. Awarded one project as co-Lead Principal Investigator from the 7th National Priorities Research Projects cycle (NPRP-cycle) from Qatar National Research Fund (QNRF):
Advanced Magnetic Resonance Imaging Methodologies for 3-D Analysis of Multiphase Flow Processes in Oil Reservoirs and Enhanced Oil Recovery. Three year program, Started February 2015.

OTHER ACTIVITIES AT TECHNICAL UNIVERSITY OF CRETE

- Vice-President and member of Managing Board of the Management Company of TUC dealing with the management of the Real Estate of TUC and for the Creation of a Science and Technology Park, 2007-2012
- Member of the 7-team Research Committee of TUC in charge of managing research projects of TUC with budget of 15 million Euro annually, 2009-2012.
- Coordinator of the Innovation and Entrepreneurship Unit of TUC, 2010-2012.
- TUC Coordinator of Practical Training, responsible for implementing the practical training of students of all four TUC Departments, 2006-2008.
- Departmental Coordinator responsible for implementing the practical training of students of Mineral Resources Engineering Department, 2002-2007.
- President of the Professor Body of TUC, 2008.

Schlumberger Companies (1986-1994)

Research, development and management for nine years in engineering and research centers of world's largest oil service company (drilling, pumping). Development of theoretical models and pilot systems, full scale and extensive field testing of new tools and techniques in drilling and cementing, both onshore and offshore, and pilot system testing, development of new techniques for hydrocarbon identification (Anadrill – Houston, patent issued). Extensive field testing of company simulator and cement placement techniques for optimization of cement placement in oil wells, implementation of cement jobs and of interpretation of cementing assessment via cement logs. Development of mud removal indicators for successful cement placement (Dowell, Saint Etienne). Engaged in developing novel drilling techniques using asymmetric bits and off-center jets via hydraulic drilling for application in ultra-short radius drilling wells with coil-tubing (Schlumberger Cambridge Research – Cambridge).

Other Activities

- Visiting Professor (five months), Departments of Mining Engineering and Petroleum and Natural Gas Engineering, Istanbul Technical University, Turkey, 2010.
- Visiting Scholar (three weeks), Chinese Academy of Sciences, Beijing China, 2009.
- International Manager in Technology Park and Incubator management, Innovation Promotion, Technology Transfer, Technology Exploitation, Technology Auditing, Technology Brokerage, Project Management, Benchmarking. Planning and Coordination of large multinational projects. Significant experience on exploitation of research results through Science and Technology Parks.

LANGUAGES: English, French, Greek (mother tongue)

PATENTS

E. Tannenbaum, T. Burgess, V.C. Kelessidis, A. Orban, J. Williams, K. Zanker, 1989. Measurement System and Method for Quantitatively Determining the Concentrations of a Plurality of Gases in Drilling Mud,

USA PATENT 4887464, 19 December 1989;

EUROPEAN PATENT 0370548B1, 21 September 1994.

BOOKS

V. C. Kelessidis, 2011. Shallow and Specific Well Drilling (in Greek), Tziolas Publishing.

MONOGRAPHS

V. C. Kelessidis, 1980 New canning techniques; aseptic Canning. Diploma Thesis. Aristotelian University of Thessaloniki.

V. C. Kelessidis, 1982 Biofouling characteristics of cooling tower water. M.Sc. Thesis, Oregon State University.

V. C. Kelessidis, 1986 Vertical Upward Gas Liquid Two Phase Flow in Concentric and Eccentric Annuli, PhD Thesis, University of Houston.

CHAPTER IN BOOK

V.C. Kelessidis, R. Maglione, and R.F. Mitchell. 2011. Chapter 5 - Drilling Hydraulics in 'Fundamentals of Drilling Engineering' edited by: R.F. Mitchell and S.Z. Miska, 710 pp.; SPE Textbook Series No. 12.

JOURNALS - EDITORIAL COMMITTEE / EDITORIAL BOARD MEMBER

- Advances in Petroleum Exploration and Development
- Chinese Journal of Chemical Engineering
- International Journal of Gas, Oil and Coal Technology

REVIEWER IN SCIENTIFIC JOURNALS

Advances in Mechanical Engineering
Advances in Petroleum Exploration and Development (APED)
American Institute of Chem. Engrs. Journal
Applied Clay Science
Applied Rheology
Chemical Engr. Research and Design
Chemical Engineering Science
Chemical Engineering & Technology
Chemical Engineering Research and Design
Chinese Journal of Chemical Engineering
Energy & Fuels
Environmental Earth Sciences
European Polymer Journal
International Journal of Multiphase Flow
Int. Journal of Gas, Oil and Coal Technology

Industrial and Engineering Chemistry Research

(Recognized as in the top 10% list of Reviewers for the Journal in 2011 which is #1 in published and #2 in total citations in Chemical Engineering for 2008, with an Impact Factor of 1.895)

International Journal of Mineral Processing

Korea-Australia Rheology Journal

Journal of Applied Mechanics

Journal of Chemical Technology

Journal of Engineering and Science Review

Journal of Materials in Civil Engineering

Journal of Petroleum Science and Engineering

Oil & Gas Science and Technology - Revue d'IFP Energies Nouvelles

Powder Technology

Rheologica Acta

PUBLICATIONS

The academic research activity over the past years has resulted in 39 articles in refereed Academic Journals and in 51 articles in refereed Conferences with over 850 citations and an h-index of 17.

Published Articles in Refereed Journals

1. V.C. Kelessidis, A.E. Dukler, 1989. Modeling flow pattern transitions for upward gas liquid flow in vertical concentric and eccentric annuli, *Int. J. Multiphase Flow*, 15, 173-191.
2. V.C. Kelessidis, A.E. Dukler, 1990. Motion of large gas bubbles through liquids in vertical concentric and eccentric annuli, *Int. J. Multiphase Flow*, 16, 375-390, 1990.
3. G. Roberts, V.C. Kelessidis, J. Williams, 1991. New system provides continuous quantitative analysis of gas concentration in the mud during drilling, *SPE Drill. Eng.* 6, No. 3, 219-224.
4. V.C. Kelessidis, R. Rafferty, A. Merlo, R. Maglione, 1994. Simulator models 'U-Tubing' to improve primary cementing, *Oil & Gas J.*, Mar. 7, 72-80.
5. V.C. Kelessidis, D.J. Guillot, R. Rafferty, G. Borriello, A. Merlo, 1996. Field data demonstrate improved mud removal techniques lead to successful cement jobs, *SPE 26982*, *SPE Advanced Technology Series*, 4, No. 1, 53-58.
6. V.C. Kelessidis, 2003. Terminal velocity of solid spheres falling in Newtonian and non-Newtonian liquids, *Tech. Chron. Sci. J. TCG.*, V, No. 1&2, 43-54.
7. V.C. Kelessidis, 2004. An explicit equation for the terminal velocity of solid spheres falling in pseudoplastic liquids, *Chem. Eng. Sci.*, 59, 4435 – 4445.
8. V.C. Kelessidis, G.E. Bandelis*, 2004. Measurements and prediction of terminal velocity of solid spheres falling through stagnant pseudoplastic liquids, *Powder Techn.*, 147, 117-125.
9. V.C. Kelessidis, G.E. Bandelis*, 2004. Flow patterns and minimum suspension velocity for efficient cuttings transport in horizontal and deviated wells in coiled – tubing drilling, *SPE Drilling and Completion*, 19 (4) December, 213-227.
10. V.C. Kelessidis, R. Maglione, C. Tsamantaki and Y. Aspirtakis*, 2006. Optimal determination of rheological parameters for Herschel-Bulkley drilling fluids and impact on pressure drop, velocity profiles and penetration rates during drilling, *J. Petrol. Sci. Eng.*, 53, 203-224.
The particular article has been nominated as the top 5th popular article (in the list of TOP 25) of Journal of Petroleum Science and Engineering, for Oct. – Dec. 2006.
The article has become the No. 11 with the most citation of the Journal of Petroleum Science and Engineering, for the period 2006-2009.
This article has been nominated as the top 24th popular article (in the list of TOP 25) of Journal of Petroleum Science and Engineering, for July – Sept. 2013.
11. V.C. Kelessidis, R. Maglione, 2006. Modeling rheological behavior of bentonite suspensions as Casson and Robertson-Stiff fluids using Newtonian and true shear rates in Couette viscometry, *Powder Techn.*, 168, 137-147.
12. V.C. Kelessidis, C. Tsamantaki, A. Michalakis*, G.E. Christidis, P. Makri*, C. Papanicolaou, A. Foscolos, 2007. Greek lignites as additives for controlling filtration properties of water–bentonite suspensions at high temperatures, *Fuel*, 86, 1112-1121.
13. V.C. Kelessidis, G.E. Christidis, P. Makri*, V. Chadjistamou*, C. Tsamantaki, A. Michalakis*, C. Papanicolaou, A. Foscolos, 2007. Gelation of water–bentonite suspensions at high temperatures and rheological control with lignite addition, *Applied Clay Sci.*, 36, 221-231.
14. V.C. Kelessidis, C. Tsamantaki, P. Dalamarinis*, 2007. Effect of pH and electrolyte on the rheology of aqueous Wyoming bentonite-dispersions, *Applied Clay Sci.* 38, 86–96
15. V.C. Kelessidis, G.E. Bandelis*, J. Li, 2007. Flow of Dilute Solid–Liquid Mixtures in Horizontal Concentric and Eccentric Annulus, *J. Can. Petr. Techn.* 46, 1-6.
16. V.C. Kelessidis, G.I. Karydakakis, N. Andritsos, 2007. Method for selecting casing diameters in wells producing low-enthalpy geothermal waters containing dissolved carbon dioxide, *Geothermics*, 36, 243-264.

The particular article has been nominated as the top 11th popular article (in the list of TOP 25) of Geothermics, for April-June 2007.

17. V.C. Kelessidis, C. Tsamantaki, P. Dalamarinis*, E. Repouskou and E. Tombacz, 2007. Influence of electrolyte concentration on rheological properties of Zenith and Wyoming bentonite-water suspensions, *Mineral Wealth*, 144, 31-45.
18. V.C. Kelessidis, R. Maglione, 2008. Yield stress of water-bentonite dispersions, *Colloids and Surfaces A*, 318, 217-226.
19. V.C. Kelessidis, R. Maglione, 2008. Shear rate corrections for Herschel-Bulkley fluids in Couette geometry, *Appl. Rheol.* 18:3 (2008) 34482-1 – 34482-11
20. K. Founargiotakis*, V.C. Kelessidis, R. Maglione, 2008. Laminar, transitional and turbulent flow of Herschel-Bulkley fluids in concentric annulus, *J. Can. Chem. Engr.*, 86, 676-683.
21. V.C. Kelessidis, 2008. Investigations on the thixotropy of bentonite suspensions, *Energy Sources Part A*, 30, 1729-1746.
22. V.C. Kelessidis, C. Papanicolaou, A. Foscolos, 2009. Greek lignites prove to be very good additives for controlling rheological and filtration properties of water-bentonite suspensions at high temperatures: A review, *International Journal of Coal Geology* 77, 394-400
23. M.B. Oyeneyin, V.C. Kelessidis, G. Bandelis* and P. Dalamarinis*, 2009. Developing a managed pressure drilling strategy for casing drilling operations, *Advanced Materials Research Vols. 62-64*, 456-465.
24. V.C. Kelessidis, V. Chatzistamou*, N. Ntioudi*, N. Koumakis*, 2009. Optimization of water-well drilling, *Mineral Wealth* 152, 1-20 (in greek)
25. V.C. Kelessidis, R. Maglione, G. Bandelis*, 2010. On the end-effect correction for Couette type oil-field direct-indicating viscometers for Newtonian and non-Newtonian fluids, *J Petrol. Sci. Engr.*, 71, 37-46
26. Mavromatidis A., V.C. Kelessidis, 2009. Investigations into the causes of high formation pressures in deep drilling in western Greece, *Mineral Wealth* 153, 9-21.
27. V.C. Kelessidis, 2010. Estimation of rock drillability in mineral and oil-gas drilling, how close are we?, *Tech. Chron. Sci. J. TCG*, I, No 1, 201-218 (in greek).
28. V.C. Kelessidis, V. Chatzistamou*, R. Maglione, 2010. Wall slip phenomenon assessment of yield stress pseudoplastic fluids in Couette geometry, *Appl. Rheol.* 20:5 (2010) 52656-1 -- 52656-8.
29. R. Maglione, V.C. Kelessidis, 2010. Choosing the best rheological model for water-bentonite suspensions, *Tech. Chron. Sci. J. TCG*, No 3, 211-226
30. V.C. Kelessidis and V. Chatzistamou*, 2011. Preparation methodology and rheological properties of yield pseudoplastic transparent fluids, *J. Dispers. Sci. Technol.*, 32: 3, 380 — 388
31. V.C. Kelessidis, 2011. Rock drillability prediction with in-situ determined unconfined compressive strength of rock, *The Journal of The Southern African Institute of Mining and Metallurgy*, 111 (June), 1-8.
32. V.C. Kelessidis, P. Dalamarinis*, R. Maglione, 2011. Experimental study and predictions of pressure losses of fluids modelled as Herschel-Bulkley in concentric and eccentric annuli in laminar, transitional and turbulent flow, *J Petroleum Science Engineering*, 77, 305-312.
33. V.C. Kelessidis, M. Poulakakis*, V. Chatzistamou*, 2011. Use of Carbopol 980 and Carboxymethyl-Cellulose polymers as rheology modifiers of sodium-bentonite water dispersions, *Applied Clay Science*, 54, 63-69.
34. Z. Mao, C. Yang and V.C. Kelessidis, 2012. Modelling and numerical simulation of yield viscoplastic fluid flow in concentric and eccentric annuli, *Chin. J. Chem. Eng.*, 20, 1-12.
35. R. Rooki, F. Doulati Ardejani, A. Moradzadeh, V.C. Kelessidis, M. Nourozi, 2012. Prediction of terminal velocity of solid spheres falling through Newtonian and non-Newtonian pseudoplastic power law fluid using artificial neural network, *International Journal of Mineral Processing* Vol. 110-111, pg. 53-61.

The particular article has been nominated as one of the top 25 articles of Journal of Mineral Processing in April to June 2012.

36. R. Rooki, F. Doulati Ardejani, A. Moradzadeh, H. Mirzaei, V.C. Kelessidis, R. Maglione, M. Nourozi, 2012. Optimal determination of rheological parameters for Herschel-Bulkley drilling fluids using Genetic Algorithms (GAs), *Korea Australia Rheology Journal*, 24, 163-170.
37. Y.C. Chemedá, G.E. Christidis, N.M. Tauhid Khan; E. Koutsopoulou; V. Hatzistamou*; V.C. Kelessidis, 2014. Rheological properties of palygorskite-bentonite and sepiolite-bentonite mixed clay suspensions, *Applied Clay Science*, 90, 165-174.

38. M. Mirarab Razi, V.C. Kelessidis, R. Maglione, M. Ghiass, M.A. Ghayyem, 2014. Experimental study and numerical modelling of rheological and flow behaviour of xanthan gum solutions using artificial neural network, *J. Dispersion Science & Technology*, 35, 1793-1800.
39. E. Karakosta, L. Lagkaditi, S. ElHardalo, A. Biotaki*, V.C. Kelessidis, M. Fardis, and G. Papavassiliou. Pore Structure Evolution and Strength Development of G-type Elastic Oil Well Cement. A combined 1H NMR and Ultrasonic Study, 2015., *Cement & Concrete Research*, 72, 90–97.

Presented Articles in Refereed Conferences

1. V.C. Kelessidis, G. Roberts, J. Williams, 1989. New system provides continuous quantitative analysis of gas concentration in the mud during drilling, SPE 19562, SPE Annual Technical Conference, San Antonio TX, Oct.
2. J. Hoskins, S. Chakravarthy, B. Ferreol, V.C. Kelessidis, L. Prouvost, D. Zighed, 1993. A predictive model of mud removal efficiency using historical well data, SPE 26221, 8th Petroleum Computer Conference, New Orleans, LA, July.
3. V.C. Kelessidis, D.J. Guillot, R. Rafferty, G. Borriello, A. Merlo, 1994. 'Field data demonstrate improved mud removal techniques lead to successful cement jobs', SPE 26982, SPE IIIrd Latin American Caribbean Petroleum Engineering Conference, Buenos Aires, Argentina, April.
4. V.C. Kelessidis, 2002. System for experimental study of two-phase solid-liquid flow of Newtonian and non-Newtonian liquids in horizontal and inclined annuli and literature review of the phenomenon. European Research Community On Flow Turbulence And Combustion (ERCOFTAC) Conference, Thessaloniki, 31 Jan. – 1 Feb.
5. V.C. Kelessidis, G.E. Bandelis*, 2003. 'Flow patterns and minimum suspension velocity for efficient cuttings transport in horizontal and deviated wells in coiled – tubing drilling', SPE 81746, SPE/ICoTA Coiled Tubing Conference held in Houston, Texas, U.S.A., 8–9 April.
6. L. Saputelli, M.J. Economides, M. Nikolaou, V.C. Kelessidis, 2003. 'Real-time decision making for value creation while drilling', SPE 85314, IADC/SPE Middle East Drilling Technology Conference and Exhibition, Abu Dhabi, UAE, 20-22 Oct.
7. A.S. Michalakis*, P.G. Makri*, V.C. Kelessidis, G.E. Christidis, A.E. Foscolos, C.E. Papanicolaou, 2004. Improving rheological and filtration properties of drilling muds with addition of Greek lignite, 7th National Congress on Mechanics, June 24-26, Chania, Greece, A. Kounadis, C. Providakis, G. Exadaktylos eds.
8. V.C. Kelessidis, G.E. Bandelis*, 2004. Hydraulic parameters affecting cuttings transport for horizontal coiled tubing drilling, 7th National Congress on Mechanics, June 24-26, Chania, Greece, A. Kounadis, C. Providakis, G. Exadaktylos eds.
9. G.E. Bandelis*, V.C. Kelessidis, 2004. New approaches for estimation of terminal settling velocity of solid spheres falling in Newtonian and non-Newtonian fluids, 7th National Congress on Mechanics, June 24-26, Chania, Greece, A. Kounadis, C. Providakis, G. Exadaktylos eds.
10. Mavromatidis, V.C. Kelessidis, D. Monopolis, 2004. A review of recent hydrocarbon exploration in Greece and its potential, 1st International Conference AMIREG, 7-9 June, Chania, Greece, Z. Agioutantis, K. Komnitsas eds., Heliotos Conf.
11. V. C. Kelessidis, X. Tsamantaki, M. Dimopoulou* and A. Michalakis*, 2005. Effect of pH on rheological parameters of bentonite-water suspensions, Paper presented at the 5th Panhellenic Symposium of Chemical Engineering, Thessaloniki, Greece, 26-28 May (in greek)
12. V.C. Kelessidis, K. Founargiotakis* and P. Liolios*, 2005. Sensitivity analysis of important parameters during two-phase solid-liquid flow in horizontal annulus for the two layer model, Paper presented at the 5th Panhellenic Symposium of Chemical Engineering, Thessaloniki, Greece, 26-28 May (in greek)
13. V.C. Kelessidis, M. Zervakis and Z. Theodosiou*, 2005. System for collection and analysis of analog camera signal for studying solid motion during two-phase flow in horizontal annulus, Paper presented at the 5th Panhellenic Symposium of Chemical Engineering, Thessaloniki, Greece, 26-28 May (in greek)
14. V.C. Kelessidis, A. Michalakis*, C. Tsamantaki, 2005. Rheology and rheological parameter determination of bentonite–water and bentonite–lignite–water mixtures at low and high temperatures, 7th World Congress in Chem. Engineering, Glasgow, July 10-14.
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** - post doctorate

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