

CURRICULUM VITAE

PERSONAL DETAILS

NAME: Maria PAPACHRISTOU
CURRENT POSITION: TEACHING & TECHNICAL PERSONNEL
Field of expertise: GEOTHERMAL ENERGY

COMMUNICATON DETAILS

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EDUCATION

Diploma: Department of Geology, Aristotle University of Thessaloniki, Thessaloniki, Greece
M. Sc: "Environmental & Applied Geology", Department of Geology, Aristotle University of Thessaloniki, Thessaloniki, Greece (9.2/10)
Ph.D.: Department of Geology, Aristotle University of Thessaloniki, Thessaloniki, Greece (10/10)

PROFESSIONAL EXPERIENCE

1996-2000: Research collaborator of the Geology Department (AUTH) on the field of geothermal energy and hydrogeology (participation as researcher in several European and National projects on geothermal exploration and exploitation)

2001-2002: (a) VIOTER S.A. construction company (Geologists, Responsible of the asphalt test Lab)
(b) ANATOLIKI S.A Development Agency of Eastern Thessaloniki (Geologist, Department of Energy and Environment)

2002-2014: Employment of the Aristotle University of Thessaloniki
2002-2007: Supplies Department of AUTH, responsible for public tender procedures for the supply of mobile and stationary equipment, as well as for the conducting of international tenders for the security and cleaning services of AUTH.

2007-2014: School of Geology (AUTH)/ Laboratory of Engineering Geology and Hydrogeology, with the following duties

- Teaching of Laboratory Exercises on the topics of Hydrogeology and Groundwater Exploitation & Management
- Organizing and Participation of the students field trips in the frame of the courses “Hydrogeology”, “Groundwater Exploitation & Management”, “Geothermal Energy”
- Lectures on selected topics of the Course “Geothermal Energy”
- Teaching of the post-graduate course “Geothermal Fields-Exploration/exploitation/Management”

2015 - : Teaching & Technical Personnel, School of Geology, AUTH

TEACHING EXPERIENCE

1996-1999: «**Geography**»: Laboratory exercises and participation to the field training for the under-graduate students

2008-σήμερα: «**Hydrogeology**» and «**Groundwater Exploitation and Management**»: Laboratory exercises and participation to the field training for the under-graduate students

2008-2015: «**Geothermal Energy**»

-Lectures on selected topics for the under-graduate students

-Field training

- Bachelor theses (co-supervision)

2012-2017: «**Geothermal Fields**» in the frame of the Post Graduate Studies Program «Applied and Environmental Geology»

2016 - : «**Geothermal Energy**»: Co-teaching of the course for the under-graduate students

2016- : Supervision of Bachelor theses on geothermal energy

2018 - : **Water works design and sustainable development:** Lecture on **Geothermal Wells** in the frame of the Post Graduate Studies Program «Applied and Environmental Geology», specialization «Engineering Geology and Environmental Hydrogeology»

PROJECTS

- **1991:** Geothermal exploration in Strymon Basin -Greece (participant)
- **1996-1998:** Geochemical Seismic Zonation, Seismic Hazard Zonation: a multidisciplinary approach using fluid geochemistry methods.(participant)
- **1996-1997:** Study of the *Nea Apollonia* thermal springs – Construction of new productive geothermal wells (participant)
- **1999-2000:** Geothermal exploration and feasibility study in the area of Tragilos- Achinos (Serres) (participant)
- **1999-2000:** Exploitation of geothermal energy in the area of Nea Triglia (Chalkidiki) (participant)

- **2000-2001:** Milos Desalination Project (MIDES): Construction of new geothermal wells in Milos island for power production (binary cycle) and desalination (participant)
- **2001:** Environmental Impact Studies for 10 geothermal wells in Milos island (project manager)
- **2012-2014:** "Local Pipeline Engineering Services for the Greece West Section of the Trans Adriatic Pipeline (TAP) Project" as subcontractor of E.ON New Build & Technology GmbH (Performed by C&M Engineering S.A.) (Watercourse crossings Hydrological Assessment studies)
- **2014-2015:** "Evaluation of geothermal resources in Santorini island" (participant)
- **2016-2017:** "Detail Engineering Services for Sections 2&3 in Greece of the EPC Onshore Pipeline Construction of the Trans Adriatic Pipeline (TAP) "(Performed by C&M Engineering S.A.) (Watercourse crossings Hydrological Assessment studies)
- **2021-2022:** European Project "CROWD THERMAL", as consultant for the Association of Greek Geologists

FOREIGN LANGUAGES

English: First Certificate in English, University of Cambridge
 Certificate of Proficiency in English, University of Michigan

Italian: Diploma di lingua Italiana

SCHOLARSHIPS

1994: State Scholarship Foundation for the ERASMUS Program (Dipartimento Scienze della Terra, Firenze)

1996-1999: State Scholarship Foundation for post-graduate studies

2001: FP5-HUMAN POTENTIAL- EC Programme for research, technological development and demonstration on "Improving the human research potential and the socio-economic knowledge base", for participating to the *European Summer School on geothermal energy applications*, Oradea, Romania

2003: International Geothermal Association (European Branch) for participating to the *International Course on Geothermal Geochemistry*, Doganbey, Turkey

THESES

MSc: «Geochemical and geomorphological indices of active faults»

PhD: «Contribution to the low enthalpy geothermal reservoir management with the use of numerical simulations-The Paris Basin case»

CONFERENCE PAPERS - PUBLICATIONS

1. «*Investigation of the 1867 Lesbos (NE Aegean) earthquake fault pattern based on soil-gas geochemical data*». M. Fytikas, S. Lombardi, M. Papachristou, S. Pavlides, N. Zouros, N. Soulakellis, *Tectonophysics*, Volume 308, Issues 1-2, pp. 249-261, 1999

2. «*Geothermal Exploration and Development Activities in Greece during 1995-1999*». Fytikas M., Andritsos N., Karydakis G., Kolios N., Mendrinou D. and Papachristou M., Proceedings World Geothermal Conference 2000
3. «*Geothermal Situation in the Greek islands and coastal areas*». Fytikas M., Papachristou M. & Andritsos N., Proceedings International Summer School on Direct Application of Geothermal Energy, Thessaloniki, August 2002
4. «*Basic facts about geothermal energy characteristics and its spreading around the world and Greece*». Fytikas M. & Papachristou M., Proceedings International Summer School on Direct Application of Geothermal Energy, Thessaloniki, August 2002
5. «*Sustainable Geothermal Reservoir Management*». Ungemach P., Antics M., Papachristou M., Proceedings World Geothermal Congress, Antalya, Turkey, 24-29 April, 2005
6. «*Sustainable Heat Mining. A Reservoir Engineering Approach*». Antics M., Papachristou, M., Ungemach, P., Proceedings, Thirtieth Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, California, Jan. 31-Febr. 2, 2005
7. «*Renewability versus sustainability. A reservoir management approach*». Ungemach P., Papachristou M., Antics M., Proceedings European Geothermal Congress, Unterhaching, Germany, 30 May-1 June, 2007
8. «*Geothermal energy exploitation*». Fytikas, M., Papachristou, M. and Andritsos N., Proc., 3rd International Conference Energetech, Athens, Nov. 2008.
9. «*Geothermal Energy in Greece, Current Situation and Future Perspectives*». Papachristou M., Andritsos N., Voudouris K., Fytikas M., Proceedings 3rd Conference of the AUTH Environment Council, 15-17 October 2009, Thessaloniki, Greece, pp. 598-606, 2009 (in greek)
10. «*Present and future of the geothermal energy situation in Greece*». Andritsos N., Arvanitis A., Papachristou M., Fytikas M., Proceedings 9th National Conference for Renewable Energy Sources, pp. 541-548, Institute of Solar Technology, Pafos, 26-28 March, 2009 (in greek)
11. «*Cogeneration of heat and power (CHP) from medium enthalpy geothermal fluids*». Fytikas, M., Papachristou, M., 4th International Conference Energetech, 23-24 October 2009, Athens
12. «*Rational management of geothermal fields as a prerequisite for their sustainable development*». M. Papachristou, Proceedings International Geothermal Forum "Geothermal Energy in the SpotLight, Thessaloniki 11-12 December 2009, ISBN 078-980-8748-08-9
13. «*Geothermal Activities in Greece during 2005-2009*». Andritsos N., Arvanitis A., Papachristou M., Fytikas M., Dalambakis P., Proceedings of the World Geothermal Congress 2010, Bali-Indonesia, April 25-30

14. «*Geomodelling and Well Architecture, Key Issues to Sustainable Reservoir Development*». Ungemach P., Antics M., Lalos P., Borodzina O., Foulquier L., Papachristou M., Proceedings Thirty-Sixth Workshop on Geothermal Reservoir Engineering Stanford University, Stanford, California, 2011
15. «*Geothermal Energy Use, Country Update for Greece*», Andritsos, N., Arvanitis, A., Dalambakis, P., Karytsas, C., Mendrinou, D., Papachristou M., Proceedings European Geothermal Congress, Pisa, Italy, 3-7 June 2013.
16. «*Geothermal Resource Management-A Reservoir Simulation Approach-The Paris Basin Case*». Papachristou M., Ungemach P., Fytikas M., Bulletin of the Geological Society of Greece, vol. XLVII 2013, Proceeding of the 13th International Congress, Chania, Sept. 2013 (in press)
17. «*Geological setting, geothermal conditions and hydrochemistry of south and southeastern Aegean geothermal systems*», Papachristou, M., Voudouris, K., Karakatsanis S., D'Alessandro W., Kyriakopoulos O., in «Sustainable Energy Developments: Turkey and Greece», Editors: Alper Baba, Jochen Bundshuh, D. Chandrasekharam, CRC Press, Taylor and Francis Group, ISBN-10: 1138001090, 336 pages.
18. «*A Comprehensive Computational Framework for Estimating the Reservoir Temperature By Chemical Geothermometry*», Veros, G. & Papachristou, M., Proceedings 10th International Hydrogeological Congress, October 2013, Thessaloniki, Greece
19. «*Assessment of the groundwater quality characteristics from the Upper Gallikos River Basin (N. Greece) using Factor and Cluster Analysis Methods*», Mattas, C., Papachristou, M., Soulios, G., Proceedings 10th International Hydrogeological Congress, October 2013, Thessaloniki, Greece
20. «*Evaluation and exploitation of the geothermal resources in Santorini island*», Papachristou, M., Nikolaidou, E., Fytikas, M., Andritsos, N., Kolios, N., Proceedings 10th National Congress on Renewable Energy Sources, November 2014, Thessaloniki, Greece
21. «*Geothermal Developments in Greece – Country Update 2010-2014*», Andritsos, N., Arvanitis, A., Dalambakis, P., Papachristou, M., Fytikas, M., Proceedings World Geothermal Congress, Melbourne, Australia, 19-25 April 2015
22. «*Geothermal exploitation in Neo Erasmio, Xanthi*», Dalambakis, P., Papachristou, M., Kolios, P., Arvanitis, A., Kolios, N., Proceedings 9th National Congress of EGME, Thessaloniki, October 2015
23. «*Preliminary Geothermal Investigation in the basin of Katerini*», Papachristou, M., Arvanitis, A., Kolios, N., Proceedings 14th Congress of the Greek Geological Society, 25-28 May, 2016, Thessaloniki, Greece
24. «*A Comprehensive Computational Framework for Estimating the Reservoir Temperature by Chemical Geothermometry*», Verros, G., Papachristou, M. Proceedings 14th Congress of the Greek Geological Society, 25-28 May, 2016, Thessaloniki, Greece
25. «*Geothermal Energy Use, Country Update for Greece*», Papachristou, M., Mendrinou, D., Dalambakis, P., Arvanitis, A., Karytsas C., Andritsos, N., Proceedings European Geothermal Congress, Strasburg, France, 19-23 September 2016.

26. «*New thermometric data from shallow aquifers in Santorini-Possibilities for geothermal exploitation*», Papachristou, M., Fytikas, M., Andritsos, N., Nikolaidou, E., Kolios, P., Proceedings European Geothermal Congress, Strasburg, France, 19-23 September 2016
27. «*Towards the development of a detailed computational chemical geothermometer*», Verros G.D. and Papachristou M., Proceedings of the International Conference of Computational Methods in Sciences and Engineering (AIP-ICCMSE-2017).
28. «*Development of a Detailed and Comprehensive Computational Chemical Geothermometer and its application to the Therma-Nigrita geothermal waters*», Arvanitis A., Papachristou M., Verros G., Proceedings 11th International Hydrogeology Conference, Athens, 2017, Volume 1, pp. 51-62.
29. «*Geothermal Activities in Greece and Europe*», M. Papachristou, N. Andritsos, A. Arvanitis, P. Dalabakis, Proceedings 11th National Conference on Renewable Energy Sources, Institute of Solar Technology, Thessaloniki (2018)
30. «*Geothermal Energy Use, Country Update for Greece (2016-2019)*», M. Papachristou, A. Arvanitis, D. Mendrinou, P. Dalabakis, C. Karytsas and N. Andritsos, Proceedings European Geothermal Congress 2019, Den Haag, The Netherlands, 11-14 June 2019
31. «*Lateral mobility and vertical scour assessment at a pipeline's crossing point with rivers/torrents*»: K. Voudouris, C. Mattas, T. Kaklis, N. Kazakis, P. Venetsanou, C. Domakinis, A. Zervopoulou, L. Dimitraki, M. Papachristou, K. Vouvalidis, Proceedings, 2nd International Conference on Natural Hazards & Infrastructure, 23-26 June 2019, Chania, Greece
32. «*Geothermal developments in Greece-Country update 2015-2020*», M. Papachristou, P. Dalampakis, A. Arvanitis, D. Mendrinou, N. Andritsos, Proceedings World Geothermal Congress 2020, Reykjavik, Iceland, 2020+1
33. «*Review of geothermal uses in Greece and the world*», M. Papachristou, N. Andritsos, A. Arvanitis, P. Dalampakis, D. Mendrinou, M., Proceedings 12th National Conference on Renewable Energy Sources, Institute of Solar Technology, Thessaloniki (2021)
34. «*New data on the characteristics of the geothermal fluids in the Akropotamos area*» P. Dalampakis, I. Koufogiannis, M. Papachristou, N. Andritsos, A. Arvanitis, K. Lympereopoulos, P. Kolios, Proceedings 12th National Conference on Renewable Energy Sources, Institute of Solar Technology, Thessaloniki (2021)

CONFERENCES (INDICATIVE)

- 1992: 6th Conference of the Greek Geological Society (Athens)
- 1994: 7th Conference of the Greek Geological Society (Thessaloniki)
- 1993: 2nd Hydrogeological Congress (Patra)
- 1996: International Conference on the "The 13th of May 1995 earthquake in Kozani-Grevena. A scientific and Social Approach" (Kozani)
- 1997: 29th General Assembly of IASPEI
- 1997: 4th Hydrogeological Congress (Thessaloniki)
- 2004: 5th International Symposium on Eastern Mediterranean Geology (Thessaloniki)
- 2009: International Forum «Geothermal Energy on the Spotlight» (Thessaloniki)
- 2013: 13th Conference of the Greek Geological Society (Chania)
- 2014: 10th International Hydrogeological Congress (Thessaloniki)

2014: 10th Conference of the Institute of Solar Technology on Renewable Energy Sources (Thessaloniki)

2015: 9th National Conference on "Agricultural Engineering (Thessaloniki)

2016: 14th Conference of the Greek Geological Society (Thessaloniki)

2016: European Geothermal Congress (Strasbourg)

2018: 11th Conference of the Institute of Solar Technology on Renewable Energy Sources (Thessaloniki)

2019: European Geothermal Congress (Der Haag)

2021: 12th Conference of the Institute of Solar Technology on Renewable Energy Sources (Thessaloniki)

2021: World Geothermal Congress (virtual)

SEMINARS-WORKSHOP-SCHOOLS

1994: European Advanced School on Structural Geology and Tectonics (ICTP, Trieste, 7-26 March 1994)

1999: Basic Unix Administration (Α.Π.Θ., Θεσσαλονίκη, 3-7/5/1999)

1999: Fifth Workshop on Non-Linear Dynamics and Earthquake Predictions (ICTP, Trieste, 4-22 October 1999)

2001: European Summer School on Geothermal Energy Applications (Oradea, Romania, 26/4-5/5/2001)

2002: International Course «District Heating, Agricultural and Agro-Industrial Use of Geothermal Energy», International Summer School on Direct Applications of Geothermal Energy (Thessaloniki, 2-4 September 2002)

2002: International Workshop on the Possibilities of Geothermal Development of the Aegean Islands Region (Milos, 5-7 September 2002)

2003: International Summer School on Direct Application of Geothermal Energy and Geothermal Geochemistry (Izmir, Turkey, 2-15 June, 2003)

2006: International Summer School on Geothermal Exploration-Prospecting-Reservoir Engineering-Monitoring, Turkey (Izmir, Turkey, 28 May-11 June 2006)