

CURRICULUM VITAE

DR. VASSILIOS CHARALAMPAKOS

1. PERSONAL INFORMATION

NAME:	Vassilios Charalampakos
DATE OF BIRTH:	December 8 th 1975
PLACE OF BIRTH:	Sparta, Greece
EMPLOYMENT:	Assistant Professor Electrical & Computer Engineering Department University of Peloponnese
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2. EDUCATION

- ❖ Department of Electrical and Computer Engineering, University of Patras.
- ❖ PhD, Department of Electrical and Computer Engineering, University of Patras .

PhD Thesis Title: Stochastic model development for the simulation of electrical breakdown of gaseous dielectrics.

3. FOREIGN LANGUAGES

- ❖ English (fluent)

4. EMPLOYMENT

- ❖ 1999 – 2005: Electrical Engineer, Construction Projects.
- ❖ 2001 – 2009: Teaching staff of Technological Educational Institute of Western Greece, Electrical Engineering Department.
- ❖ 2009 – 2019: Assistant Professor at Technological Educational Institute of Western Greece, Electrical Engineering Department.
- ❖ 2019 – present: Assistant Professor at University of Peloponnese, Electrical and Computer Engineering Department

5. PUBLICATION LIST

1. SCIENTIFIC JOURNALS

1. A. L. Kupershtokh, **V. Charalampakos**, D. Agoris, D. I. Karpov, ‘Simulation of breakdown in air using cellular automata with streamer to leader transition’, *Journal of Physics D: Applied Physics*, 34, 2001, pp. 936-946.
2. A. L. Kupershtokh, E. I. Palchikov, D. I. Karpov, I. Vitellas, D. P. Agoris and **V. P. Charalampakos**, ‘Stochastic model of breakdown initiation in dielectric liquids’, *Journal of Physics D: Applied Physics*, 35, 2002.
3. S. Korobeynikov, A. Melekhov, G. Furin, **V. Charalampakos**, D. Agoris, ‘Mechanism of surface conductivity due to image forces’, *Journal of Physics D: Applied Physics*, 35, 2002, pp. 1193-1196.
4. D. Agoris, **V. Charalampakos**, E. Pyrgioti, S. Grzybowski, ‘A Computational approach on the study of Franklin rod height impact on striking distance using a stochastic model’, *Journal of Electrostatics*, 60, 2004, pp. 175-181.
5. **V. P. Charalampakos**, C. P. Stamatelatos, D. P. Agoris, E. C. Pyrgioti, ‘Simulation of discharge phenomena in air gaps during high voltage stressing’, *Wseas Transactions on Circuits and Systems*, Issue 8, Vol. 8, 2005, pp. 933-943.
6. A. Kupershtokh, D. Karpov, D. Medvedev, C. Stamatelatos, **V. Charalampakos**, E. Pyrgioti, D. Agoris, ‘Stochastic models of partial discharge activity in solid and liquid dielectrics’, *IEE Proceedings on Science, Measurements and Technology*, volume 1, Issue 6, 2007, pp.303-311.
7. A. D. Theocharis, A. E. Tzinevrakis, **V. P. Charalampakos**, J. Miliadis-Argitis, and Th. Zacharias, ‘Development of a nonlinear geometric transformer model based on an incremental circuit of its magnetic core’, *Electrical Engineering*, 94 (4), pp. 217-232, 2012.

8. A. D. Theocharis, **V. P. Charalampakos**, A. Drosopoulos and J. Miliadis-Argitis, 'Equivalent circuit of photovoltaic generator using Newton-Raphson algorithm', *COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, vol. 31, N. 4, pp. 1224 - 1246, 2012.
9. G. D. Peppas, **V. P. Charalampakos**, E. C. Pyrgioti and I. F. Gonos, 'Electrical and optical measurements investigation of pre-breakdown processes in natural ester oil under different impulse voltage waveforms', *IET Science, Measurement and Technology*, Vol. 10, Issue 5, August 2016, pp. 545-551.
10. G. D. Peppas, **V. P. Charalampakos**, E. C. Pyrgioti, M. G. Danikas, A. Bakandritsos and I. F. Gonos, 'Statistical investigation of AC breakdown voltage of nanofluids compared with mineral and natural ester oil', *IET Science, Measurement and Technology*, Vol. 10, Issue 6, September 2016, pp. 644-652.
11. G. D. Peppas, A. Bakandritsos, **V. P. Charalampakos**, E. C. Pyrgioti, J. Tucek, R. Zboril and I. F. Gonos, 'Ultrastable natural ester based nanofluids for high voltage insulation applications', *ACS Applied Materials and Interfaces*, Vol. 8, Issue 38, September 2016, pp. 25202-25209.
12. **V. P. Charalampakos**, G. D. Peppas, E. C. Pyrgioti, A. Bakandritsos, A. D. Polykrati, I. F. Gonos, 'Dielectric Insulation Characteristics of Natural Ester Fluid Modified by Colloidal Iron Oxide Ions and Silica Nanoparticles', *Energies*, vol. 12, Issue 17, pp. 3259, August 2019.
13. K. N. Koutras, I. A. Naxakis, E. C. Pyrgioti, **V. P. Charalampakos**, I. F. Gonos, A. E. Antonelou, S. N. Yannopoulos, 'The Influence of Nanoparticles Conductivity and Charging on Dielectric Properties of Ester Oil Based Nanofluid', *Energies*, vol. 13, Issue 24, December 2020.
14. K. N. Koutras, I. A. Naxakis, A. E. Antonelou, **V. P. Charalampakos**, E. C. Pyrgioti, S. N. Yannopoulos, 'Dielectric Strength and Stability of Natural Ester Oil based TiO₂ Nanofluids', *Journal of Molecular Liquids*, vol. 316, October 2020.
15. K. N. Koutras, S. Tegopoulos, **V. P. Charalampakos**, A. Kyritsis, I. F. Gonos, E. C. Pyrgioti, 'Breakdown Performance and Partial Discharge Development in Transformer Oil – Based Metal Carbide Nanofluids', *Nanomaterials*, 12, 269, January 2022

2. CONFERENCES

1. **V. Charalampakos**, A. L. Kupershtokh, D. Agoris, D. I. Karpov, 'An approach in modeling of lightning process using cellular automata', *Proc. of the 25th Int. Conf. on Lightning Protection (ICLP2000)*, September 2000, pp. 72-77, Rhodes, Greece.

2. **V. Charalampakos**, A. L. Kupershtokh, D. Agoris, D. I. Karpov, 'Modeling of prebreakdown phenomena using cellular automata', *Proc. of the IASTED International Conference on Modeling, Identification and Control (MIC2001)*, February 2001, pp. 143-147, Innsbruck, Austria.
3. **V. Charalampakos**, D. Agoris, A. Kupershtokh, E. Pyrgioti, 'Stochastic modeling of discharge in long gaps under positive impulse voltage', *Proc. of the 6th IASTED International Conference on Power Energy Systems (EuroPES 2001)*, July 2001, pp. 545-548, Rhodes, Greece.
4. **V. Charalampakos**, D. Agoris, A. Kupershtokh, E. Pyrgioti, 'Stochastic modeling of lightning process', *Proc. of the 12th International Symposium on High Voltage (ISH 2001)*, August 2001, pp. 115-119, Bangalore, India.
5. A. L. Kupershtokh, I. Vitellas, D. P. Agoris, D. I. Karpov, **V. P. Charalampakos**, 'Stochastic Regularities of Electrical Breakdown Initiation in Transformer Oil', *IEEE Industry Application Society 2001 Annual Meeting (IAS 2001)*, September 2001, Chicago, USA.
6. A. L. Kupershtokh, E. I. Palchikov, D. I. Karpov, I. Vitellas, D. P. Agoris, **V. P. Charalampakos**, 'Dynamic Electric Strength of Perfluorodibutyl Ether', *High-Tech Seminar*, June 2001, Krasnoyarsk, Russia.
7. **V. Charalampakos**, D. Agoris, E. Pyrgioti, 'Estimation of the probability distribution of breakdown voltage in air using a stochastic model', *Proc of the International Conference on Modeling, Identification and Control (MIC2002)*, February 2001, pp. 143-147, Innsbruck, Austria.
8. D. Agoris, **V. Charalampakos**, A. Kupershtokh, 'An Approach to Fractal Dimension of Lightning Pattern', *Proc. of the 26th Int. Conf. on Lightning Protection ICLP2002*, September 2002, pp. 46-49, Krakow, Poland.
9. D. Agoris, **V. Charalampakos**, E. Pyrgioti, S. Grzybowski, 'Estimation of the protective zone of a Franklin rod using a stochastic model', *Proc. of the 26th Int. Conf. on Lightning Protection ICLP2002*, September 2002, pp. 270-274, Krakow, Poland.
10. A. L. Kupershtokh, E. I. Palchikov, D. I. Karpov, I. Vitellas, D. P. Agoris, **V. P. Charalampakos**, 'Stochastic Model of Breakdown Initiation in Dielectric Liquids under AC Voltage', *Proc. of the 14th Int. Conf. on Dielectric Liquids (ICDL 2002)*, July 2002, pp. 115-118, Graz, Austria.
11. S. M. Korobeynikov, A. P. Drozhzhin, G. G. Furin, **V. P. Charalampakos**, D. P. Agoris, 'Surface conductivity in liquid-solid interface due to image forces', *Proc. of the 14th Int. Conf. on Dielectric Liquids (ICDL 2002)*, July 2002, pp. 270-273, Graz, Austria.

12. **V. P. Charalampakos**, D. P. Agoris, E. C. Pyrgioti, 'Simulation of streamer propagation under positive impulse voltage', *13th International Symposium on High Voltage (ISH 2003)*, August 2003, Delft, The Netherlands.
13. **V. P. Charalampakos**, C. P. Stamatelatos, D. P. Agoris, E. C. Pyrgioti, 'Simulation of prebreakdown phenomena in air gaps of rod plane configuration of electrodes', *Proc. of the 5th WSEAS Int. Conf. on Power Systems and Electromagnetic Compatibility*, August 2005, pp. 29-33, Corfu, Greece.
14. C. P. Stamatelatos, **V. P. Charalampakos**, D. P. Agoris, A. L. Kupershtokh, 'A Computational estimation of the breakdown voltage of a small rod plane gap', *Proc. of the 14th International Symposium on High Voltage (ISH 2005)*, August 2005, Beijing, China.
15. **V. P. Charalampakos**, C. P. Stamatelatos, D. P. Agoris, E. C. Pyrgioti, 'A Computational approach on the estimation of streamer velocity', *Proc. of the 14th International Symposium on High Voltage (ISH 2005)*, August 2005, Beijing, China.
16. **V. P. Charalampakos**, D. P. Agoris, E. C. Pyrgioti, C. P. Stamatelatos, 'Computer simulation of lightning strokes', *Proc. of the 28th Int. Conf. on Lightning Protection ICLP2006*, September 2006, pp. 163-168, Kanazawa, Japan.
17. D. P. Agoris, C. P. Stamatelatos, E. C. Pyrgioti, **V. P. Charalampakos**, 'A Simulation of the efficiency of the lightning protection system of the Rion – Antirion tall bridge', *Proc. of the 28th Int. Conf. on Lightning Protection ICLP2006*, September 2006, pp. 539-542, Kanazawa, Japan.
18. **V. P. Charalampakos**, E. C. Pyrgioti, N. Nikolaou, C. P. Stamatelatos, 'An estimation of tall constructions height impact on striking distance using a computer simulation', *Proc. of the International Symposium on High Voltage (ISH 2009)*, August 2009, Cape Town, North Africa.
19. A. Theocharis, A. Tzinevrakis, **V. Charalampakos**, J. Miliadis – Argitis, Th. Zacharias, 'Transformer modeling based on Incremental Reluctances', *Proc. of International Conference on Power System Technology – Powercon 2010*, October 2010, Hangzhou, China.
20. **V. Charalampakos**, E. Pyrgioti, G. Peppas, G. Laskos, A. Theocharis, 'Modeling of electrical breakdown and prebreakdown phenomena in liquid dielectrics', *Proc. of 17th International Symposium on High Voltage Engineering, ISH 2011*, August 2011, Hannover, Germany.
21. G. Peppas, I. Naxakis, **V. Charalampakos**, E. Pyrgioti, 'Analysis and Monitoring of Lightning in Greece', *Proc. of 31st Int. Conf. on Lightning Protection ICLP2012*, September 2012, Vienna, Austria.

22. G. Peppas, E. Pyrgioti, **V. Charalampakos**, 'Investigation of statistical breakdown in mineral and natural ester oils under ac voltage', *Proc. of 18th International Symposium on High Voltage Engineering, ISH 2013*, August 2013, Seoul, South Korea.
23. G. D. Peppas, D. A. Zacharakis, E. C. Pyrgioti and **V. P. Charalampakos**, 'Lightning protection of air traffic control towers', *Proc. of 32st Int. Conf. on Lightning Protection ICLP2014*, September 2014, Shanghai, China.
24. G. Peppas, **V. P. Charalampakos**, E. C. Pyrgioti and E. I. Polydoropoulou, 'Influence of surface modified Fe₃O₄ Nanoparticles on the dielectric properties of natural ester based nanofluid', *Proc. of 18th International Symposium on High Voltage Engineering, ISH 2015*, August 2015, Pilsen, Czech Republic.
25. **V. P. Charalampakos**, G. D. Peppas, E. C. Pyrgioti, A. Bakandritsos, I. F. Gonos, 'A Comparative study of natural ester based nanofluids with Fe₂O₃ and SiO₂ nanoparticles', *Proc. of the 19th Int. Conf. on Dielectric Liquids (ICDL 2017)*, June 2017, Manchester, UK.
26. G. D. Peppas, **V. P. Charalampakos**, E. C. Pyrgioti, T. Tsovilis and I. F. Gonos, 'A Partial discharge study of ultrastable colloidal nanofluid impregnated paper', *Proc. of 19th International Symposium on High Voltage Engineering, ISH 2017*, August 2017, Buenos Aires, Argentina.
27. **V. P. Charalampakos**, T. Fanariotis, E. C. Pyrgioti, G. D. Peppas and A. Kolokithas, 'A Comparative study of natural ester and synthetic ester based nanofluids with TiO₂ nanoparticles', *Proc. of the 6th IEEE Int. Conference on High Voltage Engineering (ICHVE) 2018*, September 2018, Athens, Greece.
28. **V. P. Charalampakos**, E. Chatzikalymnios, E. C. Pyrgioti, G. D. Peppas, A. Bakandritsos, A. Polykrati and I. F. Gonos, 'AC Breakdown strength of natural ester oil based nanofluid with graphene nanosheets', *Proc. of the 6th IEEE Int. Conference on High Voltage Engineering (ICHVE) 2018*, September 2018, Athens, Greece.
29. G. D. Peppas, **V. P. Charalampakos**, E. C. Pyrgioti, A. Bakandritsos, A. Polykrati and I. F. Gonos, 'A study on the Breakdown Characteristics of Natural Ester Based Nanofluids with Magnetic Iron Oxide and SiO₂ Nanoparticles', *Proc. of the 6th IEEE Int. Conference on High Voltage Engineering (ICHVE) 2018*, September 2018, Athens, Greece.
30. **V. P. Charalampakos**, T. Fanariotis, E. C. Pyrgioti, G. D. Peppas and A. Kolokithas, 'A Comparative study of natural ester and synthetic ester based nanofluids with TiO₂ nanoparticles', *Proc. of the 6th IEEE Int. Conference on High Voltage Engineering (ICHVE) 2018*, September 2018, Athens, Greece.

31. **V. P. Charalampakos**, E. Chatzikalymnios, E. C. Pyrgioti, G. D. Peppas, A. Bakandritsos, A. Polykrati and I. F. Gonos, 'AC Breakdown strength of natural ester oil based nanofluid with graphene nanosheets', *Proc. of the 6th IEEE Int. Conference on High Voltage Engineering (ICHVE) 2018*, September 2018, Athens, Greece.
32. A. Polykrati, C. S. Koutsiara, **V. P. Charalampakos**, A. Kyritsis, G. D. Peppas, I. F. Gonos, and E. C. Pyrgioti, 'Thermal and electric conductivity of insulating oils with magnetic nanoparticles', *Proc. of the 6th IEEE Int. Conference on High Voltage Engineering (ICHVE) 2018*, September 2018, Athens, Greece.
33. E. C. Pyrgioti, K. N. Koutras, **V. P. Charalampakos**, G. D. Peppas, A. P. Bakandritsos, I. A. Naxakis, 'An Experimental Study on the Influence of Surface Modification of TiO₂ Nanoparticles on Breakdown Voltage of Natural Ester Nanofluid', *Proc. of 21th International Symposium on High Voltage Engineering, ISH 2019*, August 2019, Budapest, Hungary.
34. K. N. Koutras, E. C. Pyrgioti, I. A. Naxakis, **V. P. Charalampakos**, G. D. Peppas, 'AC Breakdown Performance of Al₂O₃ and SiC Natural Ester Based Nanofluids', *2020 IEEE International Conference on Environment and Electrical Engineering and 2020 IEEE Industrial and Commercial Power Systems Europe (EEEIC/I&CPS Europe)*, June 2020.
35. K. N. Koutras, E. C. Pyrgioti, I. A. Naxakis, G. D. Peppas, **V. P. Charalampakos**, I. F. Gonos, 'A Comparative study of Dielectric Properties of Untreated and Surface Modified Natural Ester Based Nanofluids', *2020 IEEE Int. Conference on High Voltage Engineering (ICHVE)*, December 2020, Beijing, China

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Impact Factor Περιοδικών

<i>ACS Applied Materials and Interfaces</i>	8,097
<i>Nanomaterials</i>	5,076
<i>Journal of Molecular Liquids</i>	5,065
<i>Journal of Physics D: Applied Physics</i>	3,207
<i>Energies</i>	3,004
<i>IEE Proceedings on Science, Measurements and Technology</i>	2,417
<i>Journal of Electrostatics</i>	1,775
<i>Electrical Engineering</i>	1,836

<i>COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i>	0,534
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