

JOHN N.E. PAPASPYROS
Chemical Engineer
Laboratory Teaching Assistant,
Department of Environmental Engineering,
Democritus University of Thrace

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Quick info

Born: 1962
Birthplace: Agrinio, Greece
Lives in: Xanthi, Greece
Marital status: Free
Peculiar activities: Walking, bicycle, violin

Education

- Diploma in Chemical Engineering, Aristotle University of Thessaloniki
- PhD candidate in the Chemical Engineering Department at the Aristotle University of Thessaloniki. The title of the dissertation is "Wakes and their effects on turbulent dispersion and mixing". Currently, the final presentation ("defense") of the dissertation is in preparation
- Attended seminar "Simple Applications of Biotechnology in Agriculture, Livestock, and Protection of the Environment" (168 hours)
- Attended seminar "Computers in Research and Production" (75 hours)
- Speaks English very well.

Professional and Educational Experience

- Research Committee of the Aristotle University of Thessaloniki: employment as a researcher in the research programs: "FLashing Ammonia DISpersions - FLADIS", "FLADIS field test analysis", AVICENNE, "EFAISTOS: Experimentations and simulations for improvement of behaviour models of forest fires", and "Biogenic gases exchange in the Black Sea - BIGBLACK". Experience in support of research programs (budget monitoring, cost and progress reports, research proposals).
- Democritus University of Thrace: employment as laboratory teaching assistant in the Department of Environmental Engineering since 2004.

PC skills

- Experience in several operating systems: VAX/VMS, Unix/Linux, MS-DOS, Microsoft Windows.
- Programming in many languages, including Basic, Fortran, C/C++, Tcl, Perl, Java, ...
- Use of office automation packs, drawing and technical design software (CorelDraw, AutoCAD, 3D Studio Max, Bryce, ...) and database suites (dBase, Sybase SQL, MySQL, ...).
- Development and use of LAN/WAN network applications (Dreamweaver, Php, ...), multimedia suites (Premiere, Director, Flash, speech synthesis - recognition, image analysis, etc.) and numerical analysis - data mining software (MatLab, Statistica, IBM DataExplorer, Vis5D, ANSYS Fluent, ANSYS CFX, INCA solver, TecPlot etc.).
- Use of specialized software for Environmental Engineering (Visual MODFLOW, GPS-X and STOAT simulators, GIS suites, ...)

Reviewer in Scientific Journals

- Advances in Water Resources
- Journal of Hydrology
- Environmental Processes

SELECTED PUBLICATIONS

Peer-reviewed publications in International Scientific Journals:

- Papaspyros J.N.E., Papanicolaou P.N., Kastrinakis E.G., Nychas S.G. "Wind tunnel simulation of ammonia gas release transport processes", Journal of Hazardous Materials 46, pp. 241-252, 1996.
- Papanicolaou P.N., Papaspyros J.N.E., Kastrinakis E.G., Nychas S.G. "A fast digital technique for calibration of hot-wires over a wide temperature range", Meas. Sci. Technol. 8, pp. 1363-1366, 1997.
- Papaspyros J.N.E., Kastrinakis E.G., Nychas S.G. "Coherent Contribution to Turbulent Mixing of a Jet in Cross Flow", Applied Scientific Research 57, pp. 291-307, 1997.
- Akratos C.S., Papaspyros J.N.E., Tsihrintzis V.A. "An artificial neural network model and design equations for BOD and COD removal prediction in horizontal subsurface flow constructed wetlands", Chemical Engineering Journal 143 (1-3), pp. 96-110, 2008.
- Akratos C.S., Papaspyros J.N.E., Tsihrintzis V.A. "Total nitrogen and ammonia removal prediction in horizontal subsurface flow constructed wetlands: Use of artificial neural networks and development of a design equation", Bioresource Technology 100 (2), pp. 586-596, 2009.

- Akratos C.S., Papaspyros J.N.E., Tsihrintzis V.A. "Artificial neural network use in orthophosphate and total phosphorus removal prediction in horizontal subsurface flow constructed wetlands", *Biosystems Engineering* 102 (2), pp. 190-201, 2009.
- Moutsopoulos K.N., Papaspyros J.N.E., Tsihrintzis V.A. "Experimental investigation of inertial flow processes in porous media", *Journal of Hydrology* 374 (3-4), pp. 242-254, 2009.
- Diamantis V., Papaspyrou I., Melidis P., Aivasidis A. "High aeration rate enhances flow stratification in full-scale oxidation ditch", *Bioprocess and Biosystems Engineering* 33, pp. 293-298, 2010.
- Moutsopoulos K.N., Poultisidis V.G., Papaspyros J.N.E., Tsihrintzis V.A. "Simulation of hydrodynamics and nitrogen transformation processes in HSF constructed wetlands and porous media using the advection–dispersion–reaction equation with linear sink–source terms", *Ecological Engineering* 37 (9), pp. 1407-1415, 2011.
- Tzelepis V., Moutsopoulos K.N., Papaspyros J.N.E., Tsihrintzis V.A. "Experimental investigation of flow behavior in smooth and rough artificial fractures", *Journal of Hydrology* 521, pp. 108-118, 2015.
- Papaspyros J.N.E., Moutsopoulos K.N., Tzavellas E. "Solutions of the Elder problem for a wide range of the Rayleigh number", *European Water* 55, pp. 31-40, 2016.
- Moutsopoulos K.N., Papaspyros J.N.E., Tsihrintzis V.A. "Management of groundwater resources using surface pumps: Optimization using Genetic Algorithms and the Tabu Search method", *KSCE Journal of Civil Engineering* 21(7), pp. 2968-2976, 2017.
- Soultanidis, V., Papaspyros, I., Voudrias, E. A., Moutsopoulos, K. N. "Release of heavy metals from conventional and reflective cool cement pavements", *Journal of Cleaner Production* 336, 130434, 2022.

According to the Scopus database, these publications have until now 412 citations, of which 351 are heterocitations (i.e., citations from groups that do not include any of the authors of the cited publication).

Publications in peer-reviewed proceedings of Scientific Conferences:

- P. Kosmides, I. Papaspyros, E.G. Kastrinakis, S.G. Nychas (1992) "Characteristics of natural convection boundary layer turbulence" presented in "ICHMT: 1992 International Symposium" on "Spatio-Temporal Structure and Chaos in Heat and Mass Transfer Processes" (Athens, May 21-23 1992).
- Ε.Γ. Καστρινάκης, Ν. Κυριακίδης, Η. Φασουράκης, Ι. Παπασπύρος, Ν. Μίτης, Σ.Γ. Νυχάς (1992) "Δυναμική φυσαλλίδων από ακροφύσια σε στήλες νερού/αέρα". Πρακτικά 5ου Πανελληνίου Συνεδρίου Ελληνικής Υδροτεχνικής Ένωσης (Λάρισα, 9-12 Νοεμβρίου 1992), σελ. 538-548 (in Greek).
- J. Papaspyros, P. Papanicolaou, E.G. Kastrinakis, S.G. Nychas (1992) "Wind Tunnel Simulation of Ammonia Gas Cloud Dispersion and Mixing", Πρακτικά 1ου Πανελληνίου Συνεδρίου "Ασφάλεια και Υγιεινή στην Χημική Βιομηχανία" (Αθήνα, 9-12 Δεκεμβρίου 1992) (in Greek).
- J.N.E. Papaspyros, P.N. Papanicolaou, E.G. Kastrinakis, S.G. Nychas (1994) "Mixing of a turbulent round buoyant jet in cross flow", in "Advances in Turbulence V", Proceedings of

the Fifth European Turbulence Conference (Siena, Italy, July 5-8 1994), Roberto Benzi (ed.), Kluwer Academic Publishers, pp. 403-407.

- Papaspyros J., Papanicolaou P., Kastrinakis E.G., Nychas S.G. (1994) "Wind Tunnel Simulation of Certain Ammonia Release Transport Processes", Proceedings of "ICHMT: 1994 International Symposium" on "Heat and Mass Transfer in Chemical Process Industry Accidents" (Rome, September 15-16, 1994), pp. 413-422.
- J.N.E. Papaspyros, P.N. Papanicolaou, E.G. Kastrinakis, S.G. Nychas (1995) "Experimental simulation of turbulent dispersion of air pollutant releases", in "Air Pollution Engineering and Management", H. Power et al. (eds), Computational Mechanics Publications, 1995, pp. 185-192.
- J.N.E. Papaspyros, P.N. Papanicolaou, E.G. Kastrinakis, S.G. Nychas (1996) "Experimental simulation of pollutant releases", in "Protection and Restoration of the Environment III", E. Diamadopoulos and G.P. Korfiatis (eds), Technical University of Crete, 1996, pp. 336-344.
- J.N.E. Papaspyros, P.N. Papanicolaou, E.G. Kastrinakis, S.G. Nychas (1996) "Buoyant jet in cross flow: study of turbulent transport terms", in "Engineering Turbulence Modelling and Experiments 3", W. Rodi and G. Bergeles (eds), Elsevier 1996, pp. 551-560.
- S.G. Nychas, J.N.E. Papaspyros, P.N. Papanicolaou, E.G. Kastrinakis (1996) "Coherent contribution to the turbulent mixing of a buoyant jet in cross flow", in "Advances in Turbulence VI", Proceedings of the Sixth European Turbulence Conference (Lausanne, Switzerland, 2-5 July 1996), S. Gavrilakis et al. (eds), pp. 125-128.
- G.A. Sideridis, J.N.E. Papaspyros, E.G. Kastrinakis, S.G. Nychas (1996) "Similarity of stochastic and spectral characteristics of two simulated environmental flows", in "Proceedings of the Third International Conference on Environmental Pollution", A. Anagnostopoulos et al. (eds), Thessaloniki 1996, pp. 98-104.
- Χ.Τ. Μωυσίδης, Ι.Ν.Ε. Παπασπύρος, Ε.Γ. Καστρινάκης, Σ.Γ. Νυχάς (1997) «Λειτουργία ανυψωτικής αντλίας με αέρα για μικρά ύψη άντλησης», Πρακτικά Πρώτου Επιστημονικού Συνεδρίου Χημικής Μηχανικής, Πάτρα 29-31 Μαΐου 1997, σελ. 677-682 (in Greek).
- Γ.Ν.Ε. Παπασπύρος, Π.Ν. Παπανικολάου, Ε.Γ. Καστρινάκης, Σ.Γ. Νυχάς (1997) «Συσχέτιση για την επίδραση στερεών σωμάτων στη διασπορά ρυπαντών», Πρακτικά Πρώτου Επιστημονικού Συνεδρίου Χημικής Μηχανικής, Πάτρα 29-31 Μαΐου 1997, σελ. 865-870 (in Greek).
- J.N.E. Papaspyros, E.G. Kastrinakis, S. G. Nychas (1997) "Coherent aspects of a turbulent jet in cross flow", presented in the EUROMECH 3rd European Fluid Mechanics Conference, 15-18 September 1997, Goettingen, Germany.
- P.N. Papanicolaou, J.N.E. Papaspyros, E.G. Kastrinakis and S.G. Nychas (1999) "A Heated Vertical Buoyant Jet in a Crossflow", in "Mixing and Dispersion in Stably Stratified Flows", P.A. Davies (ed.), Oxford University Press 1999, pp. 355-372.
- Γ.Ν.Ε. Παπασπύρος, Γ.Α. Σιδερίδης, Ε.Γ. Καστρινάκης, Σ.Γ. Νυχάς, Κ.Δ. Καλαμποκίδης (2003) "Απλουστευμένο μοντέλο συμπεριφοράς δασικών πυρκαγιών", Πρακτικά Τέταρτου Επιστημονικού Συνεδρίου Χημικής Μηχανικής, Πάτρα 29-31 Μαΐου 2003, σελ. 1041-1044 (in Greek).
- C.S. Akratos, V.A. Tsihrintzis and J.N.E. Papaspyros (2005) "Performance of Pilot-scale Horizontal Subsurface Flow Constructed Wetlands in Wastewater Treatment", Proceedings of the 9th Conference on Environmental Science and Technology, September 1-3, 2005, Rhodes Island, Greece, Vol. A, pp. 38-43.

- C.S. Akratos, J.N.E. Papaspyros, G.D. Gikas and V.A. Tsihrintzis (2006) “Performance and Modeling of Vertical Flow Constructed Wetlands Treating Municipal Wastewater in North Greece”, Proceedings of the 10th International Conference for Wetland Systems for Pollution Control, September 24-29, 2006, Lisbon, Portugal.
- Κ. Μουτσόπουλος, Ι.Ν.Ε. Παπασπύρος, Ι. Νταγιάκας, Χ. Βίνης, Β.Α. Τσιχριντζής (2006) “Πειραματικός προσδιορισμός συντελεστών εξίσωσης Forchheimer”, Συνέδριο της Ελληνικής Υδροτεχνικής Ένωσης, Ξάνθη, 13-16 Δεκεμβρίου 2006 (in Greek).
- I. Chitzi, P. Melidis, C. Akratos, J.N.E. Papaspyros and V.A. Tsihrintzis (2007) “Study of Activated Sludge Dewatering in Pilot-Scale Reed-Planted SDBs”, Proceedings of the 10th International Conference on Environmental Science and Technology (CEST2007), September 5-7, 2007, Kos Island, Greece.
- V.G. Tzelepis, J.N.E. Papaspyros, K.N. Moutsopoulos & V.A. Tsihrintzis (2010) “Characteristics of flow in fractures: an experimental study”, Proceedings of the 6th International Symposium on Environmental Hydraulics, June 23-25, 2010, Athens, Greece.
- Konstantinos N. Moutsopoulos, Christos Drosakis, Ioannis Papaspyros, Vassilios A. Tsihrintzis (2012) “Optimization of water resources management of the Evzoni Aquifer, Greece”, Protection and Restoration of the Environment XI, July 3-6 2012, Thessaloniki.
- Athiniotou, A., Papaspyros, I., Komilis, D., (2012) “Modeling leachate generation from an active sanitary landfill”, 4th international conference of the Hellenic Solid Waste Association, Athens, November 2012 (oral presentation).
- Eleni Tsiroglou, Evangelos Voudrias, Ioannis Papaspyros, Ioannis Zarkadas, Dimitrios Alivertis, Ioannis Papagianis, George Pilidis (2013) “Risk Assessment of Four Uncontrolled Landfills in Greece Before and After their Closure”, Mediterranean Scientific Association of Environmental Protection Symposium, Istanbul, September 29, 2013.
- Gerassimidou, S., Papaspyros, I., Evangelou, A., Komilis, D. (2014) “Assessing the leaching of heavy metals from incinerated expired drugs”, 4th International Conference on Industrial and Hazardous Waste Management, Chania, Greece, September 2014 (oral presentation).
- Mantzaras G., Voudrias E., Papaspyros I. (2014) “Design of a collection, haul, transfer, treatment and disposal system for infectious medical waste management in the region of East Macedonia – Thrace, Greece”, 4th International Conference on Industrial and Hazardous Waste Management, Chania, Greece, September 2014 (oral presentation).
- Tzavellas E., J. N. E. Papaspyros J.N.E., Moutsopoulos K.N. (2015) “Analysis and Numerical Simulation of the Elder Problem”, 3rd Common Conference (13th of Hellenic Hydrotechnical Association, 9th of Hellenic Committee on Water Resources Management and 1st of the Hellenic Water Association) "Integrated Water Resources Management in the New Era", Athens, Greece, December 10-12, 2015 (oral presentation).
- Soultanidis V., Voudrias E.A., Papaspyros I. (2016) “Leaching of Heavy Metal from Cool Materials”, 5th International Conference on Industrial and Hazardous Waste Management, Chania, Greece, 27-30 September 2016 (oral presentation).
- Pogaridou S., Voudrias E.A., Papaspyros I. (2016) “Heavy Metal leaching from Wood demolition waste”, 5th International Conference on Industrial and Hazardous Waste Management, Chania, Greece, 27-30 September 2016 (oral presentation).
- Soultanidis V., Voudrias E.A., Papaspyros I. (2018) “Release of Heavy Metals from Conventional and Cool Cement Blocks, using the Tank Leaching Test”, 6th International

Conference on Industrial and Hazardous Waste Management, Chania, Greece, 4-7 September 2018 (oral presentation).

CONTACT DETAILS

Work Address:

Department of Environmental Engineering
Xanthi School of Engineering
Democritus University of Thrace

Postal Address:

12 Vasilissis Sofias Str.,
67100 Xanthi, Greece

Courier Address:

Environmental Engineering Department Laboratories
67100 Kimmeria, Xanthi, Greece

Phone: +30 25410-79386

Fax: +30 25410-79393

e-mail: ipapaspi@env.duth.gr