

## CURRICULUM VITAE

### Kamvyssas Gregory

Assistant Professor

Department of Mechanical Engineering

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### Studies

1989 - **Diploma in Mathematics**, Department of Mathematics, University of Patras,

1998 - **Ph.D.**, Chemical Engineering Dept., University of Patras. Ph.D. Dissertation: “*The Spherical Scatterer in the Presence of a Low Frequency Point Source Field*”.

Supervisor, G. Dassios. Applications in: underwater acoustic research, non-destructive testing & evaluation of composite materials, development of non-invasive investigation & evaluation methods in medical science.

### Scholarships

1990-1993 Ph.D. Studies, National Scholarship Foundation (IKY)

1996-1998 Ph.D. Studies, FORTH/ICE-HT

### Teaching

TEI West. Greece Mathematical Analysis, Linear Algebra, Calculus, Ordinary  
Differential Equations, Introduction to Numerical Analysis

Hellenic Open University Calculus, Elements of Linear Algebra

### Research Interests

Applied Mathematics, Continuum Mechanics, Wave Propagation and Inverse Scattering, Flow in Porous Media.

### Publications in International Scientific Journals

1. Dassios, G., Kamvyssas, G., “Point-Source Excitation in Direct and Inverse Scattering. The Soft and the Hard Small Sphere”, *J. Appl. Math.* **55**, pp. 67-84, 1995.
2. Dassios, G., Kamvyssas, G., “The Impedance Scattering Problem for a Point-Source Field. The Small Resistive Sphere”, *Q.J.M.A.M.*, **50**, pp. 321-332, 1997.
3. Dassios, G., Hadjinicolaou, M., Kamvyssas, G., “Direct and Inverse Scattering for Point-Source Fields. The Penetrable Small Sphere”, *Z. Angew. Math. Mech.* **79**, pp. 303-316, 1999.
4. Dassios, G., Hadjinicolaou, M., Kamvyssas, G., “The Penetrable Coated Sphere Embedded in a Point-Source Excitation Field”, *Wave Motion* **32**, pp. 319-338, 2000.
5. Kamvyssas, G., Kariotou, F., “Confocal Ellipsoidal Boundaries in EEG Modeling”, *Bulletin of the Greek Mathematical Society*, **50**, pp. 119-133, 2004.
6. Dassios, G., Hadjinicolaou, M., Kamvyssas, G., Kandili, A., “On the polarizability potential for two spheres”, *International Journal of Engineering Science* **44**, pp. 1520-1533, 2006.
7. M. Hadjinicolaou, G. Kamvyssas, E. Protopapas, “Stokes flow applied to the sedimentation of a red blood cell” *Quarterly of Applied Mathematics* **73**(3), pp. 511-523, 2015.
8. Kamvyssas, G., Valavanides, M.S., “Analytical solution of the saturated flow problem in 7-spot, 2D geometries”, *Fresenius Environmental Bulletin* **26**(9), pp. 5523-5528, 2017.

### Conference Proceedings & Presentations

1. Charalambopoulos, A., Dassios, G., Kamvyssas, G., “Reciprocity Theorems for Point-Source Scalar Scattering”, *Applied Mathematics in Science and Modern Technology Workshop*, pp.12-19, Metsovo, Greece, June 30-July 1, 1997.
2. Charalambopoulos, A., and Kamvyssas, G., “Isoperimetric Relations in Scattering by Small Obstacles”, *5<sup>th</sup> National Congress on Mechanics*, pp. 508-514, Ioannina, Greece, 27-30 August, 1998.
3. Perrusson, G., Lambert, M., Lesselier, D., Ducheme, B., Dassios G., and Kamvyssas, G., “On the identification of a simple conductive body buried in a conductive earth at low frequencies”, *International Symposium of Electromagnetic Theory*, pp.575-577, Thessaloniki, Greece, 25-29 May, 1998.
4. Perrusson, G., Lambert, M., Lesselier, D., Ducheme, B., Charalambopoulos, A., Dassios G., and Kamvyssas, G., “On the characterization of a conductive body in a conductive earth using low-frequency asymptotic analyses”, *Invited Paper, Progress in Electromagnetics Research Symposium*, pp. 867, Nantes, France, 13-17 July, 1998.
5. Kamvyssas, G., Kariotou, F., “On the Electroencephalography (EEG) Problem for the Ellipsoidal Brain Model”, *6<sup>th</sup> National Congress of Mechanics*, pp. 222-226, Thessaloniki, Greece, 2001.
6. Perrusson, G., Lesselier, D., Vafeas, P., Dassios, G., Kamvyssas, G., “Low-frequency electromagnetic modeling and retrieval of simple orebodies in a conductive earth”, *Third Congress of the International Society for Analysis, its Applications and Computation (ISAAC)*, Book of Abstracts, pp. 221–222, Proceedings, World Scientific, *Progress in Analysis*, **2**, pp. 1413–1422, Berlin, Germany, 2001, Reviewed: *Math. Rev.* MR2032821.
7. Dassios, G., Kamvyssas G., “Re-identification of the gradient and Helmholtz’s decomposition theorem in anisotropic media”, *10<sup>th</sup> Pan-Hellenic Conference of mathematical Analysis*, Athens, Greece, Sept. 30/9- Oct. 2, 2004.
8. G. Dassios, M. Hadjinicolaou, G. Kamvyssas, “General Polarizability Tensor for two spheres”, *7<sup>th</sup> International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering*, pp. 128-135, Nymphaio, Greece, 8-11 Sept., 2005.
9. G. Dassios, M. Hadjinicolaou, G. Kamvyssas, “Polarizability of a sphere having an eccentric spherical inclusion”, *8<sup>th</sup> International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering*, pp. 124-133, Lefkada, Greece, Sept. 27-29, 2007.
10. Valavanides, M.S., Kamvyssas, G., Totaj, E. "[Retrospective Examination of Relative Permeability Data and Operational Efficiency Aspects for Steady-State 2-Phase Flow in Porous Media](#)" *6<sup>th</sup> Panhellenic Symposium on Porous Media*, Kavala, Greece, September 9-10, 2013.
11. Valavanides, M.S., Kamvyssas, G. "[Operational Efficiency Map of Steady-State Two-Phase Flow in Porous Media Processes](#)" *InterPore2013 5<sup>th</sup> International Conference on Porous Media*, Prague, May 21-24, 2013.
12. Καμβύσας Γ., Πρωτοπαπάς Ε., Χατζηνικολάου Μ., «Μαθηματικά Μοντέλα για τη ροή του αίματος» [30ο Πανελλήνιο Συνέδριο Μαθηματικής Παιδείας](#), Καρδίτσα, 8-10 Νοεμβρίου, 2013.
13. Dassios G., Hadjinicolaou M., Kamvyssas G., Kariotou F., Protopapas E., “Analytical expansions for the Stress and the Torque exerted by a viscous fluid on a Red Blood Cell”, *M3ST Modern Mathematical Methods in Science and Technology*, Kalamata, Greece, Aug. 30 Sept. 1, 2015 (poster)