CURRICULUM VITAE

Name (Surname, First) : Hatzikonstantinou Pavlos (Paul)
Date and Place of Birth : 1949, Athens, Greece
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DEGREES

B.Sc. In Applied Mathematics ,University of Patras, Greece (1973)
D.I.C. In Theoretical Physics, (Dept. Physics), Imperial **C**ollege of Science and Technology , U.K., (1977)
Ph.D. In Theoretical Physics, (Dept. Physics),University of Manchester, U.K., (1980)

SCHOLARSHIPS

Three postgraduate scholarships by **(1)** the National Research Institute of Greece (3 years), **(2)** the British Council (1 year) and **(3)** the A. Onassis Foundation (2 years)

References on Biography Dictionaries

(a) International Directory of Distinguished Leadership, (ΗΠΑ),1994,
(b) Dictionary of International Biography, (Αγγλία), 1994,
(c) Five Hundred Leaders of Influence, ΗΠΑ), 1995.

PROFESSIONAL POSITIONS

Professor , of Applied Mathematics and Computational Methods and their Applications in Technological Problems, in the Department of Engineering Sciences, (2/1996 -8/2013) and in the Department of Mechanical Engineering and Aeronautics (9/2013 - today), at the University of Patras. (**Asso. Professor** at the Department of Engineering Sciences, Univ.of Patras (6/1991-2/1996)
Professor, at the Technological Educational Institute of Patras (1983-93)
Special Scientist, University of Patras (1985-89)
Research Assistant , University of Patras (1973-75)

MANAGEMENT POSITIONS

Chairman- of the Department of Engineering Sciences, University of Patras, 1997-2001,2004, 2005-2009 (9 years)
Vice-Chairman- of the Department of Engineering Sciences, University of Patras, 1991-1993,2001-2004 (5 years).
Director – of the Division of Applied Mathematics and Mechanics, Department of Engineering Sciences, University of Patras, 1999-2000,2004-2009 (6 years).
Director of the Postgraduate studies of the Department (2004-2009).
Member of the Senate of the University of Patras, 1991-2004, 2005-2009.

EDUCATIONAL, SCIENTIFIC AND RESEARCH ACTIVITY

Educational Activity: During my work for 34 years in the Higher Educational, from which 19 years as Professor of Computational Fluid Dynamics and Applied Mathematics at various Departments of the Polytechnic School of the University of Patras in Greece. I have taught over 130 undergraduate courses, 8 postgraduate courses and 20 courses in International Seminars. I have been the supervisor of 4 Doctorate theses and member of the advisory committee for 10 Doctorate theses.

Main Research interests: Computational Fluid Mechanics and Heat Transfer, Magnetofluiddynamics, Magnetic (Micropolar) Fluids, Numerical Analysis of Partial Differential Equations, Applications of Electric and Magnetic Fields, Quantum Fluids, Superflluidity and Applied Mathematical Physics.

Author of 46 research papers in international scientific journals (see List of publications below and Google-*Scholar*) and 23 proceedings of International Conferences.

Author of the books in Greek language 1) Computational Methods and Applications in Fluid Mechanics and Heat Transfer, pp 454 , **2)** The series of textbooks, Mathematical Methods for Engineers and Scientist:**Vol I,** Integral and Differential Calculus of Several Variables- Vector Differential Calculus, pp 536, **Vol II,** Ordinary Differential Equations, Laplace and Fourier Transformations, pp 704, **Vol III,** Partial Differential Equations Fourier Series and Boundary Value Problems-Complex Variables, pp 735. (Total of 1975 pages, Including over 1000 solved important cotemporary physical and technological problems.). These books are considered as the main teaching aids for many Departments of the Polytechnic School and the Department of Physics at the University of Patras and related Departments in other Universities.

SCIENTIFIC AND ORGANIZATION ACTIVITIES
Member of Editorial Boards:
1) Member of the Editorial Board for the International Journal of Mechanical Systems Engineering (IJMSE). Graphy Publications.
2) Member of the Editorial Board for the International Journal of Aeronautical Sciences and Aerospace Research . (SciDoc.- Publishers).

3) Evaluator for the Edition of Greek Academic Electronic Books "KALLIPOS".
4) Co-organizer of eight International Conferences and seminars in Computational Mechanics, Summer Schools in Energy, Environment and Nuclear Physics and Application of Computers in Management and member of the Scientific Commettee of seven International Conferences.
5) Invited speaker in 9 International conferences and seminars.
6)Research Projects: I have participate in two multinational research projects financed by the Eur. Union and as leader in four national research projects.

7) Refereeing: I have made over 80 refereeing reports for the following Inter. Scientific Journals. (1) Int. Journal of Heat and Mass Transfer, (2) Numerical Heat Transfer Part A., (3) Heat Transfer, (4) Journal of Heat Transfer (ASME), (5) Journal of Fluids Engineering (ASME), (6) Journal of Computers and Mathematics, (7) Journal of Physics A:

Mathematical. and General, (8) Journal of Physics C: Solid State , (9) Journal of Physics D: Applied Physics, (10) IEEE-Transactions on Magnetism, (11) The European Physical Journal-Plus., (12) Journal of Computational Methods in Sciences and Engineering (JCMSE), (13) Journal of Magnetism and Magnetic Materials, (14) Microfluidics and Nanofluidics.

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8) Member of the Institute of Physics of U.K., of the American Physical Society, of the Royal College of Science Association (Imperial Col. of Science and Techn. London), of SIAM(Society of Industrial and Appl. Math.) , of the New York Academy of Science , of the Association for the Advancement of Science (USA) and of the Greek Mathematical and Physical Societies.

LIST OF PABLISHED PAPERS IN INTERNATIOLAL SCIENTIFIC JOURNALS WITH REFEREEING.

1. 'Relativistic Motion of an Electron in Uniform External Electric and Magnetic Fields", (1975), P. Hadjikonstantinou and A. Jannousis, Fizika 7 ,1977-186.

2.'Lowest Order Constrained Variation Calculations and Backflow Effects in Liquid $He^{3'}$,(1982), P. Hatzikonstantinou , J. M. Irvine, Jour. Low Temp. Phys. Vol. 48, 13-24.

3. 'Method of Correlated Basis Functions and FHNC Theory', P. Hatzikonstantinou J. M. Irvine, (1982), Jour. Phys. A Math.Gen. Vol.15, 1715-1731.

4 'Correlated P-wave Pairing Theory for Fermi Systems, Application to Liquid $He^{3'}$, P. Hatzikonstantinou and J. M. Irvine, (1982), Jour. Phys. A Math.Gen. Vol.15, 3627-3644.

5. 'Numerical treatment of Hydromagnetic Thermal Boundary Layer Flow of an Infi nite Porous Limiting Surface', (1984) G. C. Pande and P. Hatzikonstantinou, Astro phys. Space. Sci., Vol. 107,313-322.

6. 'Variational Calculations of the Ground State Properties of the ^{4}He Monolayer', P. Hatzikonstantinou, (1985) Jour. Phys. C: Solid State Phys. Vol. 18, 2393-2400.

8. 'Unsteady Hydromagnetic Flow past a Porous Spherical or Cylindrical Surface', P. Hatzikonstantinou, (1985), Astrophys. and Space Sic. Vol. 115, 185-194.

9. 'Unsteady Hydromagnetic Thermal Flow past a Cylinder in presence of Magnetic Field', P. Hatzikonstantinou, (1986), Zeit. Angew. Math. und Mech (ZAMM), Vol. 66, 57-60.

10. 'Some Aspects on the Electromagnetic Impulse Pendulum and BIOT-SAVART-LORENZ Force', P. G. Moyssidies and P. Hatzikonstantinou, (1988), Il Nuovo Cimento, Vol. 10D, N2, 229-234. The journal since 1/1999 merged into The European Physics Journals B and D.

11. 'Wall-to Fluidized Bed Radiative Heat Transfer Analysis using the Particle Model', Y. Filtris, G. Flamant and P. Hatzikonstantinou, (1988), Chemical Engin. Communications, Vol. 72, 187-199.

12 'Unsteady Mixed Convection about a Porous Rotating Sphere", P. Hatzikons tantinou, (1990), Int. Jour. Heat and Mass Transfer, Vol. 33, 19-27.

13. 'Effects of Mixed Convection and Viscous Dissipation on Heat Transfer about a Porous Rotating Sphere', P. Hatzikonstantinou, (1990), Zeit. Angew. Math. und Mech. (ZAMM), Vol. 70, 457-463.

14. 'Magnetic and Viscous Effects on a Liquid Metal Flow Due to a Rotating Disk' P. Hatzikonstantinou, (1989), Astrophys. and Space Sci. Vol. 161, 17-25.

15. 'Comments on a Six-Dimensional Space - Time Scheme", P. Hatzikonstantinou and P. G. Moyssides, (1989), Physics Lett. A, Vol. 140, No 3, 85-89.

16. 'Recoiling Momentum of the Electromagnetic - Impulse – Pendulum', P.G. Moyssides, P. Hatzikonstantinou, Il Nuovo Cimento D., (1989),Vol.11,N. 4,

651- 653. The journal since 1/1999 merged into The European Physics Journals -D.

17. 'Study of Electrical Characteristics of the Ball Bearing Motor', P.G. Moyssides, P. Hatzikonstantinou, (1990), IEEE: Trans. on Magnetics., Vol. 26, 1274-1281.

18. 'Explanation of the Ball Bearing Motor and Exact Solutions of the related Maxwell Equations', P. Hatzikonstantinou and P. G. Moyssides. ,(1990) Jour. Phys. A. Math. Gen. Vol. 23, 3183-3197.

19. 'On the Radiation of the Electromagnetic Impulse Pendulum", P. Hatzikonstanti nou and P. Moyssides, (1991), Il Nuovo Cimento D., Vol. 13, 1093-1099. The journal since 1/1999 merged into The European Physics Journals B and D.

20. 'Numerical Treatment of the Heat Transfer From Wall to Fluidized Bed Using the Particle Model', Y. Flitris, P. Hatzikonstantinou, , (1993), Computers Chemical Engin., Vol. 17, 885-895.

21. 'New Numerical Method For Partial Differential Equations. 1: Application to The Diffusion Equation', P. Hatzikonstantinou, (1994), Inter.Jour. Nu mer.Meth. in Fluids, Vol 18, 257-271.

22. 'Ball Bearing Motors', P. Moyssides and P. Hatzikonstantinou, (1997) IEEE, Trans. on Magnetics., Vol. 33, 4566-69.

23. 'Laminar Heat Transfer in the Entrance Region of Internally Finned Square Ducts'. V. Sakalis and P. Hatzikonstantinou , (2001) ASME Jour. of Heat Transfer, Vol. 123, 1030-1034

24. 'Thermally Developing Flow in Elliptic Ducts with Axially Variable Wall Tem- perature Distribution '.,(2002), V. Sakalis , P. Hatzikonstantinou and N. Ka fousias , Inter. Jour. of Heat and Mass Transfer, Vol. 45, 25-35

25. 'Electromagnetic Energy and Momentum Conservation in Pendulum Experi ments', ,(2003), P. Moyssides , C. Patrinos and P. Hatzikonstantinou, IEEE Trans.on Magnetics, Vol.39, 2024-2029.

26. 'A Numerical-Variational Procedure for a Laminar Flow in Curved Square Ducts',(2004), P. M., Hatzikonstantinou, V. D Sakalis, Int. Jour. for Num. Meth. in Fluids, Vol. 45, 1269-1289.

27. ' Numerical Analysis of Fully Developed Flow in Curved Square Ducts with] Internal Fins', (2004), P.K. Papadopoulos ,P.M. Hatzikonstantinou , ASME, Jour. Fluids Engin., Vol. 126,752-757.

28. 'Biomagnetic Fluid Flow in a 3D Rectangular Duct ',(2004), E.E. Tzirtzilakis, V. D Sakalis , N. G. Kafousias, P.M. Hatzikonstantinou , Inter.Jour. for Num. Meth. in Fluids Vol 44, 1279-1298.

29. ' Numerical Procedure for the Laminar Developed Flow in a Helical Square Duct'**,** (2005), V. D Sakalis, P. M., Hatzikonstantinou, P.K. Papadopoulos, ASME, Jour. Fluids Engin. , Vol. 127, 136-148.

30. ' A Numerical Procedure for the Laminar Heat Transfer In Curved Square Ducts ',(2005), V. D Sakalis, P. M., Hatzikonstantinou, Numerical Heat Transfer, Part B, Vol.47, 135-155.

31. 'Thermally Developing Flow in Curved Square Ducts with Internal Fins', (2005) ,P.K. Papadopoulos ,P.M. Hatzikonstantinou , Heat and Mass Trans fer, Vol. 42, 30-38 .

32 'Numerical Investigation of the Thermally Developing Flow in a Curved Ellip tic Duct with Internal Fins', (2007) ', P.K. Papadopoulos , P.M. Hatzikon stantinou , ASME, J. Heat Transfer, Vol. 129, 759-762 .

33. 'Application of the CVP method on 3D Internal Flows', P.K. Papadopoulos, P.M. Hatzikonstantinou, (2007), Proceedings of the Intern. Confer. on Com putational Methods in Science and Engineering of the American Inst. of

Physics (after full peer review) Vol.2, σελ.1323-1326, Corfu, Greece.

34. 'Numerical Study of Laminar Fluid Flow in a Curved Elliptic Duct with Inter nal Fins'',(2008), P.K. Papadopoulos , P.M. Hatzikonstantinou , Int. Journal of Heat and Fluid Flow, Vol. 29, 540-544.

35. 'Micropolar flow under the effect of a magnetic dipole', (2009), P. Vafeas, P. Papadopoulos, P. Hatzikonstantinou , Proceedings of the Inter. Conf. on Computational Methods in Science and Engineering of the American Inst.Physics, Vol.1148, p.566 .

36. 'A General Theoretical Model for the Magnetohydrodynamic Flow of Mi cropolar Magnetic Fluids . Application to Stokes Flow', (2010), P.M. Hat zikonstantinou , P. Vafeas , Mathematical Methods in the Applied Sciences Vol. 33, 233- 248.

37 'Improved CVP Scheme for Laminar Incompressible Flows', (2011), P.K. Papadopoulos, P.M. Hatzikonstantinou , Int. Journal for Num. Meth. in Fluids, Vol 65, No. 9, 1115-1132 .

38. 'On the Perturbation of the Three-Dimensional Stokes Flow of Micropo lar Fluids by a Constant Uniform Magnetic Field in a Circular Cylinder', (2011), P. Vafeas, P.K. Papadopoulos, P.M. Hatzikonstantinou , Mathe matical Problems in Engineering, Volume 2011, Article ID659691,1- 41

39. 'MHD and Thermal Flow Between Isothermal Vertical Concentric Cylin ders with Rotation of the Inner Cylinder', (2011), P.A. Bakalis, P.M. Hat zikonstantinou , Numerical Heat Transfer A, Vol. 59:11, 836-856, Article DOI:10.1080/10407782.2011.578013.

40. 'Ferrofluid Pipe flow under the influence of the Magnetic field of a Cylindri cal Coil', (2012), P.K. Papadopoulos, P. Vafeas, P.M. Hatzikonstantinou , Journal of Physics of Fluids, Vol. 24, No 12, 122002, 1-13.

41. 'A Computational approach for the solution of the MHD and Thermal Flow of a Liquid Metal between two Horizontal Concentric Cylinders', (2014), P. M. Hatzikonstantinou P.A. Bakalis, Int. Journal of Computa tional Fluid Dynamics, In Press.

42. 'Effect of Curvature and Magnetic Field on MHD flow of a Liquid Metal flow in a Curved Annular Duct', P.A. Bakalis, P.M. Hatzikonstantinou , (2014), International Journal of Numerical Methods for Heat and Fluid Flow (ID: HFF-12- 2013-0363.R2) Accepted for Publication.

43. 'Interpretation of the gas flow field modification induced by guided streamer ("plasma bullet") propagation.", (2014), P.K. Papadopoulos, P.Vafeas, P. Svarnas, K.Gazeli, P.M. Hatzikonstantinou , A. Gkelios, F. Clement, Journal of Physics D. Applied Physics, (102772, R1), Vol. 47,(425203), 1-16.

44. 'Analytical Integro-differential representation of flow fields for the Micropolar Stokes flow of a conducting Ferrofluid.', (2014), P. Vafeas, P.K. Papadopoulos, P.M. Hatzikonstantinou , IMA Journal of Applied Mathematics Advance Access. Accepted for Publication, in Press.

45. 'MFD formulations for the Liquid Metal flow in a curved pipe of circular cross- section' , (2015), P.A. Bakalis, P.M. Hatzikonstantinou, Computers and Fluids, (ID: CAF-D-14-00271), In Press.

46. 'Developmeant of MFD Flow of Liquid Metal between two Ho-rizontal Concentric Cylinders',(2015) P.A. Bakalis, P.M. Hatzikonstantinou , (2015), International Journal of Numerical Methods in Fluids, (ID: 0286-14),Submitted for Publication.