BIOGRAFICAL NOTE

PAPAILIOU KYRIACOS

DATE OF BIRTH	June 4, 1939
PLACE OF BIRTH	ATHENS
ADDRESS	NATIONAL TECHNICAL UNIVERSITY OF ATHENS LABORATORY OF THERMAL TURBOMACHINES P.C. 64069 157 10 ATHENS, GREECE Tel. 210 7721634-7721638

EDUCATION

- Degree of Mechanical Engineering, 1962
  NATIONAL TECHNICAL UNIVERSITY OF ATHENS
- Diploma in Experimental Aerodynamics (with distrinction), 1965. V.K.I. (von Karman Institute for Fluid Dynamics), Belgium.
- Doctorat en Sciences Appliquees, Universite de Liege (avec grande distinction), 1969.
- Doctorat es Sciences Physiques (avec mention tres honorable).
  Universite Claude Bernard, Lyon, France (1974).

LANGUAGES

Greek, English, French

CAREER ELEMENTS IN BRIEF

Aug. 1965-Sept. 1967: Research Associate, von Karman Institute (VKI), Laboratory of Rotating Machinery, Belgium

Oct. 1967-Jan. 1970 : Project Engineer, von Karman Institute, Laboratory of Turbomachinery.

At the same time

a) Sept. 1969-Jan. 1970: Technical Advisor ACEC Co., Charleroi, Belgium.

b) Jan.1969-Jan.1970: Technical Advisor, Stork Co, Hengelo (O), Holland.

Jan. 1970-Aug. 1970: Assistant Professor, von Karman Institute.

At the same time

a) Jan. 1970-Aug. 1970: Technical Advisor Ste ACEC Co., Charleroi, Belgium.

b) Jan. 1970-Aug. 1970: Technical Advisor, Stork Co, Hengelo (O), Holland.

Aug. 1970-Sept. 1971: Assistant Professor, Naval Postgraduate School, Monterey, Cal., USA.

Nov. 1971- Mar. 1973: Engineer, Societe Nationale pour l'Etude et Construction de Moteurs d'Aviation (SNECMA-Centre d'Essais Villaroche), France.

At the same time

Visiting Professor, von Karman Institute, Belgium.

Apr. 1973-Oct. 1975: Engineer, Ste Metraflu, France.

At the same time

a) Technical Advisor, Ste SNECMA-Villaroche, France.

b) Charge de Cours, Ecole Centrale de Lyon, France.

Oct. 1975-Oct. 1978: Maitre de Conferences Associe., Ecole Centrale de Lyon, France.

At the same time

a) Technical Advisor, Ste SNECMA-Villaroche, France.

b) Oct. 1975-Oct. 1977: Technical Advisor, Ste Creusot Loire, France.

c) Charge de Cours, Ecole Nationale Superieure d'Hydralique de Grenoble, France.

e) Sept. 1977-Dec. 1978: Technical Advisor, Ste Jeumont - Schneider, France.

f) June 1977-Oct. 1978: Technical Advisor, Electricite de France, France.

Nov. 1978-Nov. 1982: Three year period Professor, Chair of Turbomachinery, National Technical University of Athens.

At the same time

a) Nov. 1978-Dec. 1980: Technical Advisor, Brown Bovery and Co., Switzerland.

b) Nov.1978-Dec. 1980: Technical Advisor, Electricite de France, France.

Nov. 1982-June 2006: Professor and Director of the Thermal Turbomachinery Lab, Fluids Section, Mechanical

Engineering Department, National Technical University of Athens .

At the same time

a) Dec. 1983-June 1986: Member of the Board of Directors, Hellenic Aero Industry.

b) Oct. 1983-Aug. 1985: Managing Director and Member of the Executive Council, National Research Foundation.

c) July 1985-Mar. 1987: Secretary General for Research and Technology, Ministry of Industry, Energy and Technology. While holding this position, the National Program for Research and Technology (ΕΠΕΤ) for evaluating and funding research proposals, as well as the Organisation for Industrial Property (OBI) were established.

d) Academic Years 1982/83 and 1983/84: Visiting Professor, Genova University, Italy.

e) Member of the Evaluation Committee for the von Karman Institute (until December 2001).

f) Member of the Evaluation Committee of Program parts of the European Union and Member of the Evaluation Committee for the Evaluation of the Fourth Framework Program of the European Union for the years 1996-1997.

g) President of the National Advisory Council for Research (until August 2001).

June 2008 until today: Emeritus Professor

Besides the activities reported within the career elements in brief, it could be interesting to report the following:

1. He formed a Research Group (10 Engineers) and a Turbomachinery Lab within the Fluid Mech. Lab. of the Ecole Centrale of Lyon, France. The funding of this Research Group was ensured mainly through contracts with industrial firms and research funding organisations.

2. He formed a similar Research Group (15 Engineers), as well as the Turbomachinery Lab. in the Mechanical Engineering Dept. of the Nat. Technical University of Athens. Again, this Research Group was funded almost exclusively through contracts with European industrial outfits (see below), the European Commission and the Greek Government (until the

end of his career in the National Technical University of Athens, the funding of the Lab reached the total of, approximately, 50 million euro).

3. He designed several important turbomachinery elements (pumps (among which the 10 Megawatt pump, which cools the nuclear electricity production unit in southern France)), compressors (axial and radial), ventilators (axial and radial) for various applications, turbines (axial and radial), as, for instance an axial turbine, which was used to power a Czech helicopter, as well as the water droplet separator (system patented by EDF) used to remove water from dry steam, in the case of the previously mentioned EDF nuclear power station. The successful two phase flow design of the droplet separator resulted in a reduction of the nuclear power station volume by 40%. In addition, he has analysed various existing turbomachinery units, aiming at their improvement.

4. Various computer codes, developed by the previously mentioned two research groups, have been introduced in a number of industrial outfits.

5. 15 Mechanical Engineers have acquired their Ph.D.degree under his supervision in France and in Greece.

6. He installed in the National Technical University of Athens the first parallel super computer in Greece (an Alliant FX - 80) and, some time later two of the 500 largest worldwide supercomputers established in the Supercomputer Unit, which he created in the National Technical University of Athens.

7. A number of Technical Reports, Publications and Presentations in Conferences, Symposia with minutes and Invited Lectures were produced, as listed below.

8. He has, also, occupied the following positions:

   a) Reviewer, Applied Mechanics Review.
   b) Member of the Evaluation Committee for the Evaluation for Funding Research Projects, by the “Delegation Generale des Recherches Scientifiques et Techniques” (DGRST), France.
   c) Member of the American Society of Mechanical Engineers (ASME).
   d) Member of the Turbomachinery and the Control and Diagnostics Committee of the ASME.
   e) Member of the American Society of Aeronautics and Astronautics.
   f) Greek Representative for the International Society of Air Breathing Engines (ISOABE).
   g) Vice Chairman of ISOABE.
   h) Greek High Level Representative in the Program EUREKA.
   i) He offered his services in the field of his specialty to the OECD.

j) He offered support in the field of his specialty to the Centre Nationale des Etudes Spatiales (fusee ARIANE).
k) Member of the Scientific Committee of the Pilot Center of ERCOFTAC in Lyon and in Greece.
l) Member of the Scientific Committee of ERCOFTAC.
m) Representative of Greece in the EU in the Field of Aeronautics.
n) European Commission Expert for the Aeronautics Programs.
o) European Commission Evaluator for the Program of Industrial and Material Technologies (1991-1994), BRITE-EURAM II of the European Commission.
p) European Commission Evaluator for the Research Program ESPRIT.
q) Member of the ECCOMAS Scientific Committee for the ECCOMAS 1996 Conference.
r) Member of the Administrative Council of ECCOMAS
s) Member of the Administrative Council of the Greek Aircraft Industry
t) Technical Advisor, National Enterprise of Electricity
u) Technical Advisor, ENEL, Italy.

B.PRESENTATIONS IN CONFERENCES AND SYMPOSIA WITH MINUTES

1. KEFALAKIS M., PAPAILIOU K. D., Detailed Measurements on an Axial Compressor Stage with Application of Discrete Tip Injection for Increasing the Surge Margin", 7th ISABE Conference, Greece, 2007.
2. PAPAILIOU K. D., KEFALAKIS M., SKAMNAKIS D. "Flow Control for Internal Flows", 6th ECCOMAS Conference, The Netherlands, 2006.
3. GEORGIADIS A. C., KOUBOGIANNIS D G., GIANNACOGLOU K., PAPAILIOU K. D., " Numerical Flow Simulation of a Counter Rotating Fan Stage Using a RANS Solver for Unstructured Grids, ISABE 2001-1194, India, 2001.
4. DOUKELIS A., MATHIOUDAKIS K., PAPAILIOU K.D "Effect of Wall Rotation on the Performance of a High-Speed Compressor Cascade with Tip Clearance" Paper 99-7267, XIV ISABE Conference, Italy, 5-12, 1999.
5. PAPAILIOU K.D., SIEROS G., VASSILOPOULOS C. "Numerical Study on the 3-D Viscous Flow in a Centrifugal Compressor Impeller with and without Consideration of Tip Clearance". Part 1- Comparison with experiment. Proceedings XIV ISABE Conference, Italy, 1999.
6. KOUBOGIANNIS K.G., GIANNAKOGLOU, K.C., PAPAILIOU, K.D. "Unstructured Grid Adaptivity with Dynamic Load-Balancing on Distribute Memory Computers" "(Mini Symposium on Dynamic Load Balancing") Fourth ECCOMAS Computational Fluid Dynamics Conference, Athens, Vol. 65 pp 432-438, 1998.
7. LAMBROPOULOS N., POLITIS E.S., GIANNAKOGLOU K.C., PAPAILIOU, K.D. "Co-Located Pressure-Correction Formulations on

Unstructured 2-D Grids", 3rd National Congress on Computational Mechanics 27 1999, Volos, Greece. Pp 258-264, Sprinter-Verlag 2001,Edited by N. Avaras and J.T. Katsikadelis, vol. 2, pp 258-264

8. SIEROS G., PAPAILIOU K.D. "The Design of Small Centrifugal Compressors using Advanced Computational Means". ERCOFTAC bulletin, September 1999.
9. PAPAILIOU K.D., SIEROS G., VASSILOPOULOS C. "Numerical Study on the 3-D Viscous Flow in a Centrifugal Compressor Impeller with and without Consideration of Tip Clearance". Part 1- Comparison with Experiment. Proceedings, XIV ISABE Conference, Florence, Italy, 1999. .
10. KOUBOGIANNIS D.G., GIANNAKOGLOU K.C., PAPAILIOU K.D. "Unstructured Grid Adaptivity with Dynamic Load Balancing on Distributed Memory Computers", Fourth ECCOMAS Computational Fluid Dynamics Conference, Mini-Symposium: on Dynamic Load Balancing, vol. 2, pp 171-176, Sept. Athens, 1998.
11. FRESKOS, G.O., GIANNAKOGLOU, K.C., PAPAILIOU, K.D."3-D Analysis of a Backswept Impeller", 2nd European Conference on Turbomachinery, Fluid Dynamics & Thermodynamics, Antwerpen, Belgium, 1997.
12. KOUBOGIANNIS, D.G., GIANNAKOGLOU, K.C., PAPAILIOU, K.D. ¨Prediction of the Secondary Flow in a Turbine Cascade¨, XIII ISABE International Symposium on Air Breathing Engines, Chattanooga, Tennessee, USA, 1997.
13. DOUKELIS A., MATHIOUDAKIS K., FOUNTI M., PAPAILIOU K.D. "3-D LDA Measurements in an Annular cascade for studying Tip Clearance Effects", AGARD 90TH PEP Symposium on "Advanced Non-intrusive Instrumentation for Propulsion Engines", Brussels, Belgium, 1997.
14. MATHIOUDAKIS K., PAPAILIOU K.D., NERIS N., BONHOMMET C., ALBRAND G., WENGER U. "An Annular Cascade Facility for Studying Tip Clearance Effects in High Speed Flows", XIII ISABE, USA, 1997.
15. NIKOLAOU I.G., GIANNAKOGLOU K.C., PAPAILIOU K.D. "Numerical Prediction of the Secondary Flow in a Turbine Cascade", XIII ISABE, USA, 1997.
16. SIEROS G., VLACHOS P., PAPAILIOU K.D., "The Design of a Small Radial Compressor for a Hydrid Electric Vehicle Gas Turbine", 1st European Conference on Clean Cars, Athens 1997.
17. SIEROS G., AGGELIS K., SIMANDIRAKIS G., BOURAS V., PAPAILIOU K.D. The design of a Small Axial Flow Turbine for a Hydrid Electric Vehicle Gas Turbine", 1st European Conference on Clean Cars, Athens 1997.
18. PAPAILIOU K.D., ETEMAD S., SIEROS G."Gas Turbine versus Diesel. Advantages and Disadvantages of each solution, when used to

power an Electric Hydrid Vehicle", 1st European Conference on Clean Cars, Athens 1997.
19. PAPAILIOU K.D., ETEMAD S., SIEROS G. "Gas Turbine Hybrid Electric Vehicle Project: Description and Progress Report", First European Conference on Clean Cars, Athens 1997.
20. SIMANDIRAKIS G., BOURAS B., PAPAILIOU K.D."Shock-Boundary Layer Interaction Control. Predictions using a Viscous-Inviscid Interaction Procedure and a Navier-Stokes Solver", Third International Symposium on Experimental and Computational Aerothermodynamics of Internal Flows", Sept. 1-6, 1996, Beijing, China. Also, Published in the Journal of Thermal Sciences, 1997.
21. VASSILOPOULOS C., SIMANDIRAKIS G., GIANNAKOGLOU K., PAPAILIOU K.D."Losses Prediction in Axial Flow Compressor Cascades, Using an Explicit k-ε Cascade Navier-Stokes Solver", 85th Symposium of the Propulsion and Energetics Panel on "Loss Mechanisms and Unsteady Flows in Turbomachines", Derby, U.K., May 1995.
22. VOGIATZIS C.A., GIANNAKOGLOU K.C., KOUBOGIANNIS D., PAPAILIOU K.D."Assessment of Three Implicit Solution Methods for the Time-Dependent Navier-Stokes at Low Mach Number", 4th National Congress on Mechanics, Xanthi, Greece, 1995.
23. POLITIS E.S., GIANNAKOGLOU K.C., PAPAILIOU K.D. "A Successive Implicit Method for Incompressible Flow Calculations in Three-Dimensional Ducts and Cascades". ISABE 95-7056, Australia, 1995.
24. NIKOLOS I.K., DOUVIKAS D.I., PAPAILIOU K.D."Prediction of Losses Due to the Tip Clearance Presence in Axial Flow Machines", 85th Symposium of the AGARD Propulsion and Energetics Panel on "Loss Mechanisms and Unsteady Flows in Turbomachines", U.K., 1995, AGARD CP 371, 1996.
25. VASSILOPOULOS C., SIMANDIRAKIS G., GIANNAKOGLOU K., PAPAILIOU K.D."Losses Prediction in Axial Flow Compressor Cascades, Using an Explicit k-ε Cascade Navier-Stokes Solver", 85th Symposium of the AGARD Propulsion and Energetics Panel on "Loss Mechanisms and Unsteady Flows in Turbomachines", U.K., 1995, AGARD CP 371, 1996.
26. VOGIATZIS C.A., GIANNAKOGLOU K.C., KOUBOGIANNIS D., PAPAILIOU K.D."Assessment of Three Implicit Solution Methods for the Time-Dependent Navier-Stokes at Low Mach Number", 4th National Congress on Mechanics, Greece, 1995.
27. POLITIS E., GIANNAKOGLOU K., PAPAILIOU K.D."A Successive Implicit Method for the Compressible Flow Calculations in Three-Dimensional Ducts and Cascades", 12th ISABE, Paper ISABE 95- 7056, Australia, 1995.
28. SIMANDIRAKIS G., DEJEAN F., VASSILOPOULOS CHR., GIANNAKOGLOU K., PAPAILIOU K. D."Steady and Unsteady Two-

Dimensional Flow Calculations Using an Explicit Fractional Step Algorithm", Proc, of the ECCOMAS 94 Conference, 5-8 September, Germany, 1994.
29. GIANNAKOGLOU K., PAPAILIOU K. D.,"A Preconditioned GMRES Pressure Correction Algorithm for Incompressible, Laminar and Turbulent Flows", Proc. Of the ECCOMAS 94 Conference, 5-8 September, Germany.
30. DOUKELIS A., FOUNDI M., MATHIOUDAKIS K., PAPAILIOU K.D. "A Three Component Laser Doppler Anemometer for Measurements in a Turbomachinery Annulus". Proceedings of EUROTHERM Seminar 46 "Heat Transfer in Single Phase Flow", Italy, 1995.
31. SIMANTIRAKIS G., PAPAILIOU K.D. "Heat Transfer Analysis of Turbine Cascades Through a Navier Stokes Solver", EUROTHERM Seminar 46, "Heat Transfer in Single Phase Flows", Pisa ,1995
32. BOURAS B., LEOUTSAKOS G., THOMADAKIS M., PAPAILIOU K.D. "An Integral Method for Compressible Shear Layers", EUROTHERM Seminar 46, "Heat Transfer in Single Phase Flows", Italy, 1995.
33. SIMANDIRAKIS G., DEJEAN F., VASSILOPOULOS CHR., GIANNAKOGLOU K., PAPAILIOU K.D."Steady and Unsteady Two-Dimensional Flow Calculations Using an Explicit Fractional-Step Algorithm", ECCOMAS 94 Conference, Germany, 1994.
34. GIANNAKOGLOU K., PAPAILIOU K.D."A Preconditioned GMRES Pressure Correction Algorithm for Incompressible, Laminar and Turbulent Flows", ECCOMAS 94 Conference, Germany, 1994.
35. DOUKELIS A., FOUNTI M., MATHIOUDAKIS K., PAPAILIOU K.D. "A General Procedure for Calculating and Correcting the Displacement of Laser Beams Passing Through Plane and Cylindrical Windows Using a Three Component Laser Doppler Anemometer for Turbomachinery Applications", Seventh Intern. Symp. on Applications of Laser Techniques to Fluid Mechanics, Portugal, 1994.
36. CHAVIAROPOULOS P., GIANNAKOGLOU K., PAPAILIOU K.D."A Numerical Method for Generating Structured Grids of Desired Properties, on Complex 3-D Surfaces", ECCOMAS 94 Conference, Germany.1994
37. GIANNAKOGLOU K.C., CHAVIAROPOULOS P., PAPAILIOU K.D."Boundary Fitted Parametrization of Unstructured Topologies in Arbitrary Surfaces", Proceedings of the Second International Conference on Computational Structures Technology, Greece, CIVIL-COMP Ltd, M. Papadrakakis and B.H.V. Topping (Eds), Advances in Simulation and Interaction Techniques, pp. 149-155, 1994.
38. VASSILOPOULOS C., GIANNAKOGLOU K.C., PAPAILIOU K.D."Supersonic Rearward-Facing Step Calculations Using an Explicit Fractional-Step Method and a Two-Equation Turbulence Model",

Proceedings of the “Efficient Turbulence Models for Aeronautics” (ETMA) Workshop, U.K. 1994, Vieweg Publ.

39. CHAVIAROPOULOS P., DEDOUSSIS V., PAPAILIOU K.D.”Single Pass Method for the Solution of Inverse Potential and Rotational Problems”. Part I: “2-D and Quasi 3-D Theory and Applications”. Part II: “Fully 3D Potential Theory, on Optimum Design Methods and Applications for Aeronautics”. AGARD Report 803 for Aeronautics, FDP-VKI Conference, Belgium, 1994.
40. KOUMADAKIS M., DEDOUSSIS V., PAPAILIOU K.D.”Design of Axisymmetric Channels with Rotational Flow”, AIAA 24th Fluid Dynamic Conference, paper 93-3117, 1993. Accepted for Publication in the AIAA Journal for Propulsion and Power.
41. MALAMATENIOS CH., GIANNAKOGLOU K., PAPAILIOU K.D."Calculation of Internal Two-Phase Flows Through an Integral Shear Layer Method". Proc. of the 2nd Intern. Symposium on “Experimental and Computational Aerothermodynamics of Internal Flows (ISAIF)”. Edited by DVORAK, R. & KVAPILOVA, Jnl, Czech Republic, Vol. 2, pp. 367-373, 1993.
42. GIANNAKOGLOU K., LYBEROPOULOS N., CHAVIAROPOULOS P., PAPAILIOU K.D.”A Navier- Stokes Vorticity-Streamfunction Formulation for Two-Dimensional Flows”. Proceedings of the Fourth International Conference on Fluid Mechanics, Egypt, 1992.
43. LOUKIS E., MATHIOUDAKIS K., PAPAILIOU K.D. ”A Rotor-Stator Interaction Study Through an Implicit Euler Code on a Parallel Machine", Proc. Fourth International Conference of Fluid Mechanics, Egypt, 1992
44. CHAVIAROPOULOS P, DEDOUSSIS V., PAPAILIOU K.D."A Robust Inverse Inviscid Method for Airfoil Design", Proc., European Computational Fluid Dynamics Conference, Belgium, 1992. Also, Computational Fluid Dynamics 92 Conference (ECCOMAS), Vol.2, Ch. Hirch et al., Editors.
45. GIANNAKOGLOU K., LYMBEROPOULOS N., TOURLIDAKIS I., NIKOLAOU I.,ELDER R. L., PAPAILIOU K. D.”Adaption of a 3D Pressure Correction Navier Stokes Solver, for the Accurate Modeling of Tip Clearance Flows”, International Symposium on Recent Advances in Compressor and Turbine Aerodynamics, France, 1992. Also, Revue Francaise de Mecanique 1992-3.
46. DEDOUSSIS V., CHAVIAROPOULOS P., PAPAILIOU K. D. “A Rotational Compressible Inverse Design Method for Internal Flow Configurations”. Proceedings of the 10th ISABE, UK, 1991. Also, published in the AIAA Journal, Vol.31, No 3, March 1993.
47. LAMBIRIS B., MATHIOUDAKIS K., STAMATIS A., PAPAILIOU K.D.”Adaptive Modeling of Jet Engine Performance with Application to Condition Monitoring”. Proceedings of the 10th ISABE, UK, 1991. Also, AIAA Journal of Propulsion and Power, Vol. 6, Nov.-Dec. 1994.

48. PAPAILIOU K.D., BOURAS B., KARAGIANNIS F."Experimental Validation of a Separated Shear Layer Model on a Compressible Flow Plane Cascade", Proceedings of the 3rd European Propulsion Forum, EPF 91, France 1991.
49. MALAMATENIOS CH., GIANNAKOGLOU K., PAPAILIOU, K.D., “An Integral Boundary Layer Method for Two Phase Flows in Steam Turbines”. European Conference on Turbomachinery, I. Mech., UK, 1991. Also, Journal of Multiphase Flow, Vol. 18, no.1, 1992
50. HADZIDAKIS M., KARAGIANNIS F., CHAVIAROPOULOS P., PAPAILIOU K.D. "Unsteady Euler Calculations in 3D Internal Aerodynamics", 77th Symposium of the Propulsion and Energetics Panel AGARD/NATO, USA, May, 1991 (AGARD CP 510).
51. MALAMATENIOS CH., GIANNAKOGLOU K., PAPAILIOU K.D."A Calculation Method for Gas-Droplet Flows In Turbomachinery Components Including Viscous Effects", Proceedings of the International Symposium on Engineering Turbulence and Measurements, Yugoslavia, 1990.
52. PAPAILIOU K.D., BOURAS B. “Arbitrary Blade Section Design Based on Viscous Considerations”. “Inverse Methods in Airfoil Design for Aeronautical and Turbomachinery Applications”. VKI LS, Belgium, 1990.
53. BOURAS B., GIANNAKOGLOU K., CHAVIAROPOULOS P., PAPAILIOU K.D."Numerical Simulation of HAWT Blade Section Characteristics Using Advanced Computational Tools", European Community Wind Energy Conference and Exhibition, Spain, 1990.
54. DOUVIKAS D., KALDELIS J., PAPAILIOU K.D."Secondary Flow Calculations for Axial and Radial Compressors", AGARD Conference on "Secondary Flows in Turbomachines", Luxembourg, AGARD-CP 469.
55. SIMANDIRAKIS G., GIANNAKOGLOU K., ALKALAI K., PAPAILIOU K.D."Calculation of Axisymmetric Flows in Turbomachines through an Explicit Time-Splitting Method", 9th ISABE, Greece, 1989.
56. HADZIDAKIS M., CHAVIAROPOULOS P., PAPAILIOU K.D."A Two-Dimensional Unsteady Potential Solver in Internal Aerodynamics Flow Problems", Proceedings of the Fifth Symposium on Numerical Methods in Engineering, Switzerland, 1989, Springer Verlag Editions.
57. SIMANDIRAKIS G., GIANNAKOGLOU K., ALKALAI K., PAPAILIOU K.D. "Development and Application of a Fractional-Step Method for the Solution of Transonic and Supersonic Flow Problems", Proceedings of the Fifth Intern. Symposium on Numerical Methods in Engineering, Switzerland, 1989. Springer Verlag Editions.
58. LYMBEROPOULOS N. GIANNAKOGLOU K., CHAVIAROPOULOS P., PAPAILIOU K.D. "A Potential Prediction of Three - Dimensional Incompressible Flows Through Turbomachinery Blade Rows", GAMM Workshop, Switzerland, 1989.

59. SIMANDIRAKIS G., ALKALAI K., GIANNAKOGLOU K., PAPAILIOU K.D. “Transonic Inviscid Computations Using an Explicit Fractional Step Method”, Second National Congress on Mechanics, Greece, 1989.
60. CHAVIAROPOULOS P., PAPAILIOU K.D. “A Full Potential Flow Prediction around Rotor Blades”, Second National Congress on Mechanics, Athens, Greece, 1989.
61. DOUVIKAS D., KALDELIS K., PAPAILIOU, K.D. “A Secondary Flow Calculation Method for One Stage Centrifugal Compressor”, 9th ISABE, Greece, 1989. Published, also, in the J. of Propulsion and Power.
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63. STAMATIS A., MATHIOUDAKIS K., BERIOS G. PAPAILIOU K.D. “Jet Engine Fault Detection with Differential Gas Path Analysis at Discrete Operating Points”, 9th ISABE, Greece, 1989. Also in Journal of Propulsion and Power, Vol. 7, No. 6, 1991.

64. MATHIOUDAKIS K., STAMATIS A., LOUKIS E., PAPAILIOU, K.D., “Computer Modeling and Data Processing Methods. An Essential Part of Jet Engine Condition Monitoring and Fault Diagnosis”. Proc. of the 15th International Symposium on Aircraft Integrated Monitoring Systems, RWTH, Germany, 1989.
65. SIMANDIRAKIS G., GIANNAKOGLOU K., ALKALAI K., PAPAILIOU K.D.”Development and Application of a Fractional-Step Method for the Solution of Transonic and Supersonic Flow Problems”. Proc. of the 5th International Symposium on Numerical Methods in Engineering” Switzerland, 1989, Springer- Verlag Editions, 1989.
66. GEROLYMOS G. A..,KALLAS Y.N.,PAPAILIOU K.D. “The Behaviour of the Normal Fluctuation Terms in the Case of Attached and Detached Turbulent Boundary Layers”, Revue Phys. Appl. 24, 1989
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69. LAMBROPOULOS L., KTENIDIS P., PAPAILIOU K.D. "Boundary Layer Development on Rotating Bodies of Revolution", Proceedings, AGARD Symposium on "Les Effects Visqueux dans les Turbomachines", Denmark, AGARD-CP-351, 1988.
70. BOLETIS E., CHAVIAROPOULOS P., BOURAS B., BONATAKI E., PAPAILIOU K.D."A Complete Inverse Calculation Procedure for the

Optimization of Horizontal-Axis Wind Turbine Airfoils", Proceedings, European Community Wind Energy Conference, Denmark, 1988.
71. CHAVIAROPOULOS P., BONATAKI E., PAPAILIOU K.D."HAWT Performance Prediction using Inviscid Flow Models", European Symposium on "Soft Energy Sources at the Local Level", Greece, 1988.
72. CHAVIAROPOULOS P., PAPAILIOU K.D. "A Full-Potential Prediction of a HAWT Rotor Performance", European Community Wind Energy Conference, Denmark, 1988.
73. KALLAS J., PAPAILIOU K.D."A Method for the Calculation of the Interaction of a Turbulent Boundary Layer with a Shock Wave", 8th ISABE, U.S.A., 1987. (ISABE 87-7074).
74. PAVIS S., KTENIDIS P., PAPAILIOU K.D. "Boundary Layer Development Passing from a Stationary to a Rotating Axisymmetric Surface", 8th ISABE, Ohio, U.S.A., 1987. (ISABE 87-7023).
75. GIANNAKOGLOU K., CHAVIAROPOULOS P., PAPAILIOU K.D."Numerical Computation of Two-Dimensional Rotational Inviscid Transonic Flows, Using the Decomposition of the Flow Field into a Potential and a Rotational Part", 7th ISABE, China, 1985.
76. CHAVIAROPOULOS P., GIANNAKOGLOU K., PAPAILIOU K.D."Numerical Computation of Two-Dimensional Rotational Inviscid Compressible Subsonic Flows Using the Decomposition of the Flow Field in a Potential and Rotational Part" 39th Congresso Nazionale ATI, Italy, 1984.
77. PAPAILIOU K.D."Some aspects of Modern Radial Compressor Design", Course, 39th Congresso Nationale ATI, Italy, 1984.
78. GIANNAKOGLOU K., CHAVIAROPOULOS P., PAPAILIOU K.D. "Development of a Calculation Method for the Case of Two-Dimensional Rotational Inviscid Flow Using a Transformation which Separates the Flow Field in a Potential and a Rotational Part". 38th Congresso Nazionale ATI, Italy, 1983.
79. STAMATIS A., KTENIDIS P., PAPAILIOU K.D."Viscous Inviscid Interaction in the Case of a Laminar Separation Bubble", 38th Congresso Nazionale ATI, Italy, 1983.
80. PAPAILIOU K.D. "A Contribution to the Calculation of Secondary Flows in an Axial Compressor", 6th ISABE, France, 1983.
81. PAPAILIOU K.D. "How to Orient the Scientific and Technological Capacities Towards Meeting Industrial and Social Needs", OECD Meeting, Yougoslavia, 1983.
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F. SUPPORT TO EUROPEAN INDUSTRY

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81. European Shock Control Investigations, 1993-1995, AERO-CT92-0049. Other partners: DLR, NLR, ONERA, University of Karlsruhe, Deutsche Aerospace Airbus, etc.
82. Advanced Civil Core Compressor Aerodynamics, 1993-1995, AERO-CT92-0039, Other Partners: SNECMA, TURBOMECA, R.R., BMW, MTU, CIT, etc.
83. Gas Turbine Hybrid Electric Vehicle, 1994-1996. Other partners: CEC, ROVER GROUP LTD., Imperial College of Science and Technology etc.
84. Design and Monitoring Methods for Gas Turbines, 1994, ENEL/Italy.
85. Analysis of the Cordemais 5 L.P. Turbine Row, 1993-1994, EDF France.
86. Supplementary Analysis of a Pump Rotor, 1994, EDF France.
87. Assessment of Physical Processes and Code Calculations for Turbomachinery Flow (APPACET), 1998-2000, E.U. BRPR-CT97-0610. Other partners: DLR, SNECMA, ECL, LEMFI, EGT.
88. Ultra Low Emission Vehicle Transport Using Advanced Propulsion (ULEV-TAP), BRPR-CT97-0452 E.U, 1997-2000, Other partners: IMPCOL, UWE T.M, STCP, TTK KIEPE, DE DIETRICH.
89. On Board Identification, Diagnosis and Control of Gas Turbine Engines (OBIDICOTE), 1998-2001, E.U BRPR-GT97-0601, SNECMA.
90. Mechanism for Enabling HPCN Technology Transfer in Europe. HIPERCOSME-T.T.N 1997-2000 E.U ESPRIT-24003 HIPER TTN, Other partners: LABEIN, CERFACS, FEUP, EOMMEX ELKEPA, (Greek Organisation), Greek Enterpises.
91. Investigation of the viability of MEMS Technology for Boundary Layer Control on Aircraft (AEROMEMS), BRPR-CT97-0573.
92. Groupe Electrogene de 350 KW Compose d’une Turbine a Gaz Industrielle non Polluante, d’un Altenateur et d’une Armoire de Commande,, 1996-1998, TURBOENERGIE.
93. Investigation of High Speed Turbomachinery Flow with Laser Doppler Anemometry Techniques, 1997-1998, EEC ERBFMBI-CT-96-1706.
94. Adaptation and Validation of an Efficient Navier-Stokes Solution Method for Turbomachinery Flows, Using Structured and Unstructured Grids, 1996-1997, E.E.C ERBFMBI-CT95-0190.
95. Analysis and Design of Turbomachinery Blades, 1993 (65-68), EEC ERB-CIPA-CT92-2229, Cooperation in Science and Technology with Central and Eastern European Countries.
96. Introducing High Performance and Computing in Small and Medium Size Enterprises, 1996-1997, EEC ESPRIT20059-HIPERCOSME, TYPSA, REALIX, ATG, FEUP, INTERGRAPH.
97. Advanced Truck Engine Control System (ATECS), 2000-2003, E.U. G3RD – CT -1999 - 00015.

98. Small Turbomachinery Research (S.T.R), 2000-2003, E.U. G1RD-CT2000 - 00151.
99. Flow Library on the Web-Flownet, 1998-2001, E.U. BRPR - CT98 - 5096.
100. Research and Development of High Efficiency Components for an Intercooled Recuperated CHP Gas Turbine for Combined Head and Efficient Power. (CHEP) 2000-2003 E.U. ENKS – CT – 2000 - 00070.
101. On Board Identification, Diagnosis and Control of Gas Turbine Engines (OBIDICOTE), 1998-2001, E.U. BRPR - GT97- 0601.
102. Advanced Truck Engine Control System (ATECS) 2000-2003 E.U. G3RD – CT -1999-00015.
103. A Thematic Network for Quality and Trust in the Industrial Application of Computation Fluid Dynamics (Q-NET), 2000-2004, E.U. G1RT-CT-2000-5003.
104. Advanced Aerodynamic Flow Control Using MEMS-AEROMEMS II, 2002-2005, EU G4RD-CT-2002-00748. Other partners: BAE SYSTEMS, DASSAULT-AVIATION, EADSDA, AD.DD, EADS, SNECMA MOTEURS, AUXITROL S.A., ONERA. D.A, OLR, IAFT.
105. Prospective Study on the State of the Art of Multidisciplinary Modeling Simulation and Validation in Aeronautics, 2003-2004, EU G4MA-CT-2002-00022. Other partners: CIMNE, DASSAULT-AVIATION, EADS, AIRBUS ESPANA, SNECMA MOTEURS, ALENIA AERONAUTICA, INRIA, CIRA, ONERA, etc.
106. Contract between the Greek National Enterprize of Electricity and the Turbomachinery Laboratory of the National Technical University of Athens for the Provision of Scientific and Technological Advice and Services during the time period 1/6/97-31/5/2002 concerning Gas Turbines.
107. Greece - Spain Cooperation Program “Advanced Software Tool for the Design / Analysis of Turbomachinery Components Conceived and Manufactured by SMES”, 1997-2000, funded for the Greek side by the General Secretariat for Research and Technology.
108. EUROTHERM Seminar No 55 “Heat Transfer in Single Phase Flows, 1997”.Participation of the Turbomachinery Laboratory of the National Technical University of Athens, with funding provided by the Greek National Enterprise of Electricity.