

# JOHN C. STATHARAS



## **Dr John C. Statharas**

Professor of Thermodynamics and  
Heat Transfer  
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## **PERSONAL DATA.**

Date of Birth : July 15, 1959.  
Marriage Status : Married, Three (3) children  
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## **EDUCATION.**

- 1982 : Mechanical Engineer, Polytechnic School, University of Patras, GREECE. .
- 1993: PhD in Nuclear Technology (Department of Mechanical Engineering, Polytechnic School, University of Patras, GREECE).
- 1995 : Pedagogical Studies in PATES/SELETE.

## **SCHOLARSHIPS**

- 1985-1989 : Postgraduate fellow of the Greek Atomic Energy Commission for acquiring the PhD degree in the area of nuclear technology (nuclear reactors' thermalhydraulics after a loss of coolant accident (LOCA)).
- 1998-2000 : Postdoctoral researcher of the National Center for Scientific Research (NCSR) "DEMOKRITOS" with main objective "Thermal and dynamic analysis of solar energy systems " with emphasis in the study and optimization of their operation parameters.

## **SCIENTIFIC AND RESEARCH EXPERIENCE.**

- 1982-1983. University of Patras, Polytechnic School, Department of Mechanical Engineering, Laboratory of Nuclear Technology. Research Assistant.

- 1983-1985. National Technical University of Athens (NTUA), Department of Mechanical Engineering, Laboratory of Materials Testing (examining thermal and radiation effects). Research Assistant.
- 1985-1990. NCSR "DEMOKRITOS", Institute of Nuclear Technology and Radiation Protection. Postgraduate researcher .
- 1990-1991. Army Service.
- 1991-1998 . NCSR "DEMOKRITOS", Institute of Nuclear Technology and Radiation Protection, Mass and Energy Transfer Sector, Environmental Research Laboratory. Research Engineer .

## **ACADEMIC CAREER**

- 1996-2000 . Technological and Educational Institute (TEI) of Chalkis, School of Technological Applications, Department of Mechanical Engineering. Visiting Professor of Thermodynamics.
- 1998-1999 . Ikaron Army School of Hellenic Air Force. Teacher of Thermodynamics.
- 2000-2005. TEI of Chalkis, Department of Mechanical Engineering.
- 2005-2013 TEI of Chalkis, Department of Aircraft Technology. Full Professor
- 2013- Central Greece University of Applied Sciences, Department of Aircraft Engineering. Full Professor

## **MEMBERSHIPS**

- Member of the Technical Chamber of Greece.
- Member of the Greek Association of Mechanical Engineers.
- Member of the Greek Association of Nuclear Engineers. .

## **RESEARCH PROJECTS**

- Project FLADIS "Two phase flashing releases" . Contracts: STEP CT91.0125 (DTEE)-EV5V-CT94.
- Project EMU "Evaluation of Modelling Uncertainties". Contract EV5V-CT94-0531.
- Project ERLAP (Work Area -4 Modelling /U02) "Wind Flow and Air Pollution Patterns in Street Canyons". Contract 11796-96-04 F1ED ISP GR.
- Project SMEDIS " Scientific model evaluation of dense gas dispersion". Contract ENV4-CT96-0245.
- Project IN 196/94 HE [Direct Dryer of Agricultural Products of The Static Tray Type with LPG (Propane) Fuel] (Programme THERMIE).
- Project 4303/RB. "Thermal Hydraulic Analysis of Nuclear Research Reactors .
- Project 13130-97-08 T1ED ISP D " Analysis of data from spilling experiments performed with liquid hydrogen ".

## **RESEARCH INTERESTS.**

- Heat Transfer-Thermodynamics.
- Computational Fluid Dynamics.
- Thermal hydraulics .
- Analysis of Thermal Energy Systems .
- Two-Phase flow .
- Numerical Analysis .

## TRANSLATIONS

I have translated in Greek (Publisher ION) the following English books.

- 1). "Thermodynamics" of William Z. Black and James G.Hartley of the Georgia Institute of Technology .
- 2). "Principles of Heat Transfer" of Frank Kreith and Mark Bohn of the University of Colorado.

## SCIENTIFIC WORKS.

### A. UNPUBLISHED WORKS

1. **J.C.STATHARAS**. " THERMAL BEHAVIOUR OF A VERTICAL COOLED PIPE IN POST-CHF LOW FLOW CONDITIONS AND APPLICATION IN THE SAFETY OF NUCLEAR POWER REACTORS " PhD. Patras 1993.
2. J.G.BARTZIS, **J.C.STATHARAS** AND A.MEGARITOU 1990. THEAP-2 CODE DEVELOPMENT. OPEN POOL RESEARCH REACTOR PARTIAL CORE UNCOVERY. SOME PRELIMINARY RESULTS. Demo report 90/9. Aghia Paraskevi, March 1990.
3. GABILLARD, M., **STATHARAS, J.** and BARTZIS, J. (1993). "Intercomparison on heavy gas dispersion between the three dimensional models MERCURE and ADREA. Pressurized Flashing Release. Part I: Propane Release-Test EEC55 without obstacle." Report GDF/DETN M.CERMAP 93I.593.
4. GABILLARD, M., **STATHARAS, J.** and BARTZIS, J. (1994). "Intercomparison on heavy gas dispersion between the three dimensional models MERCURE and ADREA. Pressurized Flashing Release. Part II: Propane Release-Test EEC55 with obstacle." Report GDF/DETN M.CERMAP-MGa/IGu-94I.203.
5. J.G.Bartzis, M. Varvayanni, A. Venetsanos, N. Catsaros, C.Housiadas, G.Horsch, **J.Statharas**, G.T.Amanatidis, A. Megaritou, K.Konte: " ADREA-I: A Three-Dimensional Finite Volume Transport Code for Mesoscale Atmospheric Transport (The Cartesian Version): Part I: The model description: February 1993, DEMO 93/2, pt.1.
6. J.G.Bartzis, M. Varvayanni, A. Venetsanos, N. Catsaros, C.Housiadas, G.Horsch, **J.Statharas**, G.T.Amanatidis, A. Megaritou, K.Konte: " ADREA-I: A Three-Dimensional Finite Volume Transport Code for Mesoscale Atmospheric Transport (The Cartesian Version): Part II: Code Structure and users manual: February 1993, DEMO 93/2, pt.2.
7. Bartzis, J.G., **Statharas, J.C.**, Andronopoulos, S., Catsaros, N., Wuertz, J., and Konte K. " ADREA-HF: A Three-Dimensional Finite Volume Code for Vapour Cloud Dispersion in Complex Terrain (The Cartesian Version): CODE STRUCTURE AND USERS MANUAL, June 1994. Demo 94/14.
8. **J.C.STATHARAS** AND J.G.BARTZIS 1994. RESEARCH ON THE DISPERSION OF TWO-PHASE FLASHING RELEASES (FLADIS). FLADIS FIELD TEST ANALYSIS. Contracts No: STEP CT91.0125 (DTEE) and EV5V-CT94. July 1994. Final Report.
9. **J.C.STATHARAS** AND J.G.BARTZIS 1995. PROJECT EMU: CASE A, PHASE 1. Modelling Report prepared for Commission of the European Communities. Contract EV5V-CT94-0531. September 1995.
10. **J.C.STATHARAS** AND J.G.BARTZIS 1995. PROJECT EMU: CASE A, PHASE 2. Modelling Report prepared for Commission of the European Communities. Contract EV5V-CT94-0531. September 1995.

11. **J.C.STATHARAS** AND J.G.BARTZIS 1995. PROJECT EMU: STAGE B, PHASE 1. Modelling Report prepared for Commission of the European Communities. Contract EV5V-CT94-0531. October 1995.
12. **J.C.STATHARAS** AND J.G.BARTZIS 1995. PROJECT EMU: STAGE B, PHASE 2. Modelling Report prepared for Commission of the European Communities. Contract EV5V-CT94-0531. December 1995.
13. A.G.VENETSANOS, S.ANDRONOPOULOS, **J.C.STATHARAS**, J.G.BARTZIS:"EMU PROJECT CASE C1. ADREA-HF Modelling Report. CEC Contract No. EV5V-CT94-0531, July 1996.
14. A.G.VENETSANOS, S.ANDRONOPOULOS, **J.C.STATHARAS**, J.G.BARTZIS:"EMU PROJECT CASE C2. ADREA-HF Modelling Report. CEC Contract No. EV5V-CT94-0531, July 1996.
15. **J.C.STATHARAS**, J.G.BARTZIS, M.VARVAYANNI AND A.G.VENETSANOS 1998: "Wind Flow and Air Pollution Patterns in Street Canyons". Contract No 11796-96-04 FIED TSP GR. Final Report. June 1998.
16. **J.C.Statharas**, A.G.Venetsanos, J.G.Bartzis and J.Wurtz 1997: "BAM LH2 Experiments, ADREA-HF Modelling Report" . Contract 13130-97-08 T1ED ISP D. December 1997.
17. Bartzis, J.G., M. Varvayanni, A.Venetsanos, N.Catsaros, C.Housiadas, G.M. Horsch, **J Statharas 1999**, G.T.Amanatidis, A.Megaritou, K.Konte, S.Andronopoulos and D.Vlachogiannis (1999). "ADREA-prog: A Three-dimensional finite volumes, mesoscale meteorological prognostic model., - Report RODOS (WG2)-TN (99)-02.
18. Bartzis, J.G., M. Varvayanni, A.Venetsanos, N.Catsaros, C.Housiadas, G.M. Horsch, **J Statharas 1999**, G.T.Amanatidis, A.Megaritou, K.Konte, S.Andronopoulos and D.Vlachogiannis (1999). "ADREA-disp: A Eulerian model for atmospheric dispersion over complex terrain. Report RODOS (WG2)-TN (99)-04.
19. S.Andronopoulos S., D.Vlachogiannis, J.G. Bartzis, A.Megaritou, K.Konte, M. Varvayanni, N.Catsaros, A.Venetsanos, C.Housiadas, G.M. Horsch, **J Statharas 1999**, G.T.Amanatidis (1999). "User's manual for the RODOS version of the mesoscale meteorological diagnostic model ADREA-diag. Report RODOS (WG2)-TN (99)-07.
20. S.Andronopoulos S., D.Vlachogiannis, J.G. Bartzis, A.Megaritou, K.Konte, M. Varvayanni, N.Catsaros, A.Venetsanos, C.Housiadas, G.M. Horsch, **J Statharas 1999**, G.T.Amanatidis (1999). "User's manual for the RODOS version of the Eulerian model for atmospheric dispersion over complex terrain ADREA-disp. Report RODOS (WG2)-TN (99)-08.
21. Ιωάννης Κ. Σταθαράς και Κυριάκος Η. Κουρούσης 2005. "Παρακολούθηση της Δομήστων Αεροσκαφών και των Αεροκινητήρων: Ανασκόπηση, Εφαρμογή και Νέες Τεχνολογίες". Παρουσιάστηκε σε ημερίδα στο ΤΕΙ Χαλκίδας, Δεκέμβριος 2005.

## **B. CONFERENCE PAPERS**

### NATIONAL

22. I.Zoudiari, **J. Statharas**, E. Mathioulakis, and V. Belessiotis 1999 : « Numerical Simulation of Heat Storage in Phase Change Materials (PCMs) ». Presented in 6<sup>th</sup> National Conference on Renewable Energy Sources, Volos, Nov. 3 –5 , 1999, ISSN 1108-3603, pp137.

- 23.Α.Γ. Βενετσάνος, Ι.Γ. Μπάρτζης και Ι. Σταθαράς 2004: “Αξιολόγηση και Εφαρμογή του Υπολογιστικού Πακέτου ADREA-HF στην Εκτίμηση Ασφάλειας Εφαρμογών Υδρογόνου». Παρουσιάστηκε στο 1<sup>ο</sup> Εθνικό Συνέδριο Τεχνολογιών Υδρογόνου: Έρευνα – Ανάπτυξη – Εφαρμογές, που πραγματοποιήθηκε στο Πανεπιστήμιο Αθηνών, από 30 Σεπτεμβρίου έως 2 Οκτωβρίου 2004.
- 24.Φώτης Ν. Κουμπουλής, Νικόλαος Δ. Κούβακας και Ιωάννης Κ. Σταθαράς, 2010. “Έλεγχος κινούμενης ρομποτικής διάταξης για εργασίες με περιορισμένη κίνηση”. 2 Πανελλήνιο Συνέδριο Ρομποτικής, Πάτρα 9-10 Δεκεμβρίου 2010.

#### EUROPEAN

- 25.D.Kechrakos and **J.C.Statharas** 2002: “Modeling of the field dependent giant magnetoresistance in magnetic granular films”. Presented in the 4<sup>th</sup> European Magnetic Sensor & Actuator Conference, Xenia-Helios Hotel, Lagonnissi, Athens, 3-5 July 2002.
- 26.E.S.Valamontes and **J.C.Statharas** 2005: “Scanning X-ray microfluorescence in a SEM for the analysis of very thin overlayers”. Presented in EMAS 2005- 9<sup>th</sup> European Workshop on Modern Developments and Applications in Microbeam Analysis, Convitto della Calza, Florence (Italy), 22-26 May 2005.

#### INTERNATIONAL

- 27.A.G.VENETSANOS, J. WURTZ, J.G. BARTZIS, **J.C. STATHARAS** (1995): "Modelling the effects of obstacles on dense gas dispersion in shallow layer models". Published in Air Pollution III, vol.1:Air Pollution Theory and Simulation, pp.141-153.Computational Mechanics Publications 1995. Southampton. ISBN: 1 85312 311 0.
28. S.ANDRONOPOULOS, **J.C. STATHARAS**, P.DELIGIANNIS & J.G.BARTZIS 1996: "Evaluation of the predictions of the ADREA-HF code for dense gas dispersion with real scale ammonia release experiments" Published in AIR-POLLUTION IV: Monitoring, Simulation and Control, pp.81-88, Computational Mechanics Publications, ISBN:1-85312-4222.
- 29.J.G.Bartzis, A.G.Venetsanos, M.Varvayanni, S.Andronopoulos, S.Davakis, **J.C.Statharas**, N.Catsaros, P.Deligiannis 1997: “Wind Flow and dispersion modelling over terrain of high complexity”. Presented in Air Pollution 97, 16-18 September, Bologna, Italy.
- 30.A.G.Venetsanos, S.Andronopoulos, **J.C.Statharas** and J.G.Bartzis 1998 : “Local Scale Dispersion Model Evaluation Exercise”. Presented in AirPollution 98, 28-30 September 1998, Genoa, Italy.
- 31.D.G.Pavlou, N.V.Vlachakis, M.G.Pavlou,V.N. Vlachakis , M.Kouskouti and **J.C.Statharas** 2003: “Fundamental solution of the cracked dissimilar elastic space”. Computational Methods In Sciences And Engineering; Vol. 01, Pages: 490 – 491, ISBN: 981-238-595-9. Also presented in the International conference on Computational methods in sciences and engineering ICCMSE’03. Kastoria, Greece. September 12 - 16, 2003.
- 32.K.Krallis, N.G.Orfanoudakis and **J.C.Statharas** 2003: “Selection of the Optimum NDT Methods for Determination of Steam Boiler Remaining Life”. Presented in the 3rd International Conference On NDT of the Hellenic Society for NDT (HSNT), 15-17 October 2003, Chania, Crete-Greece.

33. M.P. Haniyas, **J.C. Statharas**, and K. Kouroumbas 2004: "Estimation of the Strange Attractor Invariants and the Use of Them in Forecasting the Nonequilibrium Thermodynamics Data from Liquid Spilling Experiments Performed with Hydrogen". Presented in International Conference on Numerical Analysis and Applied Mathematics 2004 (ICNAAM 2004), Chalkis, Sept. 10-14, 2004. ISBN 3-527-40563-1, pp.155-160.
34. A. Kokkinis, I. Raptis, **J.C. Statharas** and E.S. Valamontes 2005: "Dissolution properties of ultrathin photoresist films with multiwavelength interferometry". Presented in 5<sup>th</sup> International Symposium on Polymer Surface Modification: Relevance to Adhesion, Novotel, Toronto Centre, Toronto, Canada, 20-22 June, 2005.
35. [K. Papakonstantinou](#), [C. Belias](#), [N. Vlachakis](#) and [J. Statharas](#), Evaluation of a Natural Ventilation Configuration at a Public Building, AIP Conf. Proc. 963, 1327 (2007), 25–30 September 2007, Corfu (Greece).
36. A. Fatsis, **J. Statharas**, A. Panoutsopoulou & N. Vlachakis 2008, "LNG dispersion over the sea". Air Pollution XVI, WIT Transactions on Ecology and the Environment, Vol.116, 2008 WIT Press, ISSN 1743-3541.
37. A. Fatsis, **J. Statharas**, A. Panoutsopoulou & N. Vlachakis 2010, "A new class of exact solutions of the Navier–Stokes equations for swirling flows in porous and rotating pipes". Advances in Fluid Mechanics VIII. WIT Transactions on Engineering Sciences, Vol.69, 2010. WIT Press, ISSN 1743-3533.

### **C. JOURNAL ARTICLES**

38. **J.C. STATHARAS**, J.G. BARTZIS AND D.D. PAPAILIOU 1990. HEAT TRANSFER MODELING IN LOW FLOWS AND APPLICATION TO REFLOOD HEAT TRANSFER. Nuclear Technology, Vol.92, Nov.1990, pp.248-259.
39. **J.C. STATHARAS**, J.G. BARTZIS, A. VENETSANOS AND J. WURTZ 1993. Prediction of Ammonia Releases Using ADREA-HF Code. Process Safety Progress (Vol.12, No.2), April 1993, pp.118-122.
40. S. ANDRONOPOULOS, J.G. BARTZIS AND **J. STATHARAS** 1993. Three-Dimensional Modelling of Dense Gas Dispersion. Ercoftac Bulletin Vol.16, March 1993, pp.18-21.
41. WURTZ J., VENETSANOS A., NIJSING R., BARTZIS J., ANDRONOPOULOS S., **STATHARAS J.**, (1994): "A dense vapour dispersion code package for application in the chemical and process industry". Journal of Hazardous Materials vol.46, pp.273-284, 1996.
42. Konstantinou, N.D.; Stubos, A.K.; **Statharas, J.C.**; Kanellopoulos, N. & Papaioannou, A.: "Enhanced Boiling Heat Transfer in Porous Layers With Application in Electronic Component Cooling. Journal of Enhanced Heat Transfer, Vol.4, 1997, pp.175-186.
43. M. VARVAYANNI, N. CATSAROS, P. KONTE, **J. STATHARAS**, J.G. BARTZIS 1996: "Development and Interaction of thermally driven flows over Attiki peninsula under northerly background wind: A case study". Atmospheric Environment, Vol.32, Is.12, pp.2291-2311, May 1998.
44. N. Catsaros, C. Mita, P. Deligiannis, M. Varvayanni, **J.C. Statharas**, J.G. Bartzis 1997: "Accurate Overland Cascades Determination in Simulated Watersheds of Complex Topography". Radiation Protection Dosimetry, vol.73, No.1-4, pp.163-166 (1997). Also ISBN 1 870965 49 3, CONF 9610287, EUR 17920.
45. **J.C. STATHARAS**, A.G. VENETSANOS, J.G. BARTZIS, J. WURTZ and U. Schmidtchen 2000: "Analysis of data from spilling experiments performed with liquid hydrogen". Journal of Hazardous Materials vol.A77, pp.57-75, 2000.

46. E.S. Valamontes and **J.C. Statharas** 2005: "Scanning X-ray microfluorescence in a SEM for the analysis of very thin overlayers". [Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms](#), Volume 260, Issue 2, July 2007, Pages 628–632.
47. E.S. Valamontes and **J.C. Statharas** 2005: "Comparison of back-foil SXRF and EPMA for the elemental characterization of thin coatings". *Vacuum*, Vol.77, 2005, pp.371-376.
48. E. S. Valamontes, **J. C. Statharas** and C. Nomicos. Sensitivity and Lateral Resolution of Scanning X-Ray Microfluorescence for the analysis of very thin overlayers. *Acta Microscopica Vol 16 No1-2,(Supp.2)2007*.

## CITATIONS

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