

Curriculum Vitae Paris A. Fokaides

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*Dr.-Ing. Paris A Fokaides
Nicosia, 09 September 2010*

1. General Information

Name	Paris A. Fokaides
Born	28.06.1977, Lefkosia, Cyprus
Family status	Married to Revekka Papacharalampous, one child
eMail	fokaides@ucy.ac.cy
Web Address	http://www.rdhydraulis.com.cy/fokaides
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Address (priv.)	P.O. Box 22101, 1517, Nicosia, Cyprus

2. Academic Experience

06/2008 -	Research Associate University of Cyprus, Department of Civil and Environmental Engineering, Environmental Fluid Mechanics Laboratory
10/2007 - 05/2008	Associate Lecturer Frederick University, Department of Mechanical Engineering
11/2002 - 06/2007	Research Assistant University of Karlsruhe, Department of Chemical and Process Engineering, Engler-Bunte Institute, Division Combustion Technology

3. Research Experience - Funded Research

Project	"LOW POLLUTANT COMBUSTOR TECHNOLOGY PROGRAMME" GRD1-CT2000-25062 (FP5)
Duration	01/2001 - 12/2004 - own contribution 11/2002 - 12/2004
Brief Description	<ol style="list-style-type: none">1. Definition and validation of technological bases for a new generation of green aero engines.2. Study of individual components of combustors and incorporation in a multi-sector or annular combustor representative of large or small engines.
Partners	Snecma Moteurs (Fr), AVIO (It), MTU (Ger), Rolls-Royce (UK), Turbomeca (Fr), QinetiQ (UK), Onera (Fr), Loughborough Univ. (UK), Munich Univ. (Ger), Firenze Univ. (It), Ensmat (Fr), Lund Univ. (Sw), Cambridge Univ. (UK), DLR (Ger)
Contribution	WP 4 ; Task 4.4 ; Subcontractor(MTU Aero Engines) - Principal Researcher <ol style="list-style-type: none">1. Experimental investigation of lean blow out limits, fuel droplets dispersion in flame and emissions for atmospheric and elevated conditions for four (4) swirl nozzles provided by MTU Aero Engines.2. Design, construction and operation of two (2) test facilities simulating combustion in gas turbine for atmospheric and elevated pressure (≈ 20 bar) conditions.
Funding as partner	200 k€
On-line Reference	http://lopocotep.com/

3. Research Experience - Funded Research (cont'd)

Project	"Towards Lean Combustion" AST4-CT-2005-012326 (FP6)
Duration	01/2005 - 02/2009 - own contribution 01/2005 - 06/2007
Brief Description	<ol style="list-style-type: none"> 1. Mitigation of aviation emissions in terms of their environmental impact. 2. Wide range of experiments on mono-sector or tubular combustors.
Partners	SNECMA (Fr), Rolls-Royce Deutschland (De), MTU (De), AVIO (It), Turbomeca (Fr), ONERA (Fr), DLR (De), Lunds Univ. (Se), CNRS (Fr), Ecole Centrale de Nantes (Fr), Univ. Karlsruhe (De), Univ. di Genova (It), Univ. di Napoli "Frederico II" (It), CERFACS (Fr), Fundación Empresa Univers. de Zaragoza (Es), Univ. di Roma "La Sapienza" (It), Instytut Maszyn Przeplywowych (Pl), ACIES Europe (Fr)
Contribution	<p>WP 2 ; Task 2.3.3 ; Principal Researcher</p> <ol style="list-style-type: none"> 1. Stability diagram for three nozzles 2. Identification of lifted mode combustion 3. Flow and mixing field determination for a lifted and non-lifted flame for isothermal and reactive conditions by employing LDA, PIV, PDA and LIF <p>WP 3 ; Task 3.6 ; Principal Investigator</p> <ol style="list-style-type: none"> 1. Design, construction and operation of three swirl nozzles
Funding as partner	684 k€
On-line Reference	http://ec.europa.eu/research/transport/projects/article_3689_en.html

Project	"NEW Aero engine core Concepts", AIP5-CT-2006-030876 (FP6)
Duration	03/2007 - 02/2011 - own contribution 12/2006 - 06/2007
Brief Description	<ol style="list-style-type: none"> 1. Development of new core engine concepts 2. Identification of technology routes to environmentally friendly and economic propulsion solutions
Partners	MTU (De), Snecma (Fr), Volvo (Se), Rolls Royce Deutschland (De), AUTH (Gr), ASBL (Be), Cranfield Univ. (UK), DLR (De), EnginSoft (It), ONERA (Fr), Oxford Univ. (UK), Univ. Aachen (De), Univ. de Belfort-Montbéliard (Fr), Univ. Graz (Au), Univ. de Liège (Be), Univ. Stuttgart (De), Rolls Royce Plc (UK), AVIO (It), Turbomeca (Fr), Techspace Aero (Be), ARTTIC S.A.S. (Fr), Airbus France (Fr), Cambridge Univ. (UK), SDA (Fr), Chalmers Univ. (Se), Univ. Lausanne (Sw), Loughborough Univ. (UK), NTUA (Gr), Sulzer Metco (Sw), Univ. Firenze (It), Univ. Karlsruhe (De), Univ. Sussex (UK)
Contribution	<p>WP 6 ; Task 6.2.2 ; Principal Researcher</p> <ol style="list-style-type: none"> 1. Preliminary design of the PERM injection system 2. Characterization of the two-phase-flow at elevated pressure conditions by LDA and PDPA techniques
Funding as partner	720 k€
On-line Reference	http://www.newac.org/

3. Research Experience - Funded Research (cont'd)

Project	Categorisation of buildings in Cyprus based on their energy efficiency, ΑΕΙΦΟΡΙΑ/ΑΣΤΙ/0308 (BIE)/02 (Cyprus Research Promotion Foundation National Framework Programme for Research and Technological Development 2008-2010)
Duration	01/2009 - 09/2010 - own contribution 01/2009 -
Brief Description	Field measurements for the determination of the energy efficiency of buildings in Cyprus in order to enable their certification, based on 2002/91(EC) directive.
Partners	Cyprus Scientific and Technical Chamber (ETEK), University of Cyprus, Cyprus University of Technology, Energy Service Cyprus, RTD Talos Ltd
Contribution	Associate Researcher in following WPs WP 3: Buildings' data processing WP 4: Field measurements of buildings' energy efficiency WP 5: Results' clustering
Funding as partner	≈ 30 k€
On-line Reference	http://www.epbd-project.com

Project	Towards an optimisation of urban planning and architectural parameters for energy use minimisation in Mediterranean cities, ΔΙΕΘΝΗ/URBAN-NET/0308(BIE)/02 (EraNet - UrbanNet FP6)
Duration	04/2009 - 03/2011 - own contribution 04/2009 -
Brief Description	Aim of this project is the investigation of the energy exchange processes between buildings and air in a typical South European city as well as the ventilation properties in relation to urban-planning and architectural parameters, for the purpose of energy use minimisation.
Partners	University of Cyprus, University Högskolan i Gävle Sweden, Bulgarian Academy of Science, EXA-High Performance Computing, ATLANTIS Ltd
Contribution	Associate Researcher in following WPs WP 2: Identification of representative urban canopy areas WP 4: Field measurement of heat flux at buildings WP 7: Identification of best practices in urban planning
Funding as partner	≈ 105 k€
On-line Reference	http://www.topeum-project.com

4. Publications (peer reviewed)

2010

1. G.P. Panayiotou, S.A. Kalogirou, G.A. Florides, C.N. Maxoulis, A.M. Papadopoulos, M. Neophytou, P. Fokaides, G. Georgiou, A. Symeou, G. Georgakis: The characteristics and the energy behaviour of the residential building stock of Cyprus in view of Directive 2002/91/EC, Journal of Energy and Buildings (2010), DOI:10.1016/j.enbuild.2010.06.018
2. C.N. Markides , P.A. Fokaides , M.K.-A.Neophytou : Flow and Exchange Processes in Homogeneous Urban Street Canyon Geometries: An Experimental Study Using Particle Image Velocimetry , 9th HSTAM International Congress on Mechanics, 2010
3. M C. Phocas, A. Michael, P. Fokaides: Integrated Interdisciplinary Design, Teaching a new Environment Culture. The Environment as a Question of Architectural Education, European Association for Architectural Education, 2010
4. G.P. Panayiotou, C.N. Maxoulis, S.A. Kalogirou, G.A. Florides, A.M. Papadopoulos, M. Neophytou, P. Fokaides, G. Georgiou, A. Symeou, N. Hadjinikolaou, G. Georgakis: Cyprus Building Energy Performance Methodology: A Comparison of the Calculated and Measured Energy Consumption Results, CESB 10 Prague Conference, 2010
5. G.P. Panayiotou, C.N. Maxoulis, S.A. Kalogirou, G.A. Florides, A.M. Papadopoulos, M. Neophytou, P. Fokaides, G. Georgiou, A. Symeou, G. Georgakis: The energy performance of the residential building stock in Cyprus in view of the EPBD Directive, CESB 10 Prague Conference, 2010

2009

1. P. Fokaides: „Experimentelle Untersuchung des Stabilitätsmechanismus von abgehobenen verdrallten eingeschlossenen Diffusionsflammen“, Dissertation (in German)
2. P. Fokaides, M. Weiss, M. Kern, N. Zarzalis : „Experimental and Numerical Investigation of Swirl Induced Self-excited Instabilities at the Vicinity of an Airblast Atomiser“, Journal for Flow Turbulence and Combustion -DOI 10.1007/s10494-009-9205-3
3. M. Kern, P .Fokaides, P. Habisreuther, N. Zarzalis: „Applicability of a flamelet and a presumed JPDF 2-domain-1-step-kinetic turbulent reaction model for the simulation of a lifted swirl flame“, Proceedings of ASME Turbo Expo 2009, GT2009-59435
4. Π.Α. Φωκαΐδης, Μ. Νεοφύτου: „Αλληλεπίδραση δομημένου περιβάλλοντος και αστικού μικροκλίματος“, Πρακτικά 9ου Πανελληνίου Συνεδρίου για τις Ήπιες Μορφές Ενέργειας, Ινστιτούτο Ηλιακής Τεχνικής, Κύπρος, 2009 (in Greek)
5. P.A. Fokaides, C.N. Markides, M. Neophytou: „Ventilation characteristics of the built environment and their effects on the urban microclimate“, Proceedings of 4th International Conference on Sustainable Development and Planning, Wessex Institute of Technology, 2009
6. Π.Α. Φωκαΐδης, Χ.Ν. Μαρκίδης, Ι. Παναγιώτου, Μ. Νεοφύτου: „Πειραματική διερεύνηση αλληλεπίδρασης δομημένου περιβάλλοντος και αστικού μικροκλίματος σε ανομοιογενείς γεωμετρίες κτιρίων“, Πρακτικά 7ου Πανελληνίου Επιστημονικού Συνεδρίου Χημικής Μηχανικής, Πάτρα, 2009 (in Greek)
7. S. Kalogirou, G. Florides, A. Papadopoulos, M. Neophytou, P. Fokaides, G. Georgiou, A. Elia, C. Maxoulis, A. Symeou, G. Georgakis: „Classification of buildings in Cyprus based on their energy efficiency“, Proceedings of 4th International Conference on Sustainable Development and Planning, Wessex Institute of Technology, 2009
8. C.N. Maxoulis, S.A. Kalogirou, G.P. Panayiotou, G.A. Florides, A.M. Papadopoulos, M. Neophytou, P. Fokaides, G. Georgiou, A. Symeou, G. Georgakis: Classification of buildings in Cyprus based on their energy performance, MSI Renewable Energy Sources and Energy Efficiency Conference, Cyprus, 2009

4. Publications (peer reviewed) (cont'd)

2008

1. P.A. Fokaides, P. Kasabov, N. Zarzalis : „Experimental Investigation of the Stability Mechanism and Emissions of a Lifted Swirl Non-Premixed Flame”, Journal of Engineering for Gas Turbines and Power, Volume 130, Issue 1, 011508 DOI:10.1115/1.2749279 GTP-07-1084
2. Fokaides, P.A. ; Tsiftes, K. : „Technologies for the utilization of olive husk in the energy industry”, Arab Water World, August 2008 / Vol. XXXII Issue 8 (in English and Arabic)

2007

1. P.A. Fokaides, P. Kasabov, N. Zarzalis : „Experimental Investigation of the Stability Mechanism and Emissions of a Lifted Swirl Non-Premixed Flame”, Proceedings of ASME Turbo Expo 2007, GT2007-27126 - **Best Paper Award by the Combustion, Fuels & Emissions Committee of ASME Turbo Expo 2007**
2. P.A. Fokaides, P. Kasabov, N. Zarzalis : „Experimentelle Untersuchung Abgehobener Verdrahteter Nicht-Vorgemischter Flammen“. Gas und Wärme International, Heft 3/07 - Verbrennungstechnik (in german)
3. P.A. Fokaides, N. Zarzalis : „Lean Blowout Dynamics of a Lifted Stabilized, Non-Premixed Swirl Flame”. Proceedings of European Combustion Meeting 2007, The Combustion Institute, 2007
4. P. Fokaides, M. Weiss, M. Kern, N. Zarzalis : „Experimentelle Untersuchung und Numerische Simulation von drallinduzierten selbsterregten Instabilitäten am Brennermund eines Airblast-Zerstäubers“. VDI Bericht Nr 1988, 2007, für die VDI Tagung „Flammentag 2007“ (in german)
5. M. Odinius, P Fokaides, M. Weiss, N. Zarzalis, H. Bockhorn : „Bestimmung des integralen Zeitmasses in einer turbulenter Strömung aus LDA Messungen“ Proceedings der Fachtagung „Laser Methoden in der Strömungsmesstechnik“, 2007 (in german)
6. Fokaides, P.A. ; Tsiftes, K. : „Utilization of olive husk in energy sector in Cyprus”. Proceedings of Renewable Energy Sources & Energy Efficiency Conference, 2007, Cyprus

2005

1. C. Koroneos, P. Fokaides, N. Moussiopoulos : „Cyprus energy system and the use of renewable energy sources” Journal Energy, Volume 30, Issue 10, July 2005, Pages 1889-1901
2. Π.Α. Φωκαΐδης, Μ. Μιχαήλ: Προτάσεις Πολιτικής, Κεφάλαιο „Παράμετροι Ενεργειακής Πολιτικής: Ευρωπαϊκή Νομοθεσία και κυπριακή πραγματικότητα”, Power Publishings (in greek)

2002

1. C. Koroneos, P. Fokaides, N. Moussiopoulos : „Cyprus energy system and the use of renewable energy sources” 4th I.S.E.S. Europe Solar Congress, 2002, Italy

5. Reviewer

- | | | |
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| 06/2010 - | | Journal of Environment and Buildings (Elsevier) |
| 09/2010 - | | Journal of Biomass and Bioenergy (Elsevier) |

6. Teaching Experience / Supervising

WS 2010	University of Cyprus CEE 272: <u>Experimental Fluid Mechanics</u> , Lecturer CEE 596: <u>Renewable Energy Sources Management</u> , Lecturer
SS 2010	University of Cyprus CEE 575: <u>Energy Efficiency in Buildings</u> , Lecturer CEE 689: <u>Research Study for Master Programme</u> , Advisor of students Mr. Savvas Vlachos and Michalis Ioannou
WS 2009 - SS 2010	University of Cyprus (Department of Architecture) ARI 503: Co-Supervisor of diploma thesis of students Mrs. Anna Euripidou, Alexia Agathokleous and Louisa Skordi
WS 2009	University of Cyprus CEE 272: <u>Experimental Fluid Mechanics</u> , Lecturer
SS 2009	University of Cyprus CEE 575: <u>Energy Efficiency in Buildings</u> , Lecturer CEE 483: <u>Transport Phenomena in Environmental Engineering</u> , Lecturer
WS 2008	University of Cyprus CEE 575: <u>Energy Efficiency in Buildings</u> , Associate Lecturer CEE 596: <u>Renewable Energy Sources Management</u> , Associate Lecturer CEE 272: <u>Experimental Fluid Mechanics</u> , Lab Tutor
SS 2008	Frederick University, Cyprus AMEM 208: <u>Dynamics</u> , Lecturer
WS 2007	Frederick University, Cyprus AMEE 431: <u>Fundamentals of Internal Combustion Engines</u> , Lecturer
WS 2006	University of Karlsruhe, Germany 22999: <u>Introduction to Process Engineering</u> , Lab Tutor
SS 2006	University of Karlsruhe, Germany 22514: <u>Non-reacting and Reacting Turbulent Flows</u> , Teaching Assistant
SS 2005	University of Karlsruhe, Germany Supervisor of diploma thesis of student Mr. Dimitris Tosidis Title: <u>Experimentelle Untersuchung des Einflusses von Druckverlust, Luftvorwärmung, Temperatur, Stöchiometrie auf die Tropfenausbreitung unter Verwendung eines Airblast Zerstäubers</u>
WS 2004 - SS 2006	University of Karlsruhe, Germany 22512: <u>Heat and mass transfer for Mechanical Engineers</u> , Teaching Assistant
WS 2004	University of Karlsruhe, Germany Supervisor of diploma thesis of student Mr. Plamen Kasabov Title: <u>Experimentelle und theoretische Analyse der NOx-Emissionen bei Airblast-Zerstäuber-Düsen</u>
SS 2004	University of Karlsruhe, Germany 22542: <u>Combustion Laboratory</u> , Lab Tutor
WS 2003 - SS 2006	University of Karlsruhe, Germany 22542: <u>Applied Combustion Technology</u> , Lab Tutor
WS 2003	University of Karlsruhe, Germany 22542: <u>Applied Combustion Technology</u> , Teaching Assistant

7. Patents

Zarzalıs, N.; Fokaidıs, P.A.; Merkle, K.: Fuel injection apparatus, European Patent: EP 1 722 164 A1, 2006

8. Prizes - Scholarships

05/2008	Best Paper Award by the Combustion, Fuels & Emissions Committee from ASME Turbo Expo 2007 - Fokaidıs, P.A. et al: "Experimental Investigation of the Stability Mechanism and Emissions of a Lifted Swirl Non-Premixed Flame" GT2007-27126
04/2007	Scholarship by the German Section of the Combustion Institute for the participation at the European Combustion Meeting, April 2007

9. Skills in experimental methods

Experimental Fluid Mechanics	<ol style="list-style-type: none">1. <u>Particle Image Velocimetry</u>: Experienced user in non-reactive flows. Measurements performed in water channels for the characterisation of urban flows.2. <u>3D - Laser Doppler Anemometry</u>: Experienced user in reactive and non-reactive flows. I have performed series of experiments in swirl isothermal and reacting flames for the characterisation of the stability mechanism.3. <u>Laser Light Sheet Mie Scattering</u>: Experienced user in reactive and non-reactive flows. Experiments performed in reacting flames for the characterisation of the two-phase flow of liquid fuels.4. <u>Flow Rate and Pressure Measurements</u>: Experienced user of several instrumentation such as Coriolis and turbine flow meters, Rotameter etc. Also experienced user of several instrumentation such as piezo-electric crystals, membrane pressure gauge etc.
In-flame Measurements	<ol style="list-style-type: none">1. <u>Local and Global Concentration Analysis</u>: Experienced user of several gas analysis methods such as NDIR, FID, FTIR, Paramagnetism etc. Experiments regarding the mixture field of reacting and non reacting flames.2. <u>Temperature Measurements</u>: Experienced user of several gas analysis methods such as thermocouples, micro-thermocouples, PT100 etc. Experiments regarding the temperature field of reacting and non reacting flames.
Temperature Measurement	<ol style="list-style-type: none">1. Level 1 Thermographer (Infrared Training Center, Sweden). Experienced user for building thermography

10. Administrative and other duties

06/2009 -	University of Cyprus Representative in following committees: <ol style="list-style-type: none">1. Implementation of 2002/91/EC Directive in Cyprus, Energy Service, Ministry of Commerce Industry and Tourism2. Reflective Committee CEN/CENELEC/JWG 1 "Energy audits", Cyprus Standardization Organization
06/2003 - 06/2007	University of Karlsruhe, Germany Engler-Bunte Institute, Division of Combustion Technology In-charge of maintenance and operation of institutes' gas analysers ≈ 40 devices with a total cost of ≈ 600 k€

10. Administrative and other duties (cont'd)

06/2003 - 01/2004	University of Karlsruhe, Germany Engler-Bunte Institute, Division of Combustion Technology Health and Safety Officer for issues regarding laser safety
03/2001 - 03/2002	Aristoteleio University Thessaloniki, Greece School of Engineering, Department of Mechanical Engineering Member of students administration committee of Mechanical Engineers AUTH

11. Education

11/2002 - 06/2007	University of Karlsruhe, Germany, School of Engineering, Department of Chemical and Process Engineering Dr.-Ing., Chemical and Process Engineering (Date of Viva Voce: 26. February 2009) Thesis: Experimental investigation of the stability mechanism of lifted non-premixed swirl confined flames
10/1997 - 07/2002	Aristoteleio University Thessaloniki, Greece School of Engineering, Department of Mechanical Engineering Dipl.-Ing., Mechanical Engineering Thesis: Wind potential analysis of selected sites in Cyprus and techno-economic assessment for the establishment of a wind-park
09/1992 - 06/1995	Acropolis Lyceum Nicosia, Cyprus Apolyterion (19.0/20 - Distinction) Focus on: mathematics, physics and chemistry
09/1989 - 06/1992	Acropolis Gymnasium Nicosia, Cyprus
09/1983 - 06/1989	Dasoupolis Elementary School Nicosia, Cyprus

12. Military Service

07/1995 - 09/1997 | Artillery Cadet Officer (Cyprus National Guard)

13. Professional Memberships

Cyprus Scientific and Technical Chamber (ETEK)- since 2002
VDI - Verein Deutscher Ingenieure - since 2006
The Combustion Institute - Greek Section - since 2007
Institute for Solar Technology, Greece (IHT) - since 2009
Cyprus Association of Mechanical Engineers (ΣΜΜΗΚ) - since 2009
ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers - since 2010

14. Miscellaneous Qualifications

Foreign Languages	Greek: Mother Tongue English: Fluent reading, writing and verbal skills German: Fluent reading writing and verbal skills French: Basic reading and writing skills
Computer Literacy	Operating Systems: MS DOS, MS Windows Languages: Fortran 77/90/95, Visual Basic, Matlab Scripting Languages: HTML 3D-CAD: PTC ProEngineer Wildfire 3.0, Autocad 2009 Applications: TecPlot, EcoTect, Energy Plus, Chemkin (basic knowledge), ICEM CFD (basic knowledge), Office and Graphic Software of Microsoft and Adobe, MS-Visio, etc.
ISO Systems	Accredited Third Party Auditor for ISO 9001:2008, ISO 14001:2004 and ADR (TÜV Nord)

15. Private Interests

Interests	<ul style="list-style-type: none">• Music performing and composing (I possess the Licentiate of the Royal Schools of Music - LRSM, in Theory of Music and Piano)• Studying history and geopolitics• Weight training• Snooker
Other Memberships	<ul style="list-style-type: none">• Olympiakos Nicosia Sport Club - since 2005• Gymnastic Association 'Pancypria' - since 2002

*Dr.-Ing. Paris A Fokaides
Nicosia, 09 September 2010*