



# THE CYPRUS INSTITUTE

## Curriculum Vitae

### Costas Marakkos

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#### **Academic and Professional details:**

##### **Education:**

**2005** - PhD in Aerospace Engineering, University of Manchester, U.K.  
PhD thesis title: "An Experimental Investigation on the endwall effects of cylindrical obstacles in cross flow".

**2001** - MSc with Distinction in Thermal Power and Fluid Mechanics, U.M.I.S.T, Manchester, UK.

**2000** - BEng (Hons), First Class, in Mechanical Engineering, University of Hull, Hull, U.K.

##### **Professional Experience:**

**01/05/2011-30/04/2012**

Organisation: MEDECO Ltd, Nicosia, Cyprus

I was involved in the design of mechanical engineering installations such as air-conditioning systems and plumbing networks, for industrial and domestic buildings. This work also involved carrying out building energy consumption analyses. Proficient in the use of AutoCAD, Fine HVAC and iSBEM-Cy.

##### **Research Experience:**

**01/08/2012-to date**

Organisation: The Cyprus Institute  
Position: Post-Doctoral Research Fellow

I am currently working towards the design and development of a solar-thermal power plant for the cogeneration of electricity and desalinated water. The main tools of research are optical engineering design software such as SolTrace and TracePro, MATLAB programming and the CAD software Draftsight.

**01/05/2012-01/08/2012**

Organisation: The University of Cyprus  
Position: Research Associate

Lab-Scale Fluid Mechanics Measurements were carried out using Particle Image Velocimetry to examine the dispersion of Air Pollution around building blocks. A LaVision system for Tomographic Particle image Velocimetry was used as well as the software MATLAB and Tecplot were employed.

**10/02/2006-01/09/2009**

Organisation: The University of Manchester, U.K.

Position: Research Associate

The aim was to design and carry out experimental Fluid Mechanics and Heat Transfer analyses on the transition of boundary layer flow. The project was funded by EPSRC for the benefit of the British industry. The studies were carried out using Liquid Crystal Thermography, Particle Image Velocimetry. The instrumentation was built from National Instruments hardware modules for control and measurement analogue. The principal software used were Labview, MATLAB and Tecplot.

**Teaching Experience:**

**07/05/2012-11/05/2012**

Organisation: University of Cyprus

Position: Workshop Demonstrator

Fluid mechanics experiments were demonstrated during the 2012 Workshop on Urban Physics that was organized by the Civil and Environmental Engineering Department of the University of Cyprus.

**05/09/2005-17/12/2005**

Organisation: University of Manchester, U.K.

Position: Teaching assistant for First Year Fluid Mechanics.

This position involved teaching Fluid Mechanics Tutorials to first year undergraduate students.

**Honours and Achievements:**

2004 Presentation Prize at the 2004 Research Open Day at the University of Manchester.

2002 OSS (Ph.D.) Scholarship by the University of Manchester.

1997 Sir Roy Marshal Scholarship for undergraduate studies by the University of Hull.

1997 Scholarship for undergraduate studies by the Republic of Cyprus

**Professional Service and Memberships:**

Member of the Cyprus Scientific and Technical Chamber since 2007, C.S.T.C. I.D.:A138087

Certified Building Energy Simulation Analyst since 2013, I.D.: AXXX 100345

**Presentations and Outreach:**

Kakoniti, A., Georgiou, G., Marakkos K., and Neophytou M., "The effects of urban design parameters on the Local Microclimate", 9th Symposium, ICCMSE, Kos, Greece, 2010.

Konstantinos Marakkos and John T. Turner, „Horseshoe vortex formation around cylinders attached to an end-wall“, 8th Fluome Symposium, Chengdu, China, August 2005, Paper No 8-10.

Konstantinos Marakkos and Costas Papanicolas, "On the Optical Design of an Integrated Solar Storage Receiver", 4th International Conference on Renewable Sources & Energy Efficiency - New Challenges, June 2013

**Publications:**

Konstantinos Marakkos, and Shan Zhong, "The generation and evolution of coherent structures in a turbulent spot", 2012 (under revision), ASME, Journal of Turbomachinery.

Konstantinos Marakkos and John T. Turner, "Vortex generation in the cross-flow around a cylinder attached to an end-wall", Optics and Laser Technology, Vol. 38, 2006, pp. 277-285.