

MICHAEL A. VLACHOGIANNIS

Personal

Languages: Greek (native), English (Proficiency Level)
Current Address: Dr. Vlachogiannis Michael
Associate Professor
Dept. of Mechanical Engineering
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Professional Experience

- 2009 - Present **Head of the Department**
Department of Mechanical Engineering, Technological Institute of Larissa
- 2007 - Present **Associate Professor**
Department of Mechanical Engineering, Technological Institute of Larissa
Laboratory of Fluid Mechanics & Turbomachinery
- 2006 - 2008 **Mechanical Engineer at TEMKA S.A.**
Director of Production
Programming of Production, Programming of Machines (Messer, Ficep, Kaltenbach, Vernet, e.t.c.), Responsible for the Assembly and Welding Dept.
Director of Maintenance
Working instructions for all the CNC machines, Preventive Maintenance Schedule
Selected Projects: CERN - Lifting Beam, SIDMA- Steel Plant, Main Field Mine Belt Conveyor B=1800 Modification, Manufacturing of Drive Heads and Return Stations of Belt conveyors, Wet Flue Gas Desulphurization of Megalopolis PPC - SES Unit III
Special Projects: Increasing the oxyfuel cutting speed (25%), Welding of 230mm plate (supports for the Hydroelectric Power Plant H.E.P. ILARION)
- 2005 - 2006 **Mechanical Engineer at MIRTEC S.A.**
MIRTEC (Metallurgical Industrial Research & Technological Development Center)
 - Director of the R & D Dept.
 - Director of the Materials Testing Facilities (Tensile Strength, e.t.c)
- 2004 - present **Lecturer**, Instructor (P.D. 407/80)
University of Thessaly, Dept. of Mechanical & Industrial Engineering
 - Teaching: Thermal Process Equipment, Heat Transfer II & Solar Energy
- 2004 - 2005 **Mechanical Engineer at VIOHALCO Group**
 - Steel & Electromechanical Constructions
 - Site Manager (25 employees)
- 2003 - present **Research Associate**
University of Thessaly, Laboratory of Transport Processes & Process Equipment
 - Separation processes equipment & Heat Exchanger Design
 - Design of Biomass Furnace for charcoal production
 - Operating and Manufacturing of Steam Boilers and Cooling Towers
 - Aerospace Applications of Magnesium Alloys, AEROMAG
- 2001 - 2003 **Post-doctoral Associate**
Univ. of Illinois at Urbana-Champaign, Dept. of Chemical Engineering

«Experimental Studies on the Physics and Technology of Polymer», Drag-Reduction, Defense Advanced Research Projects Agency, Microsystems Technology Office, Friction Drag Technologies DARPA Order No. K042/05/24, Issued by DARPA/CMO under Contract MDA972-01-C-0029, (3/19/2001 to 12/18/2003)

1996 - 2001

Research and Teaching Assistant

University of Thessaly, Dept. of Mechanical & Industrial Engineering

- Desalination by mechanical compression of humid air
- Characterization of trapped hydrogen in exfoliation corroded aluminum alloy 2024

1995

Internship

STALCO S.A (Mechanical Construction Company), 1 month

1993 - 1996

Part Time (during the undergraduate studies)

MIRTEC (Metallurgical Industrial Research & Technological Development Center),

1992

Internship

Nissan (Teocar) 3 months, Internship

Education

2001-2003

Post-Doctoral Associate

University of Illinois at Urbana-Champaign, Dept of Chemical Engineering

"Polymer Drag Reduction on Turbulence", Supervisor: Dr. T.J. Hanratty,

1996 - 2001

Doctor of Philosophy in Mechanical & Industrial Engineering

GPA: Excellent

University of Thessaly, Dept. of Mechanical & Industrial Engineering

"Experimental Investigation of the film flow along a flat and a corrugated wall"

Supervisor: Dr. Vasilis Bontozoglou

1991-1996

B.S. in Mechanical & Industrial Engineering

GPA: 8.77/10 (1st)

University of Thessaly, Dept. of Mechanical & Industrial Engineering

"Experimental Study of Laser Welds", Advisor: Dr. Gregory Haidemenopoulos

Awards & Honors

1996 National Scholarship Foundation of Greece, Best Undergraduate ranking: Overall GPA: 8.77/10

1998 National Scholarship Foundation of Greece, 1997-2000, full PhD funding, Panhellenic Examination in 4 courses. Overall GPA: 15.27/20 (1st)

2003 Honored as "Distinguished New Scientist" from the Greek Department of Defense (7/3/2003)

2004 National Scholarship Foundation of Greece, Post-Doctoral Scholarship

COMPUTING SKILLS

Operating systems

Windows (95, 98, NT, 2000,XP), UNIX, DOS

Programming

Fortran, Visual Basic, Mathematica, MatLab, C++

Special

Data Acquisition and analysis, Digital Image Processing

Engineering

MS Office, AutoCad, CSIA

RESEARCH

Selected Publications in Referred Journals

- M. Vlachogiannis, A.D. Zervaki & G. N. Haidemenopoulos, 1998 *A Macro - and Micro - Structural Study of Laser Welds in D36 Ship Steel*, Tech. Chron. Sci. J. TGG, V, No 1-2.
- M. Vlachogiannis, V. Bontozoglou, Ch. Georgalas & G. Litinas 1999 *Desalination by mechanical compression of humid air*: Desalination, 122, 35-42.
- M. Vlachogiannis & V. Bontozoglou 2001 *Observations of solitary wave dynamics of film flows*. J. Fluid Mech., 435, 191-215.
- M. Vlachogiannis & V. Bontozoglou 2002 *Experiments on laminar film flow along a corrugated wall*. J. Fluid Mech., 457, 133-156.
- N. Malamataris, M. Vlachogiannis & V. Bontozoglou 2002 *Solitary waves on inclined films: Flow structure and binary interactions*. Phys. Fluids, 14, 1082-1094.
- M. Vlachogiannis, M.W. Liberatore, A.J. McHugh & T.J. Hanratty 2003 *Effectiveness of a Drag Reducing Polymer: Relation to Molecular Weight Distribution and Structuring*. Phys Fluids, 15 (12), 3786-3794.
- M. Vlachogiannis & T.J. Hanratty 2004 *Influence of wavy structured surfaces and polymer aggregation on drag reduction*. Exps. Fluids, 36 (5), 685 - 700
- S. Baik, M. Vlachogiannis and T.J. Hanratty 2005 *Use of particle image velocimetry to study heterogeneous drag reduction* Exps. Fluids, 39 (4): 637-650
- K. Argyriadi, M. Vlachogiannis and V. Bontozoglou 2006 *Experimental study of inclined film flow along periodic corrugations: The effect of wall steepness*. Phys. Fluids, 18 (1), 1082-1094.
- M. Vlachogiannis, A. Samandas, V. Leontidis, and V. Bontozoglou 2010 *Effect of channel width on the primary instability of inclined film flow*, Phys. Fluids 22, 012106 (2010); doi:10.1063/1.3294884
- V. Leontidis, J. Vatteville, M. Vlachogiannis, N. Andritsos and V. Bontozoglou 2010 *Nominally two-dimensional waves in inclined film flow in channels of finite width*, Phys. Fluids 22, 012106 (2010); doi:10.1063/1.3294884