

Europass curriculum vitae

Personal information

Surname / First name **Omirou Sotiris**
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 Nationality Cypriot

Education

Dates Sep 1986 – Jul 1991
 Title of qualification awarded **PhD** in Mechanical Engineering
 Name of awarding institution University of Patras, Department of Mechanical Engineering, Manufacturing Technology Division, Patras, Greece
 Key features Development of an Advanced CNC Controller for a Multi-axis Milling Machine. The controller equipped with new interpolations algorithms was successfully tested in real cutting conditions.

Dates Sep 1979 – July 1984
 Title of qualification awarded **MSc** in Mechanical Engineering
 Name of awarding institution Gh. Asachi Polytechnic Institute, Iasi, Romania
 Key features Programme comprehensively covered the foundations of Mechanical Engineering and included subjects in the following areas: Technology of Materials, Engineering Design, Industrial Automation Systems, Technology of Machine Tools, Manufacturing Processes

Work Experience

Dates Sep 2007 – Present
 Employer Name **Frederick University Cyprus**
 Occupation or position(s) held Associate Professor Mechanical Engineering Dept.
 Main activities and responsibilities Areas of teaching: Manufacturing Processes, CAD/CAM Systems, CNC Machines, Instrumentation and Data Acquisition Systems, Production Systems and Automation (Master in Eng. Management).

Dates Feb. 2004 – Sep. 2007
 Employer Name **Frederick Institute of Technology**
 Occupation or position(s) held Assistant Professor Mechanical Engineering Dept.
 Main activities and responsibilities Independent teaching of BSc and Diploma level subjects being included in the accredited by the Council of Educational Evaluation-Accreditation of Cyprus (ΣΕΚΑΠ) Courses of Mechanical Engineering. Areas of teaching: CAD/CAM Systems, CNC Machines, Instrumentation and Data Acquisition Systems.

Academic Profile

Dates Sep 1991 – Jun 2003
Employer Name **Technological Educational Institute of Patras, Greece.**
Occupation or position(s) held Assist. Professor Mechanical Engineering Dept.
Main activities and responsibilities Independent teaching of the following technical subjects: Technology of Materials, Computer Aided Design and Applications, Mechanical workshop, C.N.C. Machine Tools, Quality Control

Dates Sep 1993 – Jun 2002
Employer Name **Public Institute of Vocational Training, Patras, Greece.**
Occupation or position(s) held Part-time Instructor
Main activities and responsibilities Independent teaching of the following technical subjects included in the programs of various engineering specialities: Engineering Drawing, CNC Machine Tools, Computer Aided Design, Technology of Materials

Dates Sep 1985 – Jun 1991
Employer Name **University of Patras, Greece**
Occupation or position(s) held Teaching Assistant in the Manufacturing Technology Division, Mechanical Engineering Depart.
Main activities and responsibilities Supervisor of the laboratory experiments and Teaching Assistant on the undergraduate courses offered by the Manufacturing Technology Division: Students tutorials, coordination for laboratory assistants, supervision of Diploma Theses, laboratory and exercises preparation etc.
Lessons: Engineering Measurements (Laboratory applications)
Industrial Automations (Laboratory applications)
Machines Dynamic I (Laboratory applications)
CNC Machine Tools (tutorials)

Seminar Instructor

Dates 1993
Employer Name University of Patras, Greece
Occupation or position(s) held Instructor of Seminar "*Collaboration between Universities and Enterprises*"
Main activities and responsibilities Subject taught: CNC programming (10 hours)

Dates 1993
Employer Name Organisation for Vocational Education & Training, (OAEΔ), Greece.
Occupation or position(s) held Instructor of Seminar "*CNC Machine Tools*"
Main activities and responsibilities Subject taught : Programming and Manipulation of CNC Machine Tools (64 hours)

Dates 1990-1992
Employer Name University of Patras, Greece
Occupation or position(s) held Instructor of Seminar "*Industrial Automation*"
Main activities and responsibilities Subjects taught: "*Microprocessors*", "*Programming In Assembly Language*", "*Servo and Stepping Motors Control*" (100 hours)

Dates	1988-1990
Employer Name	Technological and Educational Institute of Patras, Greece
Occupation or position(s) held	Instructor of Seminar "Digital Control of N.C & C.N.C. Machines"
Main activities and responsibilities	Subjects taught: Programming in APT, Programming in E.I.A and I.S.O. codes, Programming in HEIDENHAIN codes, Programming and Manipulation of CNC Machine Tools, Industrial Applications, Microprocessors (470 hours)
Professional Organisations	Technical Chamber of Cyprus (ETEK) Member #: A104789 Technical Chamber of Greece (TEE), Member #: 48737 Institution of Mechanical Engineers of UK (IMechE), Member #: 74229250
Awards	1986: Scholarship for Post-graduate studies from the Scholarship National Foundation of Greece (IKY). 1984: Prize awarded by the "Gh. Asachi" Polytechnic Institute for high scientific performance.
Professional Contribution	Invited Reviewer by the following International Scientific Journals: <ul style="list-style-type: none"> • Computer Aided Design • International Journal of Advanced Manufacturing Technology • Robotics and Computer-Integrated Manufacturing • International Journal of Machining and Machinability of Materials • Journal of Manufacturing Science and Engineering.
Service to the University	Deputy Head of Mechanical Engineering Department. (2009 – today) Member of the Library and Information Systems Committee. Member of Evaluation Committees for academic staff appointment. Member of Coordination Committee for the Master program in Engineering Management.
Research Projects	
Duration, Funding Ag. and Funding Title	2007 (2 years) , Cyprus Research Promotion Foundation ,Total Funding: € 153.774 Development of an Integrated Design Methodology for the Production of Medium Scale Boats using the Resin Transfer Molding Technique
Role	Principal Investigator
Duration, Funding Ag. and Funding Title	2006 (3 years) , Cyprus Research Promotion Foundation ,Total Funding: € 148.648 Development of new and innovative computational and experimental methodologies for the characterization of thin hard coatings performance, XAPYMENQN, TEXNO/0506/14
Role	Principal Investigator
Duration, Funding Ag. and Funding Title	2006 (3 years) , Cyprus Research Promotion Foundation, Total Funding: € 145.231 Improvement of the working life of aluminum extrusion dies by means of advance and innovative procedures
Role	Principal Investigator
Duration, Funding Ag. and Funding Title	2006 (3 years) , EUREKA EI3881 FACTORY, € 102.516 Reconstruction of Archaeological Findings by Computer Tomographies and Rapid Prototyping Methods
Role	Researcher
Duration, Funding Ag. and Funding Title	2005 (4 years) , Cyprus Research Promotion Foundation, Total Funding: € 170.754 Design of a new high surface hardness and complicated geometry die for the extrusion of high accuracy aluminum profiles, EPYAN/0105/19
Role	Researcher
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Duration, Funding Ag. and Funding	2005 (2 years) , Cyprus Research Promotion Foundation, Total Funding: € 102516
Title	New guardrail system design for the improvement of vehicle crash safety
Role and Contribution	Researcher
Duration, Funding Ag. and Funding	2004 (3 years) , Cyprus Research Promotion Foundation, Total Funding: € 128145
Title	New Guardrail System Design for Critical Collision Cases in Cyprus Highways
Role	Researcher
Duration, Funding Ag. and Funding	2004 (2 years) , Cyprus Research Promotion Foundation, Total Funding: € 85430
Title	Design and manufacturing of fiber-reinforced composite high-pressure pipes capable for corrosion liquids
Role	Principal Investigator
Duration, Funding Ag. and Funding	1985 (6 months) , Hellenic Organisation of Small Medium sized Enterprises and Handicrafts EOMMEX, Total Funding: GR. DR.: 1.000.000
Title	Development and Implementation of an Electronic Weighing System
Role	Researcher

Publications

Doctoral Thesis

“Development of an Advanced CNC Controller for a Multi-axis Milling Machine”, University of Patras, Greece, 1991.

International Journals (published papers)

Omirou S. and Fyrillas M., “A general G-code algorithm for deep hole drilling”, Journal of Manufacturing Science and Production, Volume 15, Issue 2, Pages 225–237, May **2015**.

Omirou S. and Fyrillas M., “A CNC manufacturing method for parts with trochoidal profile”, Journal of Manufacturing Science and Production, Volume 14, Issue 2, Pages 103–113, August **2014**.

Omirou S. and Fyrillas M., “New CNC programming functions based on elliptical motion”, Journal of Manufacturing Science and Production, Vol.13/3, pp.155-164, August **2013**.

Nearchou A. and **Omirou S.**, “A Particle Swarm Optimization Algorithm for Scheduling Against Restrictive Common Due Dates”, International Journal of Computational Intelligence Systems, Vol. 6/4, pp.684-699, May **2013**.

Omirou S. and Fyrillas M., “High precision CNC machining of axisymmetric die cavities”, Asian Transactions on Engineering, Volume: 02, Issue: 05, pp. 1-9, November **2012**.

Omirou S., Rossides S., and Lontos A., “A new CNC turning canned cycle for revolved parts with free-form profile” International Journal of Advanced Manufacturing Technology, Volume 60/1, pp. 201-209, April **2012**.

Omirou S. and Nearchou A., “An epitrochoidal pocket - A new canned cycle for CNC milling machines”, Robotics and Computer-Integrated Manufacturing, Vol. 25/1, pp. 73–80, Feb. **2009**.

Omirou S. and Nearchou A., “A CNC machine tool interpolator for surfaces of cross-sectional design”, Robotics and Computer-Integrated Manufacturing, Vol. 23/2, pp. 159-264, April **2007**.

Nearchou A. and **Omirou S.**, “Differential Evolution for Sequencing and Scheduling Optimization”, Journal of Heuristics, Vol.12, pp.395-411, December **2006**.

Omirou S. and Demosthenous G., “An Algorithm for Tracing Planar Equidistant Curves”, Robotics and Computer-Integrated Manufacturing, vol 22/4 pp. 306-314, **2006**.

Omirou S. and Barouni A., “Integration of new programming capabilities into a PC-based milling machine controller”, Robotics and Computer-Integrated Manufacturing, vol 21/6 pp. 518-527, **2005**.

Omirou S., “A CNC Interpolation Algorithm for Boundary Machining”, Robotics and Computer-Integrated Manufacturing, 20/3 pp. 255-264, **2004**.

Omirou S., “A Locus Tracing Algorithm for Cutter Offsetting in CNC Machining”, Robotics and Computer-Integrated Manufacturing, 20/1 pp. 49-55, **2004**.

Omirou S., “Space Curve Interpolation for CNC Machines”, Journal of Materials Processing Technology, Vol. 141, pp. 343-350, **2003**.

Omirou S., “NC Machining for Revolved and Swept Surfaces with Free - Form Profiles”. Journal of Materials Processing Technology, Volume/Issue 132/1-3 pp.332-339, **2003**.

Papaioannou S. and **Omirou S.**, "3-Dimensional Circular Interpolation for CNC Machines", Journal of Manufacturing Science and Engineering, ASME, Vol. 118, pp. 274-277, **1996**.

Omirou S. and Papaioannou S., "Computer Aided Manufacture of Axisymmetric Cavities", Computers in Industry, Vol. 28, pp. 251-256, **1996**.

Conference papers

Omirou S., Fyrrillas M. and Lontos A., " Dynamic deep hole drilling on CNC milling machines", 4th International Conference of Engineering Against Failure (ICEAF IV). Skiathos Greece, 24-26 June **2015**.

Omirou S. and A. Lontos, "High precision CNC turning of revolved parts with free-form profile", 4th ICMEN International Conference, Thessaloniki-Greece, October 5-7, **2011**.

Papaioannou S. and **Omirou S.**, "*Motion Generation as a Locus Tracing Problem*". ELECTROMOTION '99, 3rd International Symposium on Advanced Electromechanical Motion Systems, Patras, Greece, July 8-9, **1999**.

Local Journals

Omirou S., Nearchou A., "A CNC manufacturing method for chambers of rotary internal piston engines and pumps", The Cyprus Journal of Science and Technology, Vol.5, No. 2, **2006**.

Omirou S., Lontos A., Demosthenous G., "Parametric Programming - A Powerful CNC Programming Tool", The Cyprus Journal of Science and Technology, , **2006**.

Omirou S., "A Real-Time Surface Interpolator for CNC Milling Machines", The Cyprus Journal of Science and Technology, Vol.4, No. 3, **2005**.

Books

Omirou S. L. "**Programming of CNC Machine Tools**",

Kleidarithmos Press, ISBN-10: 960-209-410-9, Athens, June **2000**.