Spyridon Kompogiannis

Curriculum Vitæ

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Personal Information

Father's Name	Konstantinos
Date of Birth	September 14, 1970
Place of Birth	Arta, Greece
Nationality	Hellenic
Marital Status	Married

Current Position

Special Technical Laboratory Staff (01/2025 - today)
Laboratory for Machine Tools and Manufacturing Engineering (EEDM/LMTME)
Design and Structures Department
School of Mechanical Engineering
Facaulty of Engineering
Aristotle University of Thessaloniki, Greece.
Webpage: http:/https://www.meng.auth.gr/archiki-new-menu/

Logistics Coordinator for ATLAS ITk Upgrade Project at Cern (01/2022 - today)
Coordinator of a multinational team of 15 members responsible for handling the shipments of parts and equipment between the institutes of the ATLAS ITk collaboration. Responsible for transportation and handling of equipment with large dimensions and for optimization of space use in the frame of ATLAS ITk Upgrade Project.
In parallel, engineering support to Muons Group of ATLAS Experiment (June 2023 - today) in Muons Group.
ATLAS Experiment
EP-UAT, 304/R-012, EO2610 CERN.

Professional Experience

EEDM 11/1996 - 03/1999 and 09/2000 - 11/2003	Member of Laboratory for Machine Tools and Manufacturing Engineering (EEDM). Participation in scientific research projects and also projects with industry (heat treatment of gears and other machine elements as main operator of the gas carburazing installation of the Laboratory).

DROMEAS S.A	KEM S.A -Member of DROMEAS Group
12/2003 - 05/2008	Chief engineer in KEM S.A., the company of the group responsible for design and construction of tools (moulds) and dies. Moulds for plastic injection parts (office furniture) but also for high pressure aluminum die casting parts (office furniture and automotive industry). Design of parts but mostly design of moulds using CAD systems and machining them with the aid of CAM software to program multi-axis milling centers, die-sink and wire-cut EDM machines. Responsible for defining the specifications for the raw material quality according to the requirements (steel and polymers). Material flow simulation into the mould. Quality control of the machined tools. Production management of plastic parts for office furniture.
DROMEAS S.A	KEM S.A -Member of DROMEAS Group
09/2004 - 05/2008	Quality Manager and Safety Responsible Engineer in KEM S.A.
EEDM	Member of Laboratory for Machine Tools and Manufacturing Engineering (EEDM).
06/2008 - 2014	Projects in cooperation with cement industry. Design (with the aid of CAD systems) of supporting equipment for improving the performance (eliminate vibrations during operation) of big fans included in production line of cement.
Fraunhofer PCCM	Research Associate in Fraunhofer-Project Center Coatings in Manufacturing (PCCM).
2008 - 2014	Participation in projects focused mainly in the technology of PVD coatings and their application on cutting tools used for different machining operations.

ATLAS Experiment 2014-today

Member of the ATLAS Experiment at CERN / 2014 - now.

New Small Wheel (NSW) Upgrade Project. Member of the AUTh team (Greece) for LM2 construction. Collaboration with the CERN team (PH/DT) responsible for design and construction the M0 (prototype) of LM2 detector (MicroMegas Detector).

Three (3) periods at CERN (06/2014 - 08/2014), (01/2015-12/2015) and (04/2016-07/2016) supporting the design of LM2 detector using CATIA (Dassault Systemes) and the tooling for the LM2-M0 (Module 0-first prototype) construction. Extensive application of composite materials and modern methods of part manufacturing (additive manufacture technology).Furthermore supervising the machining of parts for the LM2 detector itself or for the tooling and supporting devices.

Mechanical engineer for both AUTh team (Thessaloniki-Greece, LM2 drift panels) and JINR team (Dubna-Russia, LM2 Read/Out panels and final assembly of LM2 detector). Responsible for designing the 3D model and producing all the required construction drawings of the production version of the LM2 detector. Participation to the construction of drift panels of LM2 detector at Thessaloniki site (AUTh team -Greece, 09/2016-06/2018) and the assembly of LM2-M0.5 (second prototype of LM2 detector, 09/2017 at JINR in Dubna- Moscow (Russia)) .

(06/2018-06/2021) Member initially and coordinator (since 09/2019) of the mechanical integration (multinational) team of the Micromegas Detectors for the New Small Wheel Upgrade Project. Responsible for the study, design and construction of specific lifting and manipulation jigs and tools to support the integration procedure. Also responsible for the planning of the assembly, management of people and activities, coordination of the different groups (reception test, mechanics, services and electronics) participating at the Micromegas Detectors Integration procedure. Supporting the activities of the Micromegas group in the frame of collaboration with the other groups, also involved in the NSW Upgrade Project for the Atlas Experiment. Deputy of the Micromegas Integration facility (BB5 or B899) at CERN (since 09/2019).

(06/2021 - 12/2021) Responsible for the mechanical assembly (as Project Engineer and Coordinator) of the sTGC detectors on the MicroMegas Double Wedges to form the final sectors for the NSW Upgrade Project.

(10/2021 - 06/2023) Participation (as mechanical engineer) in the Commissioning phase of New Small Wheel Upgrade Project after the installation of both Wheels in ATLAS Cavern.

(01/2022 - today) Logistics coordinator for ITk upgrade project (ATLAS Experiment). In parallel, engineering support in ATLAS Muons Group and floor manager of Building 899 (BB5), an assembly facility of ATLAS Experiment hosting these days sMDT and RPC upgrade avtivities for Phase II (ATLAS Experiment).

Profile

Field of Expertise

[1] Machining.
Machine tools and machining (turning, milling, gear hobbing).
Evaluation the performance of cutting tools during machining.
Analyze the kinematics during machining according to the tool geometry and workpiece material characteristics.
Application of innovative hard thin PVD coating on cutting tools in order to improve their efficiency.

[2] Design and FEM calculations.
Detailed design of parts, machine elements, moulds and structures with big dimensions with the aid of CAD systems.
Static and dynamic analysis of structures using FEM/FEA tools.

[3] Programming CNC machine tools - CAM.
Design of complicated machining procedures with the aid of CAM software for manufacturing high complexity parts in multi-axis turning and milling centers.

[4] Heat treatment of metallic parts and machine elements.

[5] Gear Inspection.

[6] Advanced Materials.
Expertise in modern advanced materials (composites, aluminum foams) and their application in manufacturing parts assembled in demanding constructions.

[7] Big Assemblies.
Assembly of complex constructions with large dimensions and weight. Support of the procedure by calcuating and designing custom lifting and handling tools.

[8] Particle detectors design.
Design of micro-pattern gaseous detectors (e.g. MicroMegas) for use in research in the field of High Energy Particle Physics.

Education

2014 - 2018 **Postgraduate studies (MSc.) in Processes and Advanced Material Properties**
Interdepartmental Postagrduate Program of Studies
Aristotle University of Thessaloniki, Greece.
Webpage: http://http://dtpy.web.auth.gr/en/index.html

GPA: 8.43 out of 10.0; Very Good/"'Lian Kalos"'

Postgraduate Thesis

Title Computational-experimental investigation of milling porous aluminium

Supervisor Professor N. Michailidis

Grade 10.0 out of 10.0

Area of Study Advanced Materials/Machining

1989 - 1996 **Dipl.Eng. Mechanical Engineer**
School of Mechanical Engineering
Design and Structures Department
Laboratory for Machine Tolls and Manufacturing Engineering (EEDM)
Aristotle University of Thessaloniki, Greece.
Webpage: http://www.meng.auth.gr/en.html

GPA: 7.00 out of 10.0; Very Good/"'Lian Kalos"'

Undergraduate Thesis

Title	Simulation Models describing Steel Gas Carburizing Process
Supervisor	Professor K.-D. Bouzakis
Grade	10.0 out of 10.0
Area of Study	Heat Treatment of Steel

Languages

Greek	Excellent (native)
English	Excellent
German	Moderate
French	Moderate

Academic Experience

1996 - 2014 **Teaching Assistant**
Manufacturing through material removal - Machining,
Manufacturing and heat treatment of gears
Laboratory for Machine Tools and Manufacturing Engineering (EEDM)
Design and Structures Department, School of Mechanical Engineering
Aristotle University of Thessaloniki, Greece
Webpage: http://http://www.meng.auth.gr/en.html

2004 - 2008 **Lecturer - Structures Design, Mechanical Drawing II, Mechanics I, II**
Mechanical Engineering Department
Technological Educational Institute of Central Macedonia, Serres, Greece
Lectures on different fields (Static Analysis, Mechanical Design Principles, Machining and Manufacturing Technology).
Webpage: http://http://engineering.teicm.gr/index.php?lang=en

April 2017 **Lecturer - Introduction to CAD**
Engineering Department
German University of Technology in Oman (GUtech)
Lectures regarding the principles of using a CAD system for modelling (3D), assembly (3D) and drafting (2D) to first-year meachanical and process engineers undergraduate students. Organizing the lab and teaching Autodesk Inventor Professional the students.
Webpage: https://www.gutech.edu.om/

Technical Skills

Extensive software experience in programming and in various scientific packages.

Operating Systems
All MS operating systems, Unix, Linux Distributions, MacOS X
Programming Languages

Procedural	Fortran, C
Object-Oriented	Python
Visual	Visual Basic
Shells-Scripts	MS-DOS, Bash
Web	HTML,CSS,JavaScript

Tools

CAD	AutoCAD, Autodesk Inventor, Dassault SolidWorks, PTC Pro/Engineer - Creo, CATIA
CAM	Esprit, PTC Pro/Engineer - Creo, WorkNC
CAE/FEM/CFD	ANSYS, DEFORM
Other CAE/FEM	ANSA,LS-DYNA (Basic Knowledge)
Scientific	OriginLab Plot, GNU Octave, GnuPLOT, Mathworks MATLAB™
Project Planning	Microsoft Project
Instrumentation and Control	LabVIEW (Basic Knowledge)
Data-Base	mySQL (Basic Knowledge)
Office Automation	Microsoft Office™, TEX, LATEX, BIBTEX
Graphics Design	CorelDraw!™, Adobe™Illustrator and Photoshop, Inkscape, GIMP

Communication Skills

Good communication skills (gained through perpetual communication with (multinational) team members and projects' partners).

Coordination and management of working groups (usually multinational) due to the involvement in projects of an international organization (CERN).

Fast learner

Team spirit.

Publications

Co - author to more than fifty (50) publications in scientific journals and international conferences. More than 250 citations (Scopus), with h index=8. A list of ten (10) more significant publications in scientific journals is included below.

A Publications in Scientific Journals

[A.1] Bouzakis K.-D., Kombogiannis S., Antoniadis A., Vidakis N., "*Modeling of Gear Hobbing. Part I.: Cutting simulation and tool wear prediction models*", Manufacturing Science and Engineering (ASME), Manufacturing Engineering Division MED-Vol. 10 (1999) 253:259.

[A.2] Bouzakis K.-D., Kombogiannis S., Antoniadis A., Vidakis N., "*Modeling of Gear Hobbing. Part II. A Computer Supported Experimental-Analytical Determination of the Wear Progress to Optimize the Tool Life Time*", Manufacturing Science and Engineering (ASME), Manufacturing Engineering Division MED-Vol. 10 (1999) 261:269.

[A.3] Bouzakis K.-D.,Kombogiannis S., Antoniadis, A.,Vidakis, N., "*Gear Hobbing Cutting Process Simulation and Tool Wear Prediction Models*", Transactions of the ASME, Journal of Manufacturing Science and Engineering, Vol. 124, February 2002, 42:51, DOI:10.1115/1.1430236

[A.4] Bouzakis K.-D., Michailidis N. Skordaris G., Kombogiannis S., Hadjiyiannis S., Efstathiou K., Pavlidou E., Erkens G., Rambadt S., Wirth I., "*Optimisation of the cutting edge roundness and its manufacturing procedures of cemented carbide inserts, to improve their milling performance after a PVD coating deposition*", Surface and Coatings Technology, 163-164, (2003), 625:630. DOI: 10.1016/S0257-8972(02)00687-4

[A.5] Bouzakis K.-D., Michailidis N., Anastopoulos J., Kompogiannis S., Erkens G., Roudnik P.J., "*Geometry and coating parameters effect on cemented carbide sticks cutting performance used in bevel gear manufacturing*", Surface and Coatings Technology, 153/2-3, (2003), 148:154. DOI: 10.1016/S0257-8972(01)01692-9

[A.6] Erkens G., Cremer R., Hamoudi T., Bouzakis K.-D., Mirisidis I., Hadjiyiannis S., Skordaris G., Asimakopoulos A., Kombogiannis S., Anastopoulos J., Efstathiou K., "*Properties and performance of high aluminum containing (Ti,Al)N based supernitride coatings in innovative cutting applications*", Surface and Coatings Technology, 177-178, (2004), 727:734. DOI: 10.1016/j.surfcoat.2003.08.013

[A.7] K.-D. Bouzakis, D. Sagris, S. Kombogiannis, T. Papaefthimiou, V. Cambanis, A. Chatzinas, A. Linder, "*Newly constructed basement reduces vibrations*", ZKG International, 65/5, (2012), 62:69.

[A.8] Bouzakis K.D., Makrimallakis S., Skordaris G., Bouzakis E., Kombogiannis S., Katirtzoglou G., Maliaris G., "*Coated tools' performance in up and down milling stainless steel, explained by film mechanical and fatigue properties*", Wear, Vol. 303/1-2, (2013), 546:559. DOI: 10.1016/j.wear.2013.04.014

[A.9] Bouzakis K.-D., Bouzakis E., Kombogiannis S., Paraskevopoulou R., Skordaris G., Makrimallakis S., Katirtzoglou G., Pappa M., Gerardis S., MSaoubi R., Andersson J.M., "*Effect of silicon content on PVD film mechanical properties and cutting performance of coated cemented carbide inserts*", Surface and Coatings Technology, 237, (2013), 379:389. DOI: 10.1016/j.surfcoat.2013.06.044

[A.10] Michailidis, N., Kombogiannis, S., Charalampous, P., Maliaris, G., Stergioudi, F., "*Computational-experimental investigation of milling porous aluminium*", CIRP Annals - Manufacturing Technology, 66 (1), (2017), pp.121-124. DOI: 10.1016/j.cirp.2017.04.022

Other Activities - Interests

Membership Member of Technical Chamber of Greece (TEE) since 1996.
Elected member of General Assembly of Technical Chamber of Greece 04/2010-11/2013

Computing Programming languages
Interested in developing scientific applications for engineering calculations. Graphics design and photography digital processing.

Photography Landscape, technical, street and portrait. Analog photography, including development and printing B/W, C-41 and E-6, for more than 25 years.

Sports Hiking, Jogging

Literature Reading novels and poetry

References

These persons are familiar with my professional qualifications and my character:

Professor Nikolaos Michailidis
School of Mechanical Engineering
Design and Structures Department
Physical Metallurgy Laboratory
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Web: http://pml.meng.auth.gr/gr/Index.html

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