



Europass Curriculum Vitae

Personal information

First name(s) / Surname(s) **Andreas Tjirkallis**
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Nationality Cypriot / British
Date of birth 26/03/1979
Gender Male

Education and training

Dates Jan 2007 – Nov 2013
Title of qualification awarded **PhD in Mechanical Engineering**
Name of awarding institution **UNIVERSITY OF CYPRUS**
Key features Continuous Structural Health Monitoring under varying environmental and operational conditions using Wavelet Transform Modulus Maxima decay lines similarity

Dates Oct 2000 – June 2003
Title of qualification awarded **Bachelor Degree, BEng (Honours) in Mechanical Engineering**
Name of awarding institution **IMPERIAL COLLEGE, LONDON UNIVERSITY**
Key features Subjects covered Vibration and Dynamics, Advanced Dynamics (3D), Computer Controlled Systems, Materials, Stress Analysis, Manufacturing and Workshop Skills, Fracture Mechanics, Fluid Mechanics, Heat Transfer, Thermodynamics, Computer Aided Design (Solidwors, AutoCAD, etc), Electrical & Electronic Engineering, Computational Continuum Mechanics (FEA & CFD), Computing (C++, Matlab), Modelling and Realism, Interfacing and Data Processing, Management and Accounting.

Dates Dec 2003 – Oct 2004
Title of qualification awarded **Professional Development University Certificate in Forensic Road Accident Investigation**
Name of awarding institution **DE MONTFORT UNIVERSITY, LEICESTER**
Key features Subjects cover the principles of mathematics, physics and at-scene experience in carrying out Road Accident Investigation and Reconstructions

Dates Sep 1991 – June 1998
Title of qualification awarded **High School Diploma – 5 GCE A-Levels**
Name of awarding institution **THE ENGLISH SCHOOL NICOSIA, CYPRUS**
Key features 5 GCE A-Levels with grade A, subjects: Mathematics, Physics, Chemistry, Graphical-Communication and Modern Greeks

Work experience

Name and address of employer **GT ENGINEERING CONSULTANTS**
Type of business or sector Enterprise in the field of Mechanical & Automotive Engineering

Dates January 2013 – today
Occupation or position held **CEO GT ENGINEERS Group (ACE R&D)**
Main activities and responsibilities Chief Executive Officer responsible for managing GT ENGINEERS Group (ACE R&D, GEORGE TJIRKALLIS & SONS LTD), a group operating in the field of Mechanical & Automotive Engineering Sector, including Consultancy and Vocational Training.

Dates	October 2004 – January 2013
Occupation or position held	Mechanical - Automotive Engineer – Training Center Director
Main activities and responsibilities	Mechanical & Automotive Engineering Consultant for Municipalities and Private Organisations in Cyprus, Teltonika, Lithuania and EuropeGas, Poland. Qualified Expert for Energy Performance Certificates. Vocational Training Instructor for Professional Technicians, Vehicle Roadworthiness Inspectors, Professional Drivers, Dangerous Goods Transportation, Machinery Operators and Health and Safety Courses.
Name and address of employer	<u>UNIVERSITY OF CYPRUS</u>
Type of business or sector	University, Academic Research
Occupation or position held	Teaching and Research Assistant/Special Scientist - Interdepartmental Postgraduate Programme «Energy Technologies and Sustainable Design»
Dates	September 2023 – today
	Teaching Courses of Advanced Capstone design project
Dates	September 2016 – June 2019 / September 2021 – today
Occupation or position held	Teaching and Research Assistant/Special Scientist – Department of Mechanical & Manufacturing Engineering
Main activities and responsibilities	Teaching Mechanical Engineering courses - Dynamics, Stress Analysis, Signal Processing, Internal Combustion Engines, Heat Transfer, Mechatronics, HVAC, Experimental & Statistical analysis. Design and supervise the development of engineering laboratory courses (lab equipment & experimental exercises)
Dates	January 2006 – March 2009
Occupation or position held	Scientific Collaborator and Assistant Instructor
Main activities and responsibilities	Assistant Instructor in the fields of Mechanical Vibrations, Computer Controlled Systems and Mechatronics. Research in the field of Mechanical Vibrations and Signal/Image Processing.
Dates	July 2005 – January 2006
Occupation or position held	Laboratory Technician – Instructor
Main activities and responsibilities	Setting up and operating Engineering Machines/equipment, Electrical/Electronic and Computational Systems in the Laboratories of the University. Teaching of Laboratory sessions for Undergraduate students.
Name and address of employer	<u>FREDERICK UNIVERSITY</u>
Type of business or sector	University, Academic Research
Dates	September 2019 – June 2021
Occupation or position held	Visiting Lecturer - Department of Mechanical and Automotive Engineering
Main activities and responsibilities	Teaching Mechanical and Automotive Engineering courses – Mechatronics and Control Systems Research in the field of mechatronics
Dates	January 2014 – January 2015
Occupation or position held	Visiting Lecturer - Department of Mechanical and Automotive Engineering
Main activities and responsibilities	Teaching courses of Engineering Drawing, Computer Aided Design (AutoCAD, SolidWorks), HVAC, Control and Vehicle Technology for the Departments of Mechanical & Automotive Engineering
Dates	September 2009 – December 2013
Occupation or position held	Special Teaching Staff - Department of Mechanical and Automotive Engineering
Main activities and responsibilities	Teaching courses of Engineering Drawing, Computer Aided Design (AutoCAD, SolidWorks), HVAC, Control and Vehicle Technology for the Departments of Mechanical & Automotive Engineering
Consultancy	Mechanical Engineer Consultant in Governmental/Public Sector Organisations Strovolos Municipality, Aglantzia Municipality, Engomi Municipality, Dali Municipality, Latsia Municipality, Germasogia Municipality, Mesa Geitonia Municipality, Water Development Department (WDD), Water Board Nicosia (WDN), Department of Secondary Technical, Vocational Education and Training, Cyprus Ministry of Education, Sport and Youth

Personal skills and competences

Mother tongue(s)

Other language(s)

Self-assessment

European level ()***English****Greek**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user

(*) [Common European Framework of Reference for Languages](#)**Computer skills and competences**

Competent with MS-DOS, Windows 11, Pascal, C++, Python, Matlab, Octave, LabView, AutoCAD, Solidworks, Ecotect, Designbuilder, Corel Draw, PhotoShop, Virtual Crash, Microsoft Office (Excel, Access, Word), Latex.

Further Studies

Managing Workplace Mental Health and Wellbeing, European Bank for Reconstruction and Development, 2023

Road Safety Engineering, European Bank for Reconstruction and Development, 2023

Home Automation – Smart Home, Alison, 2023

Diploma in Manufacturing and Product Design, Alison, 2015

Professional Organisations

Member of the Cyprus Scientific and Technical Chamber (E TEK)

Registered Mechanical and Automotive Engineering Expert of E TEK.

Cyprus Human Resource Authority (AnAD) Mechanical Engineering External Examiner.

Dangerous Goods Transport Instructor, approved by the Ministry of Communication & Works.

Sublieutenant, Cyprus National Guard

Awards

City and Guilds Associateship Award in Mechanical Engineering

Manufacturing Technology and Workshop skills award by Imperial College, London University.

Cyprus Human Resource Authority (AnAD) Vocational Trainer/Instructor

Train the Trainer Smart 2 Tachograph, Stoneridge Europe

Dangerous Goods Safety Advisor (DGSA) awarded by the Ministry of Communication & Works.

Qualified Expert in Energy Performance Certification of Residential buildings, Energy Service.

Train the Trainer in Installation, Repair & Maintenance of LPG/CNG systems in Automobiles,

CPC, EuropeGAS.

Research/Professional Projects

Evaluation and Analysis of Analytical Course Syllabus and timetable and recommendations for updating courses for the fields of "Motor Vehicle Technicians – Vehicle Electricians" and "Motor Vehicle Electronics" for the Cyprus Ministry of Education, Sports and Youth, Department of Secondary Technical and Vocational Education and Training, 2021 (Cyprus Ministry of Education)

Damage Detection in Structures using Mechanical Vibration and Optical Measurements (University of Cyprus).

Record, Calculation, Analysis and issue of Energy Performance Certificates (EPC) for a number of residential buildings (GT Engineers).

Abnormal Electrocardiogram (ECG) Signal Identification using Wavelet Transform Modulus Maxima Decay Lines Similarity (ACE R&D).

Nonlinear Vibration Absorption – Energy Sink (University of Cyprus)

Cycle Variability in Lean burn Spark Ignition (SI) Engines (Imperial College, Honda R&D Group)

Highly efficient water pump design and manufacture project (Imperial College)

Notable Publications

Peer-Reviewed Journal Articles

Tjirkallis A., Kyprianou A., Damage Detection under varying environmental and operational conditions using Wavelet Transform Modulus Maxima decay line similarity, *Mechanical Systems and Signal Processing*, 66-67:282-297, 2016.

Tjirkallis A., Kyprianou A., Vessiaris G., Structural Health Monitoring under varying environmental conditions using wavelets, *Key Engineering Materials*, 569-570:1218-1225, 2013.

Book Chapters & Thesis

Tjirkallis A., Kyprianou A., Wavelet Transform Modulus Maxima Decay Lines: Damage Detection in Varying Operating Conditions, *Emerging Design Solutions in Structural Health Monitoring Systems*, Chapter 3, IGI Global Disseminator of Knowledge, October 2015.

Tjirkallis A., Continuous Structural Health Monitoring under varying environmental and operational conditions using Wavelet Transform Modulus Maxima decay lines similarity. PhD Thesis, University of Cyprus, 2013

Tjirkallis A., Hardalupas Y., Taylor AMKP., Cycle Variability in lean burn Spark Ignition Engines, Degree Thesis, Imperial College, London, 2003.

Peer-Reviewed Conference Articles

Kyprianou A., Tjirkallis A., Structural damage detection of a cantilever beam under varying temperature using a collection of time series, 2nd International Conference on Structural Integrity, ICSI 2017, September 2017.

Kyprianou A., Tjirkallis A., Damage Detection in a Cantilever Beam under Different Excitation and Temperature Conditions, International Conference on Noise and Vibration Engineering, August 2016.

Tjirkallis A., Kyprianou A., Damage Detection Under Varying Operating Conditions using a Sequence of Time Responses of a Cantilever Beam, International Conference on Structural Engineering Dynamics, June 2015.

Tjirkallis A., Charalambides A.G., The effect of Biofuel on Exhaust Gas Emissions under non-laboratory conditions, Distres Conference, 2009