Curriculum Vitae

Giorgos Papakokkinos

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The Cyprus Institute - EEWRC
20 Konstantinou Kavafi St.
2121 Aglantzia, P.O.BOX 27456 Nicosia, Cyprus

Education

2021 PhD in Thermal Engineering [Excellent, Cum Laude, UPC special doctoral award]
Computational modeling of adsorption packed bed reactors and solar-driven adsorption cooling systems
Universitat Politècnica de Catalunya – BarcelonaTech (UPC), Barcelona, Spain

2013 Master in Environomical Pathways for Sustainable Energy Systems [2 years, 120 ECTS]
Scholarship granted by the European Union – Double degree awarded individually by:
Universitat Politècnica de Catalunya (UPC), Barcelona, Spain (specialization in Solar Energy)
Royal Institute of Technology (KTH), Stockholm, Sweden

2010 Diploma in Mechanical Engineering [5 years, 300 ECTS, equivalent to BSc & MSc]
Specialization in Energy Engineering
National Technical University of Athens (NTUA), Greece

Professional Experience

03/2024-Present Post-doctoral Research Fellow in Solar Energy Systems
The Cyprus Institute

05/2023-01/2024 Scientific Officer
Research and Innovation Foundation, Cyprus

10/2013-04/2023 Researcher in the field of Heat & Mass Transfer and Thermal Engineering
(including 1-year postdoctoral research stay in Cyprus University of Technology)
Heat and Mass Transfer Technological Center
Universitat Politècnica de Catalunya – BarcelonaTech (UPC), Barcelona, Spain

01/2019-11/2019 Building simulation, bioclimatic analysis and Passivhaus design [28h/w]
Energiehaus Arquitectos, Barcelona, Spain

03/2012-10/2012 Researcher in the field of Thermal storage and Concentrating Solar Power
PROMES laboratory, Centre National de la Recherche Scientifique (CNRS), France

08/2011 Internship: Simulations of a Concentrating Solar Power plant
Electricity Authority of Cyprus

06/2009-08/2009 Internship: Research in the field of Aerostructures
University of Strathclyde, Glasgow, United Kingdom

Honours and Achievements

Spanish government	Margarita Salas postdoctoral grant
BarcelonaTech (UPC)	Special Doctoral Award in Industrial Engineering
Leventis foundation	Doctoral scholarship
European Union	Erasmus Mundus master scholarship

Research experience (project contribution)

While in The Cyprus Institute: INDHEAP - Developing optimal solar systems for industrial heat and power (Horizon Europe) • While in Universitat Politecnica de Catalunya: Economic COgeneration by Efficiently COncentrated SUNlight (Solar ERA-NET) • RIS3CAT Sector emergent INDUSTRIA 4.0 (Catalan regional government) • Advanced numerical algorithms for the improvement of energy efficiency in wind and solar-thermal sectors. Development/adaptation of new computational architectures (Spanish Government) • Multiscale modelling and direct numerical simulation of multiphase flows (Spanish Government) • Retrofitting solutions and services for the enhancement of energy efficiency in public edification (EU 7th Framework Program) • Analysis of mass transfer and phase change phenomena in moist air environments: frosting, defrosting and supersaturated stream mixing (Spanish government) • Numerical simulation and experimental validation of DONPER LC series hermetic reciprocating compressor: to optimize the design, improve the COP and price ratio, and reduce noise (University-Company collaboration) • Thermal storage for concentrating solar power plants (EIT-KIC InnoEnergy) • While in PROMES laboratory (CNRS): OPtimization of a Thermal energy Storage system with integrated Steam Generator (EU 7th Framework Program).

Journal publications

6. A.C. Montenon, G. Papakokkinos, K. Ilia, Quantifying the Shading Effects of a Small-Scale Rooftop-Installed Linear Fresnel Reflector in Cyprus, **Energies**, 17, 3269, 2024

5. J. Castro, J. Farnos, G. Papakokkinos, J. Zheng, S. Torras, A multivariable control strategy based on fuzzy logic interference rule for a solar-driven, direct air-cooled H_2O-LiBr absorption chiller, **Solar Energy,** 274, 112579, 2024

4. G. Papakokkinos, J. Castro, C. Oliet, A. Oliva, Computational investigation of the hexagonal honeycomb adsorption reactor for cooling applications, **Applied Thermal Engineering**, 202, 117807, 2022

3. G. Papakokkinos, J. Castro, R. Capdevila, R. Damle, A comprehensive simulation tool for adsorption-based solar-cooled buildings – Control strategy based on variable cycle duration, **Energy and Buildings**, 231, 110591, 2021

2. J. Castro, J. Farnós, G. Papakokkinos, J. Zheng, C. Oliet, Transient model for the development of an air-cooled LiBr-H_2O absorption chiller based on heat and mass transfer empirical correlations, **Int Journal of Refrigeration**, 120, 406-419, 2020

1. G. Papakokkinos, J. Castro, J. Lopez, A. Oliva, A generalized computational model for the simulation of adsorption packed bed reactors – Parametric study of five reactor geometries for cooling applications, **Applied Energy**, 235, 409-427, 2019

Conference publications

14. G. Papakokkinos, A.C. Montenon, P. Petrou, M. Papadimitriou, Synergy between biogas and concentrating solar thermal – case study of a dairy industry in Cyprus, **SyNERGY MED - 3rd Int. Conference on Energy Transition in the Mediterranean Area**, 10/2024, Limassol, Cyprus

13. G. Papakokkinos, A.C. Montenon, P. Petrou, M. Papadimitriou, Concentrating solar thermal energy as a substitute of fossil fuels in dairy industry, **Climate Crisis in the Eastern Mediterranean and Middle East** conference, 09/2024, Larnaca, Cyprus

12. G. Papakokkinos, J. Castro, J. Rigola, C.D. Perez-Segarra, C. Oliet, Waste heat and water recovery for an industrial dryer by employing an absorption heat pump, **International Congress of Refrigeration,** 08/2023, Paris, France

11. J. Zheng, J. Castro, G. Papakokkinos, A. Oliva, Sensitivity study to an absorption system performance considering heat and mass transfer enhancements, **International Refrigeration and Air Conditioning Conference**, 09/2022, Purdue, USA

10. J. Farnós, J. Castro, G. Papakokkinos, A. Oliva, Control strategy approach based on the operational results of a small capacity direct air-cooled LiBr-water absorption chiller, **ISES Solar World Congress**, 10/2017, Abu Dhabi, UAE

9. G. Papakokkinos, R. Capdevila, J. Farnós, J. Castro, A. Oliva, An integrated simulation tool for solar adsorption chillers and buildings – Control strategy for a solar cooled office in Barcelona, **International Sorption Heat Pump Conference**, 08/2017, Tokyo, Japan

8. G. Papakokkinos, E. Bartrons, J. Farnós, J. Castro, A. Oliva, A computational model based on parallelizable unstructured meshes for the simulation of the conjugate phenomena in the adsorption reactor, **International Sorption Heat Pump Conference**, 08/2017, Tokyo, Japan

7. J. Farnós, G. Papakokkinos, J. Castro, A. Oliva, Dynamic simulation of an air-cooled LiBr-H_2O absorption chiller based on variable heat and mass transfer coefficients, **International Sorption Heat Pump Conference**, 08/2017, Tokyo, Japan

6. J. Farnós, J. Castro, G. Papakokkinos, A. Oliva, Towards industrialization of small capacity direct air-cooled LiBr-H_2O absorption chiller, **Int. Sorption Heat Pump Conference**, 08/2017, Tokyo, Japan

5. E. Bartrons, P. Galione, G. Papakokkinos, C.D. Perez Segarra, Fixed-grid numerical modeling of frost formation, **American Institute of Aeronautics and Astronautics**, 06/2017, Denver, USA

4. J. Farnós, G. Papakokkinos, J. Castro, S. Morales, A. Oliva, Dynamic modelling of an air-cooled LiBr-H_2O absorption chiller based on heat and mass transfer empirical correlations, **International Energy Agency Heat Pump Conference**, 05/2017, Rotterdam, Netherlands

3. J. Rigola, J. López, G. Papakokkinos, O. Lehmkuhl, A. Oliva, Numerical analysis of suction mufflers, **International Compressor Engineering Conference**, 07/2014, Purdue, USA

2. G. Papakokkinos, Q. Falcoz, X. Py, Structured bed thermocline thermal energy storage system using recycled industrial wastes as filler materials, **SolarPaces congress**, 07/2012, Marrakesh, Morocco

1. S. Salehin, T. Larriba, G. Papakokkinos, G. Upadhyay, H. Zhang, E. Bowler, J.M.N. van Kasteren, Design of an Emergency Energy Module for relief camp situations: Case study for a Refugee camp in Chad-Sudan Border, **World Congress of Sustainable Technologies**, 11/2011, London, UK

Training Attended

Object-oriented modeling and simulation of building energy systems with Modelica (3ECTS) [3d, 8/2024]
Aalborg University, Copenhagen, Denmark

Bioclimatic Architecture and Certifications LEED, BREEAM, Passivhaus (20 ECTS) [10/2017-02/2018]
Universitat Politècnica de Catalunya, Barcelona, Spain

Passivhaus designer course (100h) [11/2018]
Energiehaus

Energy Efficiency for Better Buildings (30h, 4 courses specialization) [10/2017-01/2018]
The Institute of Sustainable Energy (EIT - InnoEnergy)

Energy supply projects in rural areas (60h) [2020]
Engineers Without Borders (Spanish branch)

SMA Solar Technology Training Seminars on inverters & PV systems design [1w, 10/2011]
SMA Solar Academy – Niestetal, Germany

Entrepreneurship and Business Management [3w, 06/2011]
Introductory Crash Course in Entrepreneurship [1w, 04/2011]
Scholarship granted by the European Institute of Technology and Innovation – KIC InnoEnergy
ESADE Business School – Barcelona, Spain

Computational skills

Fluent in: Linux, OpenModelica, LaTeX, LibreOffice, MS-Office, Windows, C++ (involved in development of in-house, object-oriented, parallelizable codes for simulations - CFD & multidomain)

Moderate experience with: Matlab, Scilab, Fortran, Python, OpenFOAM, Ansys Fluent/ICEM, COMSOL, ParaView, EnergyPlus (IDF/OpenStudio/DB/Ladybug), PHPP, THERM, genopt, HOMER, SAM-NREL, EES, FMI, Solidworks, Autocad, Rhino, Sketchup, Arduino, GIMP, gnuplot, SciDAVis

Languages

Greek	English	Spanish	Catalan	German
Native speaker	IELTS 7.5 [2010]	DELE Diploma B2 [2013]	CPNL B1 [2015]	Goethe Zertifikat B2 [2008]