

CURRICULUM VITAE

I. Personal data

1.

Family name: Manolakos **Name:** Dimitris

Date of birth: 29/06/1970

Address: 6, Markou Botsari street, 12131 Athens, Greece

Nationality: Greek

Marital status: Married, two children

2. Studies

1994: Diploma of Mechanical engineer

Country: Greece

University: National Technical University of Athens

2006: PhD thesis on Desalination with renewable energy sources

Country: Greece

University: Agricultural University of Athens

3. Work experience

1994-present

Position: Researcher-Project Manager

Organisation: Agricultural University of Athens, Agricultural Engineering Department

4. Research interests and activities

- i) Electricity generation from renewable technologies.
- ii) Sea water desalination with the use of renewable energy sources, water pumping with renewables
- iii) Rural electrification
- iv) Thermal applications and energy efficiency with emphasis in agriculture

II. Research experience

1. Selected publications from congresses and conferences

1.1) G. Papadakis, **D. Manolakos**, S. Kyritsis: **Simulation and Optimisation of Hybrid Energy Systems for electricity production and sea water desalination.**

Fifth National Conference of IST for the renewable sources, Athens Greece 6-8 November 1996, Vol. I, pp. 498-507.

1.2) G. Papadakis, **D. Manolakos**, S. Kyritsis **The photovoltaic-micro-hydro power plant of Donoussa island, Greece**. International Workshop on Decentralised Rural Energy Sources, Solar, Wind, Geothermal Energy, Freising, Germany, 18-21 March 1996.

1.3) G. Papadakis, **D. Manolakos**, S. Kyritsis **Greenhouse design for best solar transmissivity through mathematical modeling and measurements under scale greenhouse models**
AgEng'96 Conference on Agricultural Engineering, Madrid (Spain) 23-26 September 1996

1.4) G. Papadakis, **D. Manolakos**, D. Papantonis, S. Kyritsis **A Simulation-Optimisation Programme for Designing Hybrid Energy Systems Using Pumped Water as Energy Storage for Supplying Electricity and Fresh Water through Desalination to Remote Places**
Mediterranean Conference on Renewable Energy Sources for Water Production, Santorini Greece, 10-12 June 1996, pp. 265-270.

1.5) G. Papadakis, **D. Manolakos**, D. Papantonis, S. Kyritsis **A Stand Alone Photovoltaic Power System for Remote Villages Using of Pumped Water Energy Storage** 2-6 February 1998, Rabat, Morocco Volume 4, pp 165-177

1.6) L. Kalivroussis, **D. Manolakos**, G.Papadakis **Technical and Economic Evaluation of PV Water Pumping Systems Based on a DC-Driven Positive Displacement Pump**
2nd world conference and exhibition on photovoltaic solar energy conversion, Vienna, 6-10 July 1998, Proceedings, vol 3, pp 3186-3189
Citations: 2

1.7) Farkas,I., Buzás,J., Seres,I., Pradescu,M., Bartha,S. Nita,I., Papadakis,G. and **Manolakos,D.:** **Development of a hybrid system for ornamental tree garden and grape farm applications satisfying the energy and water needs**, World Renewable Energy Congress V, 20-25 September 1998, Florence, Italy, (In Four Parts), Edited by: A M Sayigh, Part IV, p. 2239-2242.

1.8) G. Papadakis, **D. Manolakos**, **An Autonomous Small Solar desalination System for Remote Areas**, International Workshop on Desalination Technologies for Small and Medium Size Plants with Limited Environmental Impact, 3-4 December 1998, Rome, Italy.

1.9) **Manolakos D.**, Sooter C., Kalivroussis L., Kyritsis S., **Contribution of Biomass District Heating to Sustainable Regional Development**, 12th European Conference on Biomass for Energy, Industry and Climate Protection, 17-21 June 2002, Amsterdam, The Netherlands, pp 1431-1433

1.10) **D. Manolakos**, G. Makris G. Papadakis and S. Kyritsis, **Autonomous Low-Temperature Solar Rankine Cycle System for Reverse Osmosis Desalination**, Eurosun2004, 20-23 June 2004, Freiburg, Germany pp. 1-453

Citations: 3

1.11) Essam Sh. Mohamed, **D. Manolakos** and P. Soldatos, **Design of an autonomous brackish water reverse osmosis (BWRO) desalination plant powered by photovoltaics and battery bank, a case study for Cyprus**, paper presented at MEDRC International Conference on Desalination Costing., (2004), Limassol, Cyprus.

1.12) G. Kosmadakis, **D. Manolakos**, S. Kyritsis, G. Papadakis and K. Bouzianas, **Design of an autonomous, two stages solar organic Rankine cycle system for reverse osmosis desalination**, **Proceedings of the International Conference on Environmental Management, Engineering, Planning and Economics Skiathos**, June 24-28, Pages:1267-1272

2. Publications in scientific journals with reviewers

2.1) G. Papadakis, **D. Manolakos**, S. Kyritsis **Solar Radiation Transmissivity of a Single-Span Greenhouse through Measurements on Scale Models**. Journal of Agricultural Engineering Res. 71 (1998) 331-338, Article Number: ag980331

Citations: 19

2.2) **D. Manolakos**, G. Papadakis, D. Papantonis, S. Kyritsis **A Simulation-Optimisation Programme for Designing Hybrid Energy Systems for Supplying Electricity and Fresh Water Through Desalination to Remote Areas. Application: The Merssini Village, Donoussa Island, Aegean Sea, Greece**. Energy 26 (2001) 679-704.

Citations: 29

2.3) **D. Manolakos**, G. Papadakis, D. Papantonis, S. Kyritsis **A Stand Alone Photovoltaic Power System for Remote Villages Using Pumped Water Energy Storage**. Energy 29 (2004) 57-69

Citations: 18

2.4) **D. Manolakos**, G. Papadakis, Essam Sh. Mohamed, S. Kyritsis and K. Bouzianas **Design of an Autonomous Low-Temperature Solar Rankine Cycle System for Reverse Osmosis Desalination**. Desalination 183 (2005) 73-80

Citations: 11

2.5) **D. Manolakos**, G. Papadakis, S. Kyritsis, K. Bouzianas **Experimental evaluation of an autonomous low-temperature solar Rankine cycle system for reverse osmosis desalination**. Desalination 203 (2007) 366-374

Citations: 12

2.6) **D. Manolakos**, Essam Sh. Mohamed, I. Karagiannis, G. Papadakis **Technical and economic comparison between PV-RO system and RO-Solar Rankine system. Case study: Thirasia island.** Desalination 221 (2008) 47–69

Citations: 11

2.7) G. Kosmadakis, **D. Manolakos**, S. Kyritsis, G. Papadakis **Comparative thermodynamic study of refrigerants to select the proper to be used in a two-stage Organic Rankine Cycle for RO desalination.** Desalination 243 (2009) 74–94

Citations: 2

2.8) G. Kosmadakis, **D. Manolakos**, S. Kyritsis, G. Papadakis **Design of a two-Stage Organic Rankine Cycle system for reverse osmosis desalination supplied from a steady thermal source.** Desalination 250 (2010) 323–328

2.9) G. Kosmadakis, **D. Manolakos**, S. Kyritsis, G. Papadakis **Simulation of an autonomous, two stage solar organic Rankine cycle system for reverse osmosis desalination.** Desalination and Water Treatment 1 (2009) 114–127.

2.10) **D. Manolakos**, G. Kosmadakis, S. Kyritsis, G. Papadakis **On Site Experimental Evaluation of a Low Temperature Solar Organic Rankine Cycle System for Reverse Osmosis Desalination.** Solar Energy 83 (2009) 646–656.

Citations: 12

2.11) G. Kosmadakis, **D. Manolakos**, S. Kyritsis, G. Papadakis **Economic assessment of a two-stage solar organic Rankine cycle for reverse osmosis desalination.** Renewable Energy 34 (2009) 1579–1586.

Citations: 6

2.12) **D. Manolakos**, G. Kosmadakis, S. Kyritsis, G. Papadakis **Identification of behaviour and evaluation of performance of small scale, low-temperature Organic Rankine Cycle system coupled with a RO desalination unit.** Energy 34 (2009) 767–774

Citations: 6

2.13) G. Kosmadakis, **D. Manolakos**, G. Papadakis **Parametric theoretical study of a two-stage solar organic Rankine cycle for RO desalination.** Renewable Energy 35 (2010) 989–996

Citations: 2

2.14) Sotirios Karellas, Konstantinos Terzis, **Dimitrios Manolakos**, **Investigation of an autonomous hybrid solar thermal ORC–PV RO desalination system. The Chalki island case.** Renewable Energy, Volume 36, Issue 2, February 2011, Pages 583–590

2.15) G. Kosmadakis, **D. Manolakos**, G. Papadakis, **Simulation and economic analysis of a CPV/thermal system coupled with an organic Rankine cycle for increased power generation.** Solar Energy, Volume 85, Issue 2, February 2011, Pages 308–324

3. Research projects

1. Development of a Stand-Alone PV power System for Remote Villages, Making Use of Pumped Water as Energy Storage. An Intelligent Integration of a PV Power System in a Remote Village with Partial Central and Decentral PV Power. R&D project JOULE II, contract No. JOULE2-CT92-0155 funded by EC
2. Hybrid Renewable Energy Systems in Donoussa and La Graciosa Islands, as Prototype Systems for Applying Desalination to Small Villages in Mediterranean Islands and Isolated Coastal Areas, by Using Local Energy Sources for Electricity production. R&D project APAS, contract No. RENA-CT94-0030, funded by EC
3. Theoretical and Experimental Study of Greenhouse Transmissivity in Solar Irradiance as a Function of Greenhouse Geometry, Orientation and Place Latitude. National research project financed by the Ministry of Research and Technology Project No. 9013502)
4. Follow up activities concerning the promotion of hybrid renewable energy technologies in Eastern Europe. INCO-Copernicus project, ICOP-DISS-2148-96, funded by EC
5. Development and Application of a Water Pumping System for Remote Areas Consisted of Photovoltaics (PV) Modules with Inverters Integrated onto the PV Modules and a New Type of Asynchronous Motor. INCO-Copernicus project, ICOP-DISS-2154-96, funded by EC
6. Optimisation of RO Desalination Systems Powered by Renewable Energies. R&D project JOULE III, Contract No. JOR3-CT98-0274, funded by EC
7. Solar Thermally Driven Desalination System with Corrosion Free Collectors and 24-Hours per Day storage. R&D project JOULE III, Contract No. JOR3-CT98-0229, funded by EC
8. Development of an Autonomous Solar Thermally Driven Distillation System. R&D project CRAFT-JOULE III, Contract No. JOE3-CT98-7006, funded by EC
9. Training-Visits in the Field of Photovoltaic Applications. Accompanying measures in INCO-COPERNICUS programme, Contract No. 6.7211-40/I/97-005, funded by EC
10. Contribution of Biomass District Heating to Sustainable Regional Development. ECOS-OUVERTURE project partially financed by ERDF and PHARE funds, Contract No. 99.08.29.012.BG

11. Development of an Autonomous Desalination System, Consisted of a Solar Assisted Heat Pump and a Micro CHP Turbine. CRAFT, Exploratory Award project, partially financed by EC, Contract No. EXAW/CT-2001/02392
12. Development of an Autonomous Biomass-Solar Thermally Driven Distillation System” CRAFT, Co-operative research project, partially financed by EC. CRAF-CT-1999-71227
13. Autonomous desalination system concepts for sea water and brackish water in rural areas with renewable energies – Potentials, Technologies, Field Experience, Socio-technical and Socio-economic impacts – MEDAWATER PROGRAMME - ME8/AIDCO/2001/0515/59610-ADIRA
14. Development of an Autonomous Low-Temperature Solar Rankine Cycle System for Reverse Osmosis Desalination. Cooperative research project COOP-CT2003-507997 (RO-Solar Rankine)
15. Energy 4 Cohesion. Intelligent Energy Europe GRANT AGREEMENT – EIE/05/103/SI2.420018
16. Improvement of organic solar Rankine RO system performance by in depth investigation and assessment of physical and technical parameters strongly affect on. Scientific and Technological cooperation between Greece and US financed by the Greek government. Contract OPS-40d
17. Development and laboratory testing of improved action and Matrix hydro turbines designed by advanced analysis and optimization tools. SP1-Cooperation, Collaborative project. Grant agreement number 211983
18. Regional Networks for the development of a Sustainable Market for Bioenergy in Europe. Contract N°: IEE/09/769/SI2.558258
19. Facilitating energy storage to allow high penetration of intermittent renewable energy. Contract N°: IEE/10/222
20. Development and experimental evaluation of two-stage solar organic Rankine cycle system for RO desalination. Financed by the Greek government Contract No. 09SYN-32-982.

III. Other personal data

- Member of the Technical Bureau of Greece, Member of the CIGR, Member of European Desalination Society.
- Fluent knowledge of English