

# CURRICULUM VITAE THOMAS BARTZANAS

Associate Professor  
Lab of Farm Structures, Director  
Agricultural University of Athens  
Department of Natural Resources Management  
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## INFORMATION

**Nationality:** Greek  
**Birth:** 1973-09-13  
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# 1 EDUCATION

## 1.1 POST GRADUATE

- **PhD** degree in Agricultural Constructions (2004). Title: “Management of Greenhouse High Humidity Levels” University of Thessaly, School of Agricultural Sciences, Volos, Greece.
- **Post Doc** 2015-2016, Aarhus University Denmark, Department of Engineering

## 1.2 UNDER GRADUATE

- **Bachelor’s** degree in Agricultural Sciences (1998). Title: “Types, Equipment. Energetic Evaluation and Potential Energy Saving in the Greenhouses of Magnesia University of Thessaly, School of Agricultural Sciences, Volos, Greece
- Attendance and successfully examined on courses of the undergraduate program of the School of Agriculture, University of Thessaly, corresponded to 120 ECTS

## 1.3 SCHOLARSHIPS

- “General Secretariat for Research and Technology”, 1998-2000, YPER projects, 36 months

## 1.4 IDIOMS

- Greek (Native Language)
- English (Fluently, Proficiency University of Michigan)
- French (Moderate)

# 2 PROFESSIONAL EXPERIENCE

## 2.1 TEACHING

### 2.1.1 COURSES IN HIGHER EDUCATION ORGANISATIONS

- A. Agricultural University of Athens, Department of Natural Resources Management and Agricultural Engineering, Lab of Farm Structures
  - “**Greenhouse and Hydroponics**”, BSc course (course responsible), 2019-
  - “**Hydroponics systems**” BSc course (course responsible), 2019-
  - “**Architectural planning**” BSc course (course responsible), 2019-
- B. Agricultural University of Athens, Department of Crop Production
  - “**Design and Operation of Greenhouses**” MSc course 2019-
- C. University of Thessaly, Faculty of Agriculture, Department of Agriculture Crop Production and Rural Environment as Assistant Professor, Academic year 2008-2009, 2009-2010, 2010-2011

- **“Storage of agricultural products”**, (co-teaching), M.Sc. course
  - **“Storage of agricultural products”**, (co-teaching), B.Sc. course
- D. Technological Education Institute of Larisa, Faculty of Agriculture Department of Biosystems Engineering
- **“Storage buildings”** (course responsible), 3 Academic years: 2004-2006.
  - **“Agricultural Machinery”** (course responsible), 3 Academic years: 2004-2006.
  - **“Storage-Handling of agricultural products”**, (course responsible), 3 Academic years: 2006-2008.
  - **“Mechanical means for transport of agricultural products”**, (course responsible), 3 Academic years: 2006-2008.
  - **“Agricultural Buildings”** (course responsible), 1 Academic year: 2008-2009.
  - **“Environmental control of agricultural buildings”** (course responsible), 2 Academic years 2010 - 2012

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### 2.1.2 LABORATORY COURSES

University of Thessaly, Faculty of Agriculture, Department of Agriculture Crop Production and Rural Environment

- **“Environmental control of greenhouses”**, 3 Academic years: 1999-2002
- **“Energy technologies in agriculture”**, 3 Academic years: 1999-2002
- **“Crop Processing and Storage”**, 2 Academic years: 2006-2008

Agricultural University of Athens, Department of Natural Resources Management and Agricultural Engineering, Lab of Farm Structures

- **“Greenhouse and Hydroponics”** (course responsible), 2019-

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### 2.1.3 SUPERVISING

1. PhD co-supervisor: Sustainable development of green roof systems, 2010- Tsiantou St. main supervisor: C. Kittas, University of Thessaly
2. M.Sc co-supervisor. Effect of two new cover materials on greenhouse energy consumption and cooling load, 2009 A. Tsouknidas, main supervisor: C. Kittas, University of Thessaly
3. B.Sc supervisor. Novel system for storage of agricultural product, 2009, A. Kirtsa, Technical Institution of Larisa
4. B.Sc supervisor. Storage of agricultural product in low oxygen environments, 2010, X. Kokologos, Ksarxas, N., Technical Institution of Larisa
5. B.Sc supervisor. Crop based climate control in greenhouse using the phytomonitoring, 2010, A. Thasaneris, University of Thessaly, Volos, Main supervisor Dr. Nikos Katsoulas
6. Msc co supervisor. Precision agricultural technologies for integrated peach production, 2011. A. Zaxou, University of Thessaly, Volos, Main supervisor Dr. Spyros Fountas

7. Msc co supervisor. Microclimate distribution under shading nets 2012. A. Kandyla, University of Thessaly, Volos
8. Msc co supervisor. Rational use of water in hydroponics crops in high salinity environments 2012. Xrysa Nikolaou, University of Thessaly, Volos
9. Msc co supervisor. Real time management and scheduling of irrigation in greenhouse crops, 2012. P. Papadopoulos, University of Thessaly, Volos
10. PhD external committee evaluator. Wentao Wu “Modelling and reducing gas emissions from naturally ventilated livestock buildings, 2012, University of Aarhus
11. Msc co supervisor. Optimisation of environmental factors for rational salinity control in hydroponic crops, 2013. Zagari Eleni. University of Thessaly, Volos
12. Msc co supervisor. Use of plant monitoring sensors for the development of plant based indicators for rational climate control in greenhouses, 2013. Dermati Kanelli University of Thessaly, Volos
13. PhD co supervisor. Plant based greenhouse climate control. Antonis Tzounis, University of Thessaly, Volos
14. PhD co supervisor. Implementation of Precision Livestock Farming Technologies to Minimize the Environmental Impact of Livestock Installations. Vasileios Anestis, University of Thessaly, Volos
15. PhD co supervisor. Design optimization of livestock buildings with the use of Computational Fluid Dynamics. Michalina Markousi, University of Thessaly, Volos

## 2.2 RESEARCH

### 2.2.1 INSTITUTES

1. INRA, Station de Bioclimatology, Avignon. 15/2/2000 - 15/06/2000, as Invited Researcher. Main collaboration with Dr. Thiery Boulard
2. University of Thessaly, Department of Agriculture Crop Production and Rural environment, Laboratory of Agricultural Constructions and environmental Control, 2004-2007 as Research Fellow . Main collaboration with Prof. Constantinos Kittas
3. Wageningen University, Greenhouse Technology Group. April 2008. Short term research visit. Main collaboration with Dr, Elder van Henten
4. CNRS, Laboratoire de Combustion et Systèmes Réactifs, France Orlean. May 2008. Short term research visit. Main collaboration with Dr, Iskender Gokalp
5. University of Aarhus, Department of Biosystems Engineering, September 2009, as Invited Researcher, Main collaboration with Dr, Claus Sørensen
6. University of Aarhus, Department of Biosystems Engineering, 1/08/2010 – 31/10/2010. Visiting Associate Professor, Main collaboration with Prof. Dionysis Bochtis

7. Seoul National University, College of Life Sciences and Engineering, 1/10/2011 – 31/10/2011 and 1/5/2012-15/5/2012. Short term research visit. Main collaboration with Professor In Bok Lee, in the field of industrial aerodynamics.
8. University of Arizona, Department of Agricultural and Biosystems Engineering, 15/8/2012 – 31/09/2012. Short term research visit. Main collaboration with Professor Murat Kacira, Machine vision and automation in agriculture.
9. Center for Research and Technology-Hellas (CERTH), Institute of Bio-Economy and Agrotechnology (IBO), Research Director
10. Aarhus University, Department of Engineering, Post Doc Researcher
11. Agricultural University of Athens, Associate Professor

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### 2.2.2 PROJECTS

1. 1998. «Determination of the effects of a thermal screen on the energy balance of greenhouse». (Research Committee of University of Thessaly).
2. 1998-2001. «Management of Greenhouse High Humidity Levels» (General Secretariat for Research and Technology of Greece).
3. 2000. «Influence of insects screens on greenhouse ventilation». (Research fellow in INRA, Station de Bioclimatology, France).
4. 2001-2002 «Agriculture and Environment. Summer School for Agriculture Engineers». (European Community under the framework of Altener Programs).
5. 2001-2002. «New Learning Technologies for Agriculture Engineers». (European Community under the framework of Altener Programs).
6. 2003-2004. «Development of UV-absorbing greenhouse covering films aiming to reduce pest and diseases in greenhouses. (General Secretariat for Research and Technology of Greece, PAVET actions).
7. 2004-2006. «Tracing of pesticides in the greenhouse environment» (Ministry of National Education and Religious Affairs of Greece, Pythagoras action).
8. 2006-2008. «Development and optimisation of an innovative, friendly to the environment, system for heating and carrying hydroponics cultivations. (General Secretariat for Research and Technology of Greece, PAVET action).
9. 2006-2008. «Development and evaluation of anti-drop greenhouse covering materials for environmental friendly greenhouses. (General Secretariat for Research and Technology of Greece, PAVET action).

10. 2006-2008. «Production, Standardization, Marking, and Traceability: Innovative Technologies and Methods for the Ensurance of Total Quality in the Production, Packaging, Transport, Storage, and Supply of Food and Beverages. (General Secretariat for Research and Technology of Greece).
11. 2006-2008. «Total Quality in the Production, Packaging, Transport, Storage, and Supply of Food in Thessaly (Thessaly Food). (Research program founded by the General Secretariat for Research and Technology of Greece).
12. 2007-2008. «Investigation of pesticides emission and dispersion from naturally ventilated greenhouse. (Research program founded by the General Secretariat for Research and Technology of Greece, under the bilateral Greek-France programs).
13. 2007-2008. «Energy crops – Production, development and marketing of Biofuels in Greece. (Research program founded by the General Secretariat for Research and Technology of Greece).
14. 2008-2010. «Meeting the challenges of the farm of tomorrow by integrating Farm Management Information Systems to support real-time management decisions and compliance to standards Future Farm». (Research program founded by the European Commission, FP7, KBBE 2007-1-4-05).
15. 2009-2010. Experimental evaluation of new energy saving greenhouse covering materials (Funded by Plastika Kritis S.A).
16. 2010. Numerical optimization of green roof systems. (Research program founded by the General Secretariat for Research and Technology of Greece under the action Vouchers for SMEs).
17. 2010. A simple software for analyzing the thermodynamic behavior of solar systems. (Research program founded by the General Secretariat for Research and Technology of Greece under the action Vouchers for SMEs).
18. 2010-2012. Sustainable use of irrigation water in the Mediterranean region, (Research program founded by the European Commission, FP7, KBBE 2009-1).
19. 2010-2012. Development of an integrated system for monitoring and management of quantity and quality of water resources in rural areas under climate change scenarios. Case study in the lake of Carla. (Research program founded by the General Secretariat for Research and Technology of Greece under the action Cooperation).
20. 2010-2012. Optimisation of greenhouse climate control for salinity control using omic technology. (Research program founded by the General Secretariat for Research and Technology of Greece under the action Cooperation).
21. 2011 – 2013. Smart technologies for controlled environment agriculture. FP7, People, Marie Curie actions, IRSES



22. 2011-2013 Integrated robotic and software platform as a support system for farm level business decisions. (FP7, ERA-NET, ICT AGRI call).
23. 2012-2015. Intelligent crop-based environmental monitoring and control of sustainable greenhouse eco-systems. (General Secretariat for Research and Technology of Greece, Aristeia action).
24. 2012-2015. Reducing the environmental footprint in livestock facilities. (General Secretariat for Research and Technology of Greece, Synergasia action)
25. 2013-2015. Translation network SME support in the animal breeding and horticulture sector- AgroStart. (South East Europe, Interreg)
26. 2013-2015. Smart Integrated Livestock Farming: integrating user-centric & ICT-based decision support platforms (EU, FP7, ICT-Agri-2)
27. 2013-2015. Development of innovative greenhouse films with enhanced durability and applicability. (General Secretariat for Research and Technology of Greece, Synergasia action).
28. 2013-2015. Smart Specialisation Pole for the Region of Thessaly: Research, Innovation, Strategies. (General Secretariat for Research and Technology of Greece, KRHPIS action).
29. 2013-2015. Online Professional Irrigation Scheduling. – OpIris (EU-FP7, KBBE-2013).
30. 2016-2019. Bridging competence infrastructure gaps and speeding up growth and jobs delivery in regions – BRIDGES (Interreg Europe).
31. 2019-2021. Development of carbon nanotube-based wireless gas sensors and applications in stored product protection and food safety (General Secretariat for Research and Technology of Greece,)
32. 2019-2021. Development of a broiler meat production system with reduced environmental impact and antibiotic free (General Secretariat for Research and Technology of Greece)
33. 2020-2022. Enabling Smart Livestock Farming Technologies for Environmental Sustainability using Blockchain (H2020-Era-Gas-ICT AGRI-Susan Joint Call 2018)
34. 2020-2022. Mitigating greenhouse gas emissions from livestock systems. (H2020-Era-Gas-ICT AGRI-Susan Joint Call 2018)
35. 2020-2022. Decision support system for sustainable and GHG optimized milk production in key European areas (H2020-Era-Gas-ICT AGRI-Susan Joint Call 2018)

## 2.3 ADMINISTRATION

1. 2007-2012: Member of the committee for evaluating the equipment of the Center for Research and Technology – Thessaly

2. 2012-today: Head of the AgroTechnology division, Institute for Research and Technology- Thessaly, Center for Research and Technology – Hellas
3. 2012-2013: Member of the Boards of Directors, Center for Research and Technology – Thessaly
4. 2013-today: Member of the Technical Council, Center for Research and Technology – Hellas
5. 2016-2018: Vice Director IBO / CERTH
6. 2019- : Director, Lab of Farm Structures, Agricultural University of Athens

## 3 PUBLICATIONS

### 3.1 THESIS

- [1] **Bartzanas T** (2004). *Management of Greenhouse High Humidity Levels*. Ph.D. Thesis. University of Thessaly, Faculty of Agriculture, Department of Agriculture Crop Production and Rural environment, Greece, 256 pp.
- [2] **Bartzanas T** (1998) *Types, Equipment. Energetic Evaluation and Potential Energy Saving in the Greenhouses of Magnesia*. B.Sc (full 5 years diplome) Thesis, University of Thessaly, Faculty of Agriculture, Department of Agriculture Crop Production and Rural environment, Greece, 90 pp.

### 3.2 PEER REVIEWED JOURNALS

- [3] C.Kittas, **T. Bartzanas**, A. Jaffrin, 2001. Greenhouse evaporative cooling. Measurements and Data Analysis. Transactions of the ASAE, 44(3), 683 - 689.
- [4] **T. Bartzanas**, T. Boulard, C. Kittas, 2002. Numerical simulation of airflow and temperature patterns in a greenhouse equipped with insect-proof screen. Computers and Electronics in Agriculture 34, 207 - 221.
- [5] C.Kittas, T. Boulard, **T. Bartzanas**, N. Katsoulas, M. Mermier, 2002. Influence of an insect screen on greenhouse ventilation. Transactions of the ASAE 45(4), 1083-1090.
- [6] C. Kittas, **T. Bartzanas**, A. Jaffrin, 2003. Temperature Gradients in a Partially Shaded large Greenhouse equipped with Evaporative Cooling Pads. Biosystems Engineering, 85 (1), 87-94.
- [7] **T. Bartzanas**, C. Kittas, 2003. Numerical investigation of the influence of ventilators configuration on greenhouse microclimate. Geotechnical and Scientific Subjects, 14 (4): 14- 23
- [8] **T. Bartzanas** C. Kittas, T. Boulard, 2004. Effect of vent arrangement on windward ventilation of a tunnel greenhouse. Biosystems Engineering 88 (4), 479-490
- [9] **T. Bartzanas**, M. Tchamitchian and C. Kittas, 2005. Influence of the heating method on greenhouse microclimate and energy consumption. Biosystems Engineering, 91 (4), 487-499
- [10] **T. Bartzanas**, N. Katsoulas, C. Kittas, T. Boulard, M. Mermier, 2005. Effect of Vent Configuration and Insect Screen on Greenhouse Microclimate. International Journal of Ventilation, 4 (3), 193-202

- [11] N. Katsoulas, **T. Bartzanas**, T. Boulard, M. Mermier, C. Kittas, 2006. Effect of Vent Openings and Insect Screens on Greenhouse Ventilation. *Biosystems Engineering*, 93 (4), 427-436.
- [12] C. Kittas and **T. Bartzanas**, 2007. Greenhouse Microclimate and Dehumidification Effectiveness under Different Ventilators Configuration. *Energy and Buildings*, 42 (10), 3774- 3784
- [13] **T. Bartzanas**, C. Kittas; A.A Sapounas, Ch. Nikita-Martzopoulou, 2007. Analysis of Airflow through Experimental Rural Buildings: Sensibility to Turbulence Models. *Biosystems Engineering*, 97 (2), 229-239
- [14] A.A. Sapounas, **T. Bartzanas**, C. Nikita – Martzopoulou, C. Kittas, 2008. Aspects of CFD modeling of Fan and Pad Evaporative Cooling System in Greenhouses. *International Journal of Ventilation*, 6 (4): 212-224.
- [15] N. Tadj, **T. Bartzanas**, B .Draoui, G. Theodoridis and C. Kittas, 2008. Convective heat transfer in a tunnel cultivated greenhouse. *International Journal of Applied Engineering Research*, 3(9): 1161-1168
- [16] N. Tadj, **T. Bartzanas**, B. Draoui, C. Kittas, 2008. Experimental and Numerical Investigation of Convective Heat Transfer in a Tunnel Greenhouse. *International Review of Mechanical Engineering*, 2 (6): 872-887
- [17] C. Kittas; N. Katsoulas, **T. Bartzanas**, Marie Mermier, Thiery Boulard, 2009. The impact of insect screens and ventilation openings on the greenhouse microclimate. *Transactions of the ASABE*, 51(6): 2151-2165
- [18] D.K. Papanastasiou, D. Melas, **T. Bartzanas**, C. Kittas, 2009. Temperature, comfort and pollution levels during heat waves and the role of sea breeze. *International Journal of Biometeorology*, 54(3):307-17
- [19] D. Fidaros, C. Baxevanou, **T. Bartzanas**, C. Kittas, 2010. Numerical simulation of thermal behavior of a ventilated arc greenhouse during a solar day, *Renewable Energy*, 35 (7): 1380-1386
- [20] N. Tadj, **T. Bartzanas**, D. Fidaros, B. Draoui, C. Kittas, 2010. Influence of Heating System on Greenhouse Microclimate Distribution, *Transactions of the ASABE*, 53 (1): 225-238
- [21] I.-H. Seo, I.-B. Lee, M.-H. Shin, G.-Y. Lee, H.-S. Hwang, S.-W. Hong, J. P. Bitog, J.-I. Yoo, K.-S. Kwon, Y.-H. Kim, **T. Bartzanas**, 2010. Development of a CFD Model to Predict the Diffusion of Fugitive Dust at the Reclaimed Land. *Transactions of the ASABE*, 53 (3): 891-901
- [22] **T. Bartzanas**, D.D. Bochtis, C.G. Sørensen, A.A Sapounas, 2010. A Numerical Modelling Approach on Biomass Field Drying. *Biosystems Engineering*, 106: 458-469
- [23] D. Bochtis, C.G. Sørensen, O. Green, **T. Bartzanas**, S. Fountas, 2010. Feasibility of a modelling suite for the optimised biomass harvest scheduling. *Biosystems Engineering*, 107 (4): 283-293
- [24] C. Baxevanou, D. Fidaros, **T. Bartzanas**, C. Kittas, 2010. Numerical simulation of solar radiation distribution in a naturally ventilated agricultural building. *CIGR E-Journal*, 12: 3-4: 58-69
- [25] D. Papanastasiou, D. Fidaros, **T. Bartzanas**, C. Kittas, 2011. Monitoring particulate matter levels and climate conditions in a Greek sheep and goat livestock building. *Environmental Monitoring and Assessment*, 183, 285 – 296

- [26] D.Bochtis, C. G. Sørensen, O. Green, **T. Bartzanas**, 2011. A diagnostic System for Improving Biomass Quality Based on a Sensor Network, *Sensors*, 11(5), 4990-5004
- [27] D. Papanastasiou, D. Melas, **T. Bartzanas**, C. Kittas, 2011. Estimation of ozone trend in central Greece based on meteorological adjusted time series. *Environmental Modeling & Assessment*, 17:353–361
- [28] C. Kittas, N. Katsoulas, N. Rigakis, **T. Bartzanas**, E. Kitta, 2012. Microclimate and tomato crop production and quality under shading nets. *Journal for Horticulture Science and Biotechnology*, 87 (1): 7-12
- [29] O. Green, **T. Bartzanas**, M.M. Løkke, O.J. Jørgensen, V. G. Tortajada, D.D. Bochtis, C.G. Sørensen, 2012. Spatial and temporal variation of temperature and oxygen concentration inside silage stacks. *Biosystems Engineering*, 111(2): 155-165
- [30] N. Katsoulas, T. Boulard, N. Tsiropoulos, **T. Bartzanas**, C. Kittas, 2012. Experimental and modelling analysis of pesticides fate from greenhouses: case of pyrimethanil on tomato crop. *Biosystems Engineering*, 113: 195-206
- [31] D.K. Papanastasiou, D. Fidaros, **T. Bartzanas**, C. Kittas, 2013. Impact of urban heat island development on buildings' energy consumption. *Fresenius Environmental Bulletin*, 22(7): 2087-2092
- [32] In-Bok Lee, Se-Woon Hong, Il-Hwan Seo, Jessie P. B. Kyeong-Seok Kwon, **T. Bartzanas**, T. Norton, 2013. The past, present and future of CFD for agro-environmental applications, *Computers and Electronics in Agriculture*, 98: 168-193
- [33] **T. Bartzanas**, M. Kacira, H. Zhu, S. Karmakar, E. Tamimi, N. Katsoulas, In Bok Lee, C. Kittas, 2013. Computational fluid dynamics applications to improve crop production systems. *Computers and Electronics in Agriculture*, 98: 151-167
- [34] **T. Bartzanas**, D.D. Bochtis, O. Green, C.G. Sørensen D. Fidaros, 2013. Prediction of quality parameters for biomass silage: a CFD approach, *Computers and Electronics in Agriculture*, 98: 209-216
- [35] **T. Bartzanas**, D.D. Bochtis, C.G. Sørensen, O. Green, 2013. Moisture content evaluation of forage grass using CFD approach, *Scientia Agricola*, 69(5): 1-8
- [36] B. Bjerg, T. Norton, T. Banhazi, G. Zhang, **T. Bartzanas**, P. Liberati, G. Cascone, I.-B. Lee, A. Marucci, 2013. Modelling of ammonia emissions from naturally ventilated livestock buildings – Part one: Ammonia release modelling. *Biosystems Engineering*, 116(3), 232-245
- [37] B. Bjerg, P. Liberati, A. Marucci, G. Zhang, T. Banhazi, **T. Bartzanas**, G. Cascone, I.-B. Lee, T. Norton, 2013. Modelling of ammonia emissions from naturally ventilated livestock buildings – Part two: Air change modelling. *Biosystems Engineering*, 116(3): 246-258
- [38] B. Bjerg, G. Cascone, I.-B. Lee, **T. Bartzanas**, T. Norton, S.-W. Hong, I-H Seo, T. Banhazi, P. Liberati, A. Marucci, G. Zhang, 2013. Modelling of ammonia emissions from naturally ventilated livestock buildings – Part three: CFD modelling. *Biosystems Engineering*, 116(3): 259-275
- [39] D. K. Papanastasiou, **T. Bartzanas**, P. Panagakis, C. Kittas, 2014. Assessment of a typical sheep barn based on potential seasonal heat-stress of dairy ewes. *Applied Engineering in Agriculture*, 30 (6): 953-959

- [40] N. Katsoulas, D. Savvas, E. Kitta, **T. Bartzanas**, C. Kittas, 2014. Development and evaluation of a model used to automatically control water and nutrient discharge in tomato grown in semi-closed hydroponic systems *Computers and Electronics in Agriculture*, 103:17-25
- [41] D.K. Papanastasiou, **T. Bartzanas**, C. Kittas, 2015. Classification of Potential Sheep Heat-Stress Levels According to the Prevailing Meteorological Conditions, *CIGR e- Journal, Special Issue 57*
- [42] E. Kitta, **T. Bartzanas**, N. Katsoulas, C. Kittas, 2015. Benchmark irrigated under cover agriculture crops. *Agriculture and Agricultural Science Procedia*, 4: 348–355
- [43] N. Rigakis, N. Katsoulas, M. Teitel, **T. Bartzanas**, C. Kittas, 2015. A simple model for ventilation rate determination in screenhouses, *Energy and Buildings*, 87: 293-301.
- [44] S. Akdemir and **T. Bartzanas**, 2015. Numerical modelling and experimental validation of a cold store ambient factors, *Tarim Bilimleri Dergisi*, 21 (4): 606-619
- [45] D.K. Papanastasiou, **T. Bartzanas**, P. Panagakis, G. Zhang, C. Kittas, 2016. Study of heat-stress levels in naturally ventilated sheep barns during heat waves: development and assessment of regression models. *International Journal of Biometeorology*, 60:1637–1644
- [46] I. Giannenas, A. Karamoutsios, **T. Bartzanas**, A. Tsinas, A. Tzora, I. Skoufos, 2016. Oregano and Sage essential oils improve antioxidant status of raw and cooked breast and thigh chicken meat. *Agro FOOD Industry Hi Tech* 27(4): 10-13
- [47] I. Skoufos, I. Giannenas, D. Tontis, **T. Bartzanas**, C. Kittas, P. Panagakis & A. Tzora, 2016. Effects of oregano essential oil and attapulgit on growth performance intestinal microbiota and morphometry in broilers, *South African Journal of Animal Science*, 46: 77-88
- [48] C.A. Baxevanou, D.K. Fidaros, D.K. Papanastasiou **T. Bartzanas**, C.Kittas, 2017. Numerical simulation of flow and transport phenomena in a livestock building, *Environmental Engineering and Management*, 16:2513-2522
- [49] A. Elvanidi et al. , N. Katsoulas, **T. Bartzanas**, K.P. Ferentinos, C. Kittas, 2017. Crop water status assessment in controlled environment using crop reflectance and temperature measurements. *Precision Agriculture*, 18: 332-349
- [50] N. Katsoulas, D. Antoniadis, I. Tsirogiannis, E. Labraki, **T. Bartzanas**, C. Kittas, 2017. Microclimatic effects of planted hydroponic structures in urban environment: measurements and simulations. *International Journal of Biometeorology*, 61: 943-956
- [51] K.P. Ferentinos, N. Katsoulas, A. Tzounis, **T. Bartzanas**, C. Kittas, 2017. Wireless sensor networks for greenhouse climate and plant condition assessment. *Biosystems Engineering*, 153, 70-81.
- [52] I. Giannenas et al. , E. Bonos, V. Anestis, G. Filioussis, D. K. Papanastasiou, T. Bartzanas, N. Papaioannou, A. Tzora, I. Skoufos, 2017. Effects of Protease Addition and Replacement of Soybean Meal by Corn Gluten Meal on the Growth of Broilers and on the Environmental Performances of a Broiler Production System in Greece. *PLoS ONE* 12(1): e0169511. doi:10.1371/journal.pone.0169511
- [53] A. Tzora, I. Giannenas, N. Papaioannou, D. Papanastasiou, E. Bonos, S. Skoufos, T. Bartzanas,,I. Skoufos, 2017. Effects of Oregano, Attapulgit, Benzoic Acid and their Blend on Chicken Performance, Intestinal Microbiology and Intestinal Morphology, *Journal of Poultry Science*, 54:218-227

- [54] Tzounis, N.Katsoulas, **T. Bartzanas**, C. Kittas, 2017. Internet of Things in agriculture, recent advances and future challenges. *Biosystems Engineering*, 164:31-48
- [55] Fidaros, C. Baxevanou, A. Tsangarasoulis, T. Bartzanas, C. Kittas, 2017. Bioclimatic Reformation of Urban Area – A CFD Stud. *Procedia Environmental Sciences* 38: 586-594
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- [222] **T. Bartzanas**, E. Kitta, N. Katsoulas, A. Baille, 2011. Assessment of climate distribution under screenhouses. National Conference of Horticulture Science, Cyprus, November, 2011.
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- [226] Papanastasiou D.K., **Bartzanas T.**, Panagakis P., Kittas C., «Seasonal variation of potential sheep heat-stress conditions inside a naturally ventilated barn. 8th National Conference of Greek Agriculture Engineering Society, 25-26 September, Volos, Greece, pp. 451 – 455
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- [229] **T. Bartzanas**, N. Katsoulas, C. Kittas, 2013. Use of agriculture residuals for heating of rural buidlings: application to greenhouse heating. Workshop for innovative methods for integrated use of agricultural residuals and by-products, CERTH conference center, 19-21 November 2013, Thessaloniki, Greece
- [230] D.Fidaros, C.Baxevanou, A.Tsagrasoulis, **T. Bartzanas** and C.Kittas, 2014. Simulation of transport phenomena in urban area, 10th National Conference for Renewable Energy Sources, Thessaloniki, 26-27 November 2014
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- [232] M. Marcousi, D.Fidaros, C.Baxevanou, D. Papanastasiou, **T. Bartzanas** and C.Kittas, 2014. Numerical simulation of 3-D flow patterns in anisotropic topografies. 10th National Conference for Renewable Energy Sources, Thessaloniki, 26-27 November 2014
- [233] C. Baxevanou, D. Fidaros, **T. Bartzanas**, I. Skoufos, P. Panagakis C. Kittas, 2015. Energy consumption in broiler poultries – Energy audit protocol. 5th National Conference for Animal Technology, 30-31 January, Thessaloniki, Greece
- [234] D. Fidaros, C. Baxevanou, **T. Bartzanas**, I. Skoufos, P. Panagakis C. Kittas. Development and Validation of calculating tool for the assessment of poultries Energy Performance. 5th National Conference for Animal Technology, 30-31 January 2015, Thessaloniki, Greece
- [235] D.K. Papanastasiou, M. Frantzis, P. Panagakis, I. Skoufos, **T. Bartzanas**, A. Tzora, S. Skoufos, C. Kittas, 2015. Air quality in poultry houses. 5th National Conference for Animal Technology, 30-31 January, Thessaloniki, Greece
- [236] D.K. Papanastasiou, M. Frantzis, I. Skoufos, **T. Bartzanas**, A. Tzora, S. Skoufos, C. Kittas, 2015. Environemntal conditions in a pig house. 5th National Conference for Animal Technology, 30-31 January 2015, Thessaloniki, Greece
- [237] **T. Bartzanas**, 2017. Techniques and technolgies for the production of vegetabels in controlled enviorment. 28th National Conference of Greek Horticulture Society, Thessaloniki, 16-20 October, 2017.
- [238] **T. Bartzanas**, 2017. Precision Livestock Technolgies. 32th Annual Conference of Greek Society of Animal Husbandry, 4-6 October, Larisa.
- [239] **A. Vatsanidou**, T. Bartzanas, N. Katsoulas, 2019. Assessing the sustainability of greenhouse crops using life cycle analysis tools. National Conference of Hellenic Society of Agricultural Engineers, Volos, October 2019
- [240] **T. Bartzanas**, 2019. Applications of Computational Fluid dynamics in Precision crop farming. National Conference of Hellenic Society of Agricultural Engineers, Volos, October 2019
- [241] V. Anestis, A. Vatsanidou. **T. Bartzanas**, C. Kittas., 2019. Carbon footprint of the sheep & goat milk used for industrial feta cheese production in Greece. National Conference of Hellenic Society of Agricultural Engineers, Volos, October 2019

### 3.6 POSTERS

- [242] C. Kittas, G.Papadakis, **T. Bartzanas**. Greenhouse Cooling. 1st National Floricultural Conference, Volos, 27-29 May 1998
- [243] G. Papadakis, C. Kittas, **T. Bartzanas**. Renewable Energy Sources. Possibilities for Implementation in Floriculture. 1st National Floricultural Conference, Volos, 27-29 May 1998
- [244] **T. Bartzanas**, C.Kittas, 2000. Numerical simulation (CFD) of greenhouse heating. Proceedings of 1st Southeastern Europe Fluent Users Group Meeting 20 October 2000, Thessaloniki, S5: 48-53
- [245] **T. Bartzanas**, C. Kittas. Improving greenhouse ventilation efficiency with computational fluid dynamics. 2nd Southeastern Europe Fluent Users Group Meeting, Bucharest 1-2 November 2001, Rumania.
- [246] **T. Bartzanas** and C. Kittas. Numerical simulations and validation of the airflow and temperature distribution in a tunnel greenhouse. 3rd Southeastern Europe Fluent Users Group Meeting, Thessaloniki, 2002.
- [247] C. Kittas, A. Vatsanidou, **T. Bartzanas**, D. Bliatsos. Specialization of National Certification Norms of agriculture production for greenhouse cultivations. Cretacert 2008, 2<sup>nd</sup> International Conference for quality and marketing of agriculture products, Creta, 25- 27 September, 2008, in Greek
- [248] C. Kittas, K. Peponakis, **T. Bartzanas**. Food Technological Platform of Thessaly. Cretacert 2008, Cretacert 2008, 2nd International Conference for quality and marketing of agriculture products, Creta, 25- 27 September, 2008

### 3.7 TECHNICAL GREEK MAGAZINES

- [249] C. Kitas, G. Papadakis, **T. Bartzanas**, 1999. Greenhouse Cooling. Agriculture and Animal Production, v 6, p23-32.
- [250] G. Papadakis, C. Kittas, **T. Bartzanas**. 2001. Implementation of Renewable Energy Sources in Greenhouses. Agriculture Technology, 2: 70-87.
- [251] C. Kittas, **T. Bartzanas**, 2003. Greenhouse Ventilation. Modern Technical Review 136, 56-60.
- [252] C. Kittas, **T. Bartzanas**, N. Katsoulas, 2004. Greenhouse Cooling. Modern Technical Review 144, 24-30.
- [253] C. Kitas, N. Katsoulas, **T. Bartzanas**, 2005. Greenhouse Cooling. Agriculture and Animal Production, v 5, p31-42.
- [254] **T. Bartzanas** and C. Kittas, 2006. Improving greenhouse ventilation openings design using CFD, Agriculture and Animal Production 7:38-45.
- [255] C. Kittas and **T. Bartzanas**, 2009. Food Technology Platform of Thessaly. Agriculture and Animal Production 1:76-78
- [256] C. Kittas, **T. Bartzanas**, N. Katsoulas. Greenhouses in Grece, 2011: Current trends and future perspectives, Agriculture and Animal Production 10:19-28
- [257] N. Katsoulas, **T. Bartzanas**, C. Kittas, 2011. Automation in greenhouses. Agriculture and Animal Production 10:38-45

- [258] N. Katsoulas, **T. Bartzanas**, C. Kittas, 2011 Energy saving and energy saving technologies in greenhouses. Agriculture and Animal Production 10: 54-57

### 3.8 DISSEMINATION

- [259] C. Kittas, **T. Bartzanas**. Greenhouse climate control. Workshop for new technologies for environmental friendly greenhouses, Technological Institution of Larisa, 16 December 2004.
- [260] C. Kittas and **T. Bartzanas**. Possibilities for using biomass resources in greenhouses. Workshop Biofuels and Environment, Technical Chamber of Greece, 28 January 2004
- [261] C. Kittas and **T. Bartzanas**. Use of biomass for greenhouse heating. Workshop of the Biofuels Technology Platform. Karditsa 15 December 2007
- [262] C. Kittas, N. Katsoulas, **T. Bartzanas**, 2008. Novel technologies for sustainable greenhouses. Workshop for the research activities in the University of Thessaly. 23 January 2008
- [263] C. Kittas, N. Katsoulas, **T. Bartzanas**. New technologies for environmental friendly greenhouses. Workshop for sustainable greenhouses in rural areas, 10 May 2008, Filiatra, Greece
- [264] C. Kittas and **T. Bartzanas**. Green Buildings: Influence on building microclimate. Workshop for environment, 5 November 2009 Volos, Greece
- [265] **T. Bartzanas**. Possibilities for RTD support in the SMEs. Workshop in the framework of the 1<sup>st</sup> EU week for innovation and technology, Volos, 3 June 2010
- [266] C. Kittas and **T. Bartzanas**. The role of green roofs and green areas in the reduction of aerial pollution in cities. Workshop of the chamber of Greek Architectures 16 April 2010
- [267] C. Kittas, N. Katsoulas, **T. Bartzanas**. Protected cultivation for sustainable rural development. 2<sup>nd</sup> Regional Conference of Karditsa, 19-21 February 2010, Karditsa
- [268] **T. Bartzanas**. D. K Papanastasiou, D. Fidaros, C. Baxevanou, S. Tsiantou, C. Kittas. Sustainable green roof systems for energy and pollution reduction. Workshop for green roofs systems, Athens 13 May 2010
- [269] C. Kittas, N. Katsoulas, **T. Bartzanas**. Energy and water saving in greenhouse crops. Workshop for greenhouse growers, 24 May 2011, Almyros, Greece.
- [270] C. Kittas, N. Katsoulas, **T. Bartzanas**. New trends In greenhouse construction. Workshop for greenhouse growers, 8 September 2011, Ellasona, Greece.
- [271] **T. Bartzanas**, N. Katsoulas, C. Kittas. An integrated web-based platform for rational water use in irrigated agriculture. Workshop for horticulture industry, 22 March 2012, Vestino,, Greece.
- [272] **T. Bartzanas**. Reducing the environmental footprint livestock industry. Workshop of TEI of Epirus for regional innovation, Arta, 5 April 2013
- [273] **T. Bartzanas**. Agrofood Clusters & Regional Development. 1st Workshop of Transnational Network for SME support in the animal breeding and horticulture sector» Bucharest, Romania 5-7 May 2013
- [274] **T. Bartzanas**. Effective approaches for technology and innovation transfer to SMEs. 3rd Workshop of Transnational Network for SME support in the animal breeding and horticulture sector» Aigio Greece, 4-6 September 2013

- [275] **T. Bartzanas.** Design and development of ifarma: a farm management application for mobile devices. 4th Workshop of Transnational Network for SME support in the animal breeding and horticulture sector» Tirana, Albania, 21-23 October 2013
- [276] **T. Bartzanas.** Effective support approaches to assess entering new markets, meeting European quality standard, promotion of products and facilitate the internationalisation of SMEs. 5th Workshop of Transnational Network for SME support in the animal breeding and horticulture sector» Ruse, Bulgaria, 11-12 Ruse, Bulgaria 2013
- [277] C. Kittas, **T. Bartzanas**, N. Katsoulas, 2014. Greenhouse crops in Greece: Technological trends and needs. Workshop for the competitiveness of Greek Agriculture Sector, Embassy of Netherlands in Greece, 31 March, 2014, Athens, Greece

## 4 INTERNATIONAL RECOGNITION

### 4.1 REVIEWER

#### 4.1.1 JOURNALS

- Journal: **Agriculture and Forest Meteorology**, Elsevier
- Journal: **Biosystems Engineering**, Elsevier
- Journal: **Computers and Electronics in Agriculture**, Elsevier
- Journal: **International Journal of Heat and Mass transfer**, Elsevier
- Journal: **Transactions of the ASABE**, ASABE org
- Journal: **Applied Engineer in Agriculture**, ASABE org
- Journal: **European Journal of Horticulture Science**, German Society for Horticultural Science
- Journal of **Zhejiang University**, Zhejiang University
- Journal: **Agricultural Engineering International: the CIGR Journal**
- Journal: **Solar Energy**, Elsevier
- Journal: **Sensors**, MDPI
- Journal: **Agronomy**
- Journal: **Energy and Buildings**
- Journal of **Cleaner Production**
- **African Journal of Biotechnology**
- **Scientia Agricola**

- **Sustainability Journal**

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#### 4.1.2 CHARMAIN IN CONFERENCES

Acting as chairman in the following conferences / sessions

- 2007: 2nd Palenc Conference and 28th AIVC Conference “Building low energy cooling and advanced ventilation technologies in the 21st century. Session: Natural Ventilation Systems
- 2008: AgEng2008 International Conference on Agricultural Engineering & Industry Exhibition, 23-25 June 2008, Hersonissos Creta, Greece. Προεδρείο στις θεματικές Session:Renewable Energy II
- 2008: AgEng2008 International Conference on Agricultural Engineering & Industry Exhibition, 23-25 June 2008, Hersonissos Creta, Greece. Session: Microclimate in Greenhouses
- 2009: International Symposium on High Technology for Greenhouse Systems GreenSys 2009, Quebec, Canada, 14-19 June 2009. Session: CFD
- 2009: 6th National (Greek) conference of Agricultural Engineers. Session: Numerical Models
- 2011: Advanced technologies and management towards sustainable greenhouse ecosystems-GreenSys2011. Session: CFD
- 2011: Advanced technologies and management towards sustainable greenhouse ecosystems-GreenSys2011. Session: CFD
- 2011: 7th National Conference of Agriculture Engineer, 23-25 November, Athens: Session: Agricultural Constructions – Energy
- 2013: 8th National Conference of Agriculture Engineer, 25-27 September, Volos, Greece: Session: Agricultural Constructions
- 2013: International Symposium «New Technologies for Environment Control, Energy saving and Crop Production in Greenhouses and Plant Factory - GreenSys2013», October 6-10, 2013, Jeju, Korea). Session – CFD
- 2015: 7<sup>th</sup> International Conference for Precision Livestock Farming, 15-18 September, Milano, Italy
- 2016: CIGR - AgEng joint conference, 26 – 29 June, Aarhus, Denmark, Session CFD
- 2017: 8<sup>th</sup> European Conference on Precision Livestock Farming (EC-PLF), Nante, France. Session: Dust and Ventilation for pigs/chickens / Session: Emissions
- 2018: XXX ISHS Conference. Session: Greenhouse Structures

## 4.2 SCIENTIFIC SOCIETIES

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### 4.2.1 BOARD MEMBER

- 2009-2011. Board Member of the Greek agricultural engineering society (**GrAgEng**-Greek Branch of the EuAgEng)
- Member of the management committee in the DairyCare COST action ([www.dairycare.org](http://www.dairycare.org))

- Member of the management committee in the COST action GroupHouseNet
- Member and vice-chair of the management committee in the COST action LivAge (Vice-Chair)

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#### 4.2.2 MEMBER

- **EIP-AGRI**, Member of the Expert Focus Group, Livestock Emissions in Dairy Cattle
- **Animal Task Force**, Representing Greece, CErTH
- **EurAgEng** - European Society of Agricultural Engineers
- **ISHS**, International Society of Horticulture Science (ISHS)

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#### 4.2.3 CHAIR

- **2017-2020, Chair** Hellenic Society of Agricultural Engineers
- **2017-2020. Vice Chair**, representing the research / academia. Greek Food for Life Technological Platform
- **2016-2019, Vice-Chair of COST** action CA 16106 Ammonia and Greenhouse Gases Emissions from Animal Production Buildings
- **2015- CFD WG – ISHS**. Chair of CFD working group under the auspices of International Society of Horticulture Science (ISHS)

#### 4.3 KEYNOTE SPEAKER

- C. Kittas, **T. Bartzanas**, N. Katsoulas, 2009. Greenhouse heating- challenges in the Mediterranean region in light of the increase in fuel prices: a review and current trends in Greece. 19th Agro Mashov Exhibition, Israel Trade Fairs and Convention Center, Tel Aviv, Israel 14-15 January 2009
- C. Kittas, N. Katsoulas, **T. Bartzanas**, 2009. Characterization and analysis of the effects of greenhouse climate control equipment on greenhouse microclimate and crop response, GreenSys 2009, 14-19 June, 2009, Quebec Canada (invited presentation)
- C. Kittas, N. Katsoulas, **T. Bartzanas**, 2011. Effects of greenhouse climate control equipment on greenhouse microclimate and crop response. Protected Horticulture Advances and Innovations, Proceedings of 2011 and 2<sup>nd</sup> High-level International Forum on Protected Horticulture (invited presentation)
- **Bartzanas T.**, Baxevanou K., Fidaros D., Kacira M., Boulard T., Fatnassi H., Bournet P E., Roy J C., Katsoulas N., Kittas C. 2013. The use of User Define Functions in CFD applications in greenhouses. Invited presentation, International Symposium «New Technologies for Environment Control, Energy saving and Crop Production in Greenhouses and Plant Factory - GreenSys2013», October 6-10, 2013, Jeju, Korea).
- **T. Bartzanas**, 2016. Applications of CFD in the horticulture industry. CIGR-AgEng2016, June 2016, Aarhus, Denmark



- **T. Bartzanas**, 2017. Techniques and technologies for the production of vegetables in controlled environment. 28th National Conference of Greek Horticulture Society, Thessaloniki, 16-20 October, 2017.
- **T. Bartzanas**, 2017. Precision Livestock Technologies. 32th Annual Conference of Greek Society of Animal Husbandry, 4-6 October, Larisa.

#### 4.4 CITATIONS, H-INDEX

Source	Total citation	h-index	Last update
Scopus	1444	20	12/12/2019
Google Scholar	2354	23	12/12/2019

#### 4.5 OTHER INTERNATIONAL ACTIVITIES

- Co editor of the special volume for “Soil Engineering” published by Springer under the series “Soil Biology” (<http://www.springer.com/life+sciences/agriculture/book/978-3-642-03680-4>)
- Co-convener and member of the organizing and the scientific committees of the International Conference for Sustainable Greenhouse Systems, (GreenSys2011), June 5-10 2011, Greece, [www.greensys2011.com](http://www.greensys2011.com)
- Organizer of the CFD symposium on GreenSys 2013 conference, Deju island, Korea
- Organizer of the CFD symposium on GreenSys 2015 conference, Evora, Portugal
- Organizer of the CFD symposium on GreenSys 2017 conference, Benijin China