Panagiotis Seferlis

Curriculum Vitae

May 2015

Personal Data

Current position: Associate Professor, Department of Mechanical Engineering, Aristotle University of Thessaloniki. Affiliated Senior Reseracher, Chemical Process and Energy Resources Institute (CPERI)/Centre for Research and Technology – Hellas (CERTH).

Work address: Aristotle University of Thessaloniki, PO Box 484, 55124 Thessaloniki, Greece.

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Field of Research

Systems engineering for process, mechanical, and energy conversion systems. Automatic and advanced control of dynamic systems. Integration of process/systems design and control. Model predictive control. Sensitivity analysis in process optimization. Separation process modeling and design (reactive distillation and absorption – CO_2 capture), polymer production optimization and control, hydrogen production (steam reforming), energy conversion technologies, renewable energy resources.

Education

1990-95 **Ph.D. in Chemical Engineering, McMaster University, Canada.**

1985-90 **Diploma in Chemical Engineering (5 years program).**
Aristotle University of Thessaloniki.

Employment History

2006-15 **Aristotle University of Thessaloniki – Department of Mechanical Engineering**
Associate Professor (2014)
Assistant Professor – Tenured (2010)
Assistant Professor – Tenure track (2006)

2006-15 **Centre for Research and Technology – Hellas – Chemical Process and Energy Resources Institute**
Senior Research Associate – Laboratory of Procees Systems Design and Implementation

1999-06 **Centre for Research and Technology – Hellas – Chemical Process and Energy Resources Institute**
Associate Researcher

1997-99 **Delft University of Technology – Department of Chemical Engineering**
Post doctoral researcher

1996-97 Military service (Hellenic Army Researcher)

1995 **Honeywell Hi-Spec Solutions, Canada**
System simulation analyst

Teaching Experience

2005-14 **Aristotle University of Thessaloniki - Department of Mechanical Engineering**

Courses taught: "*Automatic Control*" – 2005-15

"*Digital Control of Dynamic Systems*" – 2005-15

"*Optimal Control of Dynamic Systems*" – 2007-15

"*Process Design and Optimization*" – 2005-09, 2010-15

"*Experimental Methods in Machine Dynamics*" – 2008-09

Post graduate program: "Advanced Material Technology and Processes"

Master (diploma) Thesis: 12 completed

PhD Supervision: 5

Erasmus Mundus Master's Course "*Turbomachinery Aeromechanics* "

"*Advanced Mechanical Vibrations*" – 2010-15 (with Duke University, USA)

"*Advanced Dynamics and Vibration*" – 2011-15

Aristotle University of Thessaloniki – Department of Mathematics

Post graduate programme in "*Control Theory*"

"*Model Predictive Control*" – 2015

2005-09 **University of Athens – Department of Chemistry**

Post graduate programme in "*Catalysis and its applications*"

"*Design of Catalytic Reactors*" – 2005-2008

2003-05 **Alexandrian Technological Institute of Thessaloniki – Department of Automation**

2009-10 "*Automatic Control Systems II* " – 2003-2004

"*Process Control*" – 2004-2005 and 2009-2010

1997-99 **Delft University of Technology – Department of Chemical Engineering**

Master Thesis Supervision

Research Projects

Employer	Position	Project title – Project details
Funding Agency: European Commission – DG Research		
CPERI/CERTH 2011-14	***Project Coordinator and Principal Investigator***	CAPSOL – Design Technologies for Multi-Scale Innovation and Integration in Post-Combustion CO_2 Capture: From Molecules to Unit Operations and Integrated Plants (FP7-ENERGY-282789-2011) Budget: 523,240 € Partners: University of Manchester UK, Imperial College London UK, ETH Zurich CH, Universitaet Paderborn DE, University of Panonia HU, National Technical University EL, Public Power Corporation. EL, CaO Hellas Macedonian Lime SA EL, Scottish Power UK, Process Design Center NL, J. Montz GmbH DE
CPERI/CERTH 2011-14	***Member of the core scientific team***	COMETHY – Compact Multifuel-Energy To Hydrogen converter (FP7-JTI-FCH-279075-2011) Budget: 413,452 € Partner: Agenzia per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile, IT, Processi Innovativi, IT, Acktar Ltd., IS, Israel

		Institute of Technology, IS, Fraunhofer Institute for Ceramic Technologies and Systems, DE, Università degli Studi di Salerno, IT, Aristotle University of Thessaloniki, EL, University La Sapienza, IT, Energy Research Centre of the Netherlands, NL, GKN Sinter Metals Engineering GmbH, DE, Università Campus Biomedico, IT
CPERI/CERTH 2010-12	***Member of the core scientific team***	2nd generation biofuels in an urban environment - Biofuels-2G LIFE Programme Budget: 550,000 € Partners: Aristotle University, Municipality of Theassaloniki
CPERI/CERTH 2011-14	***Member of the core scientific team***	JORIEW – Improving capacity of Jordanian research in integrated renewable energy and water supply (FP7-INCO-2010-266579) Budget: 30.000 € Partners: Hashemite University, JO, Univ. Western Macedonia, Aalborg University DK, University of Nis, SR, University of Zagreb, HR, Hungarian Science and Technology Foundation, HU
CPERI/CERTH 2005-08	***Project Coordinator and Principal investigator***	ECOPHOS – Waste utilization in phosphoric acid industry through the development of ecologically sustainable and environmentally friendly processes for a wide class of phosphorus-containing products" (FP6-INCO-CT-2005-013359) Budget CPERI/CERTH: 340.000 € Partners: University of Manchester UK, University of Dortmund DE, Polytechnic University of Catalunya ES, Brno University of Technology CZ, Phosphoric Fertilizers Industry S.A. EL, Firth Executives Ltd UK, Mendeleev University of Chemical Technology of Russia RU, IREA Research Centre RU, St Petersburg Institute of Technology RU, Promtrak Ltd RU, South Kazakhstan State University KZ, Sodrughestvo-T Ltd UA
CPERI/CERTH 2002-04	***Project Coordinator and Principal Investigator***	Modeling and Optimization of industrial Absorption Processes" (OPT-ABSO, RTD-G1RD-CT-2001-00649) CERTH/CPERI Budget: 500,000 € Partners: University of Manchester UK, University of Dortmund DE, Delft University of Technology NL, Imperial College London UK, Brno University of Technology CZ, Phosphoric Fertilizers Industry S.A. EL, ESTIA Consultants EL, Process Systems Enterprise Ltd UK.
Funding Agency: General Secreteriat for Research and Technology, Hellenic Ministry of Education		
Technological Educational Institute 2012-14	***Member of the core scientific team***	Design Optimization αnd Control of αn Integrated Fuel Cell System with Application on Vehicular Power Systems (OPT-VIPS)
CPERI/CERTH 2010-13	***Member of the core scientific team***	Hybrid power system for automotion Budget: 52,258 € Partners: Advanced Energy Technologies S.A., Systems Sunlight S.A., HELBIO Ltd, Centre for Renewable Energy Sources
CPERI/CERTH	***Member of the core***	Optimal Energy Management for Autonomous Hybrid Power

2010-13	***scientific team***	Systems Budget: 175,000 € Partners: Systems Sunlight SA, Democritus University of Thrace
CPERI/CERTH 2010-13	***Member of the core scientific team***	Sustainable Diesel Production Budget: 597,213 € Partners: Hellenic Petroleum S.A., National Technical University, Aristotle University
CPERI/CERTH 2006-07	***Member of the core scientific team***	Development of an integrated energy conversion system based on renewable energy sources with simulataneous hydrogen production, storage and utilization Budget: 200,000 € Partners: Systems Sunlight S.A.
CPERI/CERTH 2006-07	***Member of the core scientific team***	Design and construction of a control system for maximum power in a fuel cell Budget: 200,000 € Participating partners: Systems Sunlight S.A.
CPERI/CERTH 2003-05	***Member of the core scientific team***	Power production from methanol reforming and fuel cell technology Budget: 91,712 € Partners: ICE-HT/FORTH, University of Patras, Tropical S.A., Frigoglass S.A., Systems Sunlight S.A.
Aristotle Univesrity of Thessaloniki 2004-06	***Member of the core scientific team***	Bio-oil reforming for thermal and electric energy production
Technological Institute of Thessaloniki 2003-05	***Member of the core scientific team***	Adavcned control system for a pilot plant fluidized catalystic cracking unit Budget: 56,000 €

Scientific Activitities

1 Associate Editor of "*Chemical Product and Process Modeling*" Journal, De Gruyter, 2006-2015.

2 Member of the Editorial Board for "*Chemical Engineering Transactions*", Associazione Italilana di Ingegneria Chimica (AIDIC), 2009-15.

3 Member of the International Scientific Committee for conference series "*Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction – PRES*":
PRES'06 (Prague, Czech Republic, 24-28 August 2006) – PRES'07 (Ischia, Italy, 24-27 June 2007) – PRES'08 (Prague, Czech Republic, 24-28 August 2008) – PRES'09 (Rome, Italy, 10-13 May 2009) – PRES'10 (Prague, Czech Republic, 29 August – 2 September 2010) - PRES'11 (Florence, Italy, 8-11 May 2011) – PRES'12 (Prague, Czech Republic, 25-29 August 2012)

4 Co-chair and President of the International Scientific Committee for conference series "*Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction – PRES*":
PRES'13 (Rhodes, Greece, 29 September – 2 October 2013)

5 Vice President of the International Scientific Committee for conference series "*Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction – PRES*":
PRES'14 (Prague, Czech Republic, 26-29 August 2014), PRES'15 (Kuching, Malaysia, 26-29 August 2015)

6 Member of the International Scientific Committee for conference series: "*International Conference on Chemical & Process Engineering (ICheaP)*":
ICheaP-8 (Ischia, Italy, 24-27 June 2007) – ICheaP-9 (Rome, Italy, 10-13 May 2009) – ICheaP-10 (Florence, Italy, 8-11 May 2011) – ICheaP-11 (Milan, Italy, 2-5 May 2013).

7 Chair of the organizing and scientific committee for conference "*Computer Aided Process Engineering (CAPE) Forum 2008*" co-organized under the auspices of the CAPE Working Party of the European Federation of Chemical Engineers, Thessaloniki, Greece, 7-8 February 2008.

8 Member of the International Scientific Committee for the "*3rd International Conference on Manufacturing Engineering (ICMEN)*", Chalkidiki, Greece, 1-3 October 2008.

9 Member of the International Scientific Committee for "*European Symposium in Computer Aided Process Engineering–12*", The Hague, The Netherlands, 26-29 May 2002, *ESCAPE-21* – Thessaloniki, Greece, 29 May – 1 June 2011.

10 Reviewer in the following scientific journals and conferences:

- *Computers and Chemical Engineering*, Elsevier Science
- *Industrial and Engineering Chemistry Research*, American Chemical Society
- *Chemical Engineering Communications*, Taylor & Francis
- *Chemical Engineering and Processing*, Elsevier Science
- *International Journal of Systems Science*, Taylor & Francis
- *Journal of Process Control*, Elsevier Science
- *Chemical Engineering Science*, Elsevier Science
- *International Journal of Systems Science,* Taylor & Francis
- *Journal of Vibration and Acoustics,* ASME
- *Journal of Vibration and Control,* Sage
- *American Institute of Chemical Engineers Journal,* Wiley
- *Chemical Engineering Research and Design,* Elsevier Science
- *Proceedings of the Institution of Mechanical Engineers, Part K, Journal of Multi-body Dynamics,* IMechE
- *Journal of Cleaner Production*, Elsevier Science
- *Applied Thermal Engineering,* Elsevier Science

Conferences

- *16th IFAC World Control Conference,* International Federation of Automatic Control
- *Foundations on Computer Aided Process Operations,* CACHE
- *European Symposium on Computer Aided Process Engineering 19,* European Federation of Chemical Engineers
- *American Control Conference 2010,* American Automatic Control Council

13 Professional Engineer, since 1990 (AM TEE 59433)

14 Senior member of the American Institute of Chemical Engineers (A.I.Ch.E.), since 1997

15 Horizon 2020 Expert Evaluator

Awards - Scholarships

2011 J. Angelino Best paper award – 1st Seminar on Organic Rankine Cycle Systems, The Netherlands.

1997-99 Scholarship OSPT, The Netherlands

1990-95 McMaster University Scholarship.

1994-93 Shell Canada Scholarship.

1990-94 Differential fee waiver scholarship, Canada.

Publications

Books – Monographs

[B1] Seferlis P., *Collocation Models for Distillation Units and Sensitivity Analysis Studies in Process Optimization*, Ph.D. Thesis, McMaster University, Hamilton, Canada, 1995.

[B2] Voutetakis S., P. Seferlis, F. Stergiopoulos, S. Papadopoulou, D. Ipsakis, C. Ziogou, A.I. Papadopoulos, and C. Elmasides, *Design, Optimization and Control of Power Systems based on Renewable Energy Sources and Hydrogen Production, Storage and Utilization*, Nova Science Publishers Inc, New York, 1-178, 2011.

Editorial Supervision of Collective Volumes

[V1] Papadopoulos A. I., and P. Seferlis, "Process Systems and Material for CO2 Capture", Wiley & Sons, *Planned* 2016.

[V2] Klemes, J. J., and P. Seferlis, Guest Editors, *PRES'14 Special Issue, Applied Thermal Engineering*, Elsevier, 2014.

[V3] Varbanov P., and P. Seferlis, Guest Editors, *PRES'13 Special Issue*, *Clean Technologies and Environmental Policy*, Springer, 2014.

[V4] Varbanov P., Klemes J. Seferlis P., Papadopoulos A. I., and S. Voutetakis, Guest Editors, *Chemical Engineering Transactions*, **35**, AIDIC – Italian Association of Chemical Engineering, (ISBN 978-88-95608-26-6, ISSN 1974-9791), 2013

[V5] Seferlis P., and M.C. Georgiadis Editors, *The Integration of Process Design and Control*, *Computer Aided Chemical Engineering*, **17**, Elsevier Science B.V., Amsterdam, 2004.

Book Chapters in Collective Volumes

1. Chatziagorakis P., C. Elmasides, G. C. Sirakoulis, I. Karafyllidis, I. Andreadis, N. Georgoulas, D. Giaouris, A. I. Papadopoulos, C. Ziogou, D. Ipsakis, S. Papadopoulou, P. Seferlis, F. Stergiopoulos, and S. Voutetakis, "Cellular Automata Model with Game Theory for Power Management of Hybrid Renewable Energy Smart Grids", in Cellular Automata, Lecture Notes in Computer Science, 8751, 248-257, 2014.
2. Papadopoulos A.I., and P. Seferlis, "Automation for a sustainable food industry: computer aided analysis and control engineering methods", in "*Robotics and Automation in the Food Industry: Current and Future Technologies*", D. G. Caldwell Editor, Woodhead Publishing Ltd., 441-486, 2013.
3. Seferlis P., N. Dalaouti, and T. Damartzis, "Efficient Reduced Order Dynamic Modeling of Complex Reactive and Multi-Phase Separation Processes Using Orthogonal Collocation on Finite Elements", στο "Dynamic Process Modeling", M.C. Georgiadis, J.R. Banga, and E.N. Pistikopoulos Eds, Wiley VCH, Berlin, 203-237, 2010.
4. Voutetakis S., F. Stergiopoulos, P. Seferlis, S. Papadopoulou, D. Ipsakis, C. Ziogou, A.I. Papadopoulos, and C. Elmasides, "Design of a Stand-Alone Power System using Renewable Energy Sources and Long-Term Hydrogen

Storage", in "*Handbook of Sustainable Energy*", Lee W.H., and V.G. Cho Editors, Nova Science Publishers Inc, New York, 1-88, 2010.

5. Seferlis P., and S. S. Voutetakis, "Measurement and Process Control for Water and Energy Use in Food Industry", in *Handbook of Water and Energy Management in Food Processing*, Klemes J.J., Smith R., J.-K. Kim Editors, Woodhead-Publishing Ltd, Cambridge, 387-418, 2008.

Publications in Referreed Journals

6. Damartzis T., A. I. Papadopoulos, P. Seferlis, "Process Flowsheet Design Optimization for Various Amine-Based Solvents in Post-Combustion CO2 Capture Plants", *J. Cleaner Production, to appear*, 2015.
7. Giaouris D., A. I. Papadopoulos, P. Seferlis, S. Papadopoulou, and S. Voutetakis, "Adaptive Management of Renewable Energy Smart Grids Using a Power Grand Composite Curves Approach", *Computer Aided Chemical Engineering,* **37**, 2411-2416, 2015.
8. Damartzis T., A. I. Papadopoulos, and P. Seferlis, "An Integrated Framework for Controllability Assessment and Solvent Selection in Post-Combustion CO2 Capture Processes", *Computer Aided Chemical Engineering,* **37**, 1247-1252, 2015.
9. Giaouris D., A. I. Papadopoulos, S. Voutetakis, S. Papadopoulou, and P. Seferlis, "A power grand composite curves approach for analysis and adaptive operation of renewable energy smart grids", *Clean Technologies and Environmental Policy*, 10.1007/s10098-015-0940-y, 2015.
10. Mavrou P., A. I. Papadopoulos, M. Stijepovic, P. Seferlis, P. Linke, and S. Voutetakis, "Novel and conventional working fluid mixtures for solar Rankine cycles: Performance assessment and multi-criteria selection", *Applied Thermal Engineering*, **75**, 384-396, 2015.
11. Seferlis P., and Varbanov P. S., "PRES'13: contribution of process integration and intensification to development of clean technologies", *Clean Technologies and Environmental Policy*, **16**(7), 1227-1228, 2014.
12. Varbanov P. S., and P. Seferlis, "Process innovation through Integration approaches at multiple scales: a perspective", *Clean Technologies and Environmental Policy*, **16**(7), 1229-1234, 2014.
13. Chatziagorakis P., C. Elmasides, G. C. Sirakoulis, I. Karafyllidis, I. Andreadis, N. Georgoulas, D. Giaouris, A. I. Papadopoulos, C. Ziogou, D. Ipsakis, S. Papadopoulou, P. Seferlis, F. Stergiopoulos, and S. Voutetakis, "Application of Neural Networks Solar Radiation Prediction for Hybrid Renewable Energy Systems", Communications in Computer and Information Science, **459**, 133-144, 2014.
14. Liew P. Y., J. J. Klemes, A. Doukelis, N. Zhang, and P. Seferlis, "Identification of Process Integration Options for CO2 Capture in Greek Lignite-Fired Power Plant", *Chemical Engineering Transactions*, **39**, 1447-1452, 2014.
15. Mavrou P., A. I. Papadopoulos, M. Stijepovic, P. Seferlis, P. Linke, and S. Voutetakis, "Assessment of Working Fluid Mixtures for Solar Organic Rankine Cycles", *Chemical Engineering Transactions*, **39**, 283-288, 2014.
16. Papadopoulos A. I., S. Badr, A. Chremos, E. Forte, T. Zarogiannis, P. Seferlis, S. Papadokonstantakis, C. S. Adjiman, A. Galindo, and G. Jackson, "Efficient Screening and Selection of Post-Combustion CO2 Capture Solvents", *Chemical Engineering Transactions*, **39**, 211-216, 2014.
17. Giaouris D., A. I. Papadopoulos, P. Seferlis, S. Papadopoulou, Spyros Voutetakis, F. Stergiopoulos, and C. Elmasides, "Optimum Energy Management in Smart Grids Based on Power Pinch Analysis", *Chemical Engineering Transactions*, **39**, 55-60, 2014.

18. Damartzis T., A. Kouneli, A. I. Papadopoulosa, P. Seferlis, G. Dimitriadis, and G. Vlachopoulos, "Optimal Design of Solvent Based Post Combustion CO2 Capture Processes in Quicklime Plants", *Chemical Engineering Transactions*, **39**, 1327-1332, 2014.

19. Stijepovic M. Z., A. I. Papadopoulos, P. Linke, A. S. Grujicc, and P. Seferlis, "An Exergy Composite Curves Approach for the Design of Optimum Multi-Pressure Organic Rankine Cycle Processes", *Energy*, **69**, 285-298, 2014.

20. Damartzis T., A. I. Papadopoulos, and P. Seferlis, "Optimum Synthesis of Solvent-Based Post-Combustion CO2 Capture Flowsheets through a Generalized Modeling Framework", *Clean Technologies and Environmental Policy*, **16**(7), 1363-1380, 2014.

21. Stijepovic M. Z., A. I. Papadopoulos, P. Linke, A. S. Grujicc, and P. Seferlis, "Design of Multi-pressure Organic Rankine Cycles for Waste Heat Recovery in Site Utility Systems", *Computer Aided Chemical Engineering*, **33**, 109-114, 2014.

22. Kyriakides A. S., L. Rodríguez-García, S. Voutetakis, D. Ipsakis, P. Seferlis, and S. Papadopoulou, "Enhancement of Pure Hydrogen Production Through the Use of a Membrane Reactor", *International Journal of Hydrogen Energy*, **39**, 4749-4760, 2014.

23. Giaouris D., A.I. Papadopoulos, C. Ziogou, D. Ipsakis, S. Voutetakis, S. Papadopoulou, P. Seferlis, F. Stergiopoulos, and C. Elmasides, "Performance investigation of a hybrid renewable power generation and storage system using systemic power management models", *Energy*, **65**, 621-635, 2013.

24. Papadopoulos A.I., M.Z. Stijepovic, P. Linke, P. Seferlis, and S.S. Voutetakis, "Towards Optimum Working Fluid Mixtures for Organic Rankine Cycles using Molecular Design and Sensitivity Analysis", *Industrial and Engineering Chemistry Research*, **52**(34),12116–12133, 2013.

25. Ziogou C., D. Ipsakis, P. Seferlis, S. Bezergianni, S. Papadopoulou, and S. Voutetakis, "Optimal Production of Renewable Hydrogen based on an Efficient Energy Management Strategy", *Energy*, **55**, 58-67, 2013.

26. Tarabsheh A.A., S. Voutetakis, A.I. Papadopoulos, P. Seferlis, I. Etier, and Saraereh O., "Investigation of Temperature Effects in Efficiency Improvements of Non-Uniformly Cooled Photovoltaic Cells", *Chemical Engineering Transactions*, **35**, 1387-1392, 2013.

27. Giaouris D., A.I. Papadopoulos, C. Ziogou, D. Ipsakis, P. Seferlis, S. Papadopoulou, S. Voutetakis, and C. Elmasides, "Optimization of Hybrid Renewable Power Generation Flowsheets Using Generic Structural and Temporal Models", *Chemical Engineering Transactions*, **35**, 115-120, 2013.

28. Ziogou C., D. Ipsakis, P. Seferlis, S. Bezergianni, S. Papadopoulou, and S. Voutetakis, "Performance Assessment and Efficiency of a Renewable Hydrogen Production Station based on a Supervisory Control Methodology", *Chemical Engineering Transactions*, **35**, 163-168, 2013.

29. Kyriakides A.S., D. Ipsakis, S. Voutetakis, S. Papadopoulou, and P. Seferlis, "Modeling and Simulation of a Membrane Reactor for the Low Temperature Methane Steam Reforming", *Chemical Engineering Transactions*, **35**, 109-114, 2013.

30. Ipsakis D., S. Papadopoulou, S. Voutetakis, and P. Seferlis, "Analysis and Implementation of a Plant-Wide Control System for an LPG Reforming-Fuel Cell Power System", *Chemical Engineering Transactions*, **35**, 955-960, 2013.

31. Damartzis T., A.I. Papadopoulos, and P. Seferlis, "Generalized Framework for the Optimal Design of Solvent-based Post-combustion CO_2 Capture Flowsheets", *Chemical Engineering Transactions*, **35**, 1177-1182, 2013.
32. Ved O.V., P. Seferlis, and P.O. Kapustenko, "A multi-level mathematical model of the CO catalytic conversion process", *Chemical Engineering Transactions*, **35**, 691-696, 2013.
33. Papadopoulos A.I., M. Stijepovic, P. Linke, P. Seferlis, and S. Voutetakis, "Molecular Design of Working Fluid Mixtures for Organic Rankine Cycles", *Computer Aided Chemical Engineering*, **32**, 289-294, 2013.
34. Papadopoulos A.I., G. Giannakoudis, P. Seferlis, and S. Voutetakis, "Efficient Design under Uncertainty of Renewable Power Generation Systems using Partitioning and Regression in the Course of Optimization", *Industrial and Engineering Chemistry Research*, **51**(39), 12862-12876, 2012.
35. Ipsakis D., S. Voutetakis, S. Papadopoulou, and P. Seferlis, "Optimal Operability by Design in a Methanol Reforming-PEM Fuel Cell Autonomous Power System", *International Journal of Hydrogen Energy*, **37**, 16697-16710, 2012.
36. Ziogou C., D. Ipsakis, K.G. Tsita, P. Seferlis, S. Bezergianni, S. Papadopoulou, and S. Voutetakis, "A Novel and Flexible Energy Management Strategy with Application in a Hydrolytic Solar Hydrogen Autonomous System", *Chemical Engineering Transactions*, **29**, 1189-1194, 2012.
37. Ipsakis D., S. Voutetakis, S. Papadopoulou, P. Seferlis, C. Elmasides, K. Papadaki, S. Mastrogeorgopoulos, and A. Kyriakides, "Dynamic Modeling and Control of a Steam Reformer-Fuel Cell Power System Operating on LPG for Vehicular Applications", *Chemical Engineering Transactions*, **29**, 49-54, 2012.
38. Seferlis P., I. Stavrakis, and A.I. Papadopoulos, "Homotopy Continuation Solution Method in Nonlinear Model Predictive Control Applications", *Computer Aided Chemical Engineering*, **30**, 1327-1331, 2012.
39. Papadopoulos A.I., M. Stijepovic, P. Linke, P. Seferlis, and S. Voutetakis "Multi-level Design and Selection of Optimum Working Fluids and ORC Systems for Power and Heat Cogeneration from Low Enthalpy Renewable Sources", *Computer Aided Chemical Engineering*, **30**, 66-70, 2012.
40. Ziogou C., D. Ipsakis, C. Elmasides, F. Stergiopoulos, S. Papadopoulou, P. Seferlis, and S. Voutetakis, "Automation Infrastructure and Operation Control Strategy in a Stand-Alone Power System Based on Renewable Energy Sources", *Journal of Power Sources*, **196**, 9488-9499, 2011.
41. Giannakoudis G., A.I. Papadopoulos, P. Seferlis, and S. Voutetakis, "A Data-mining Approach for Efficient Systems Optimization under Uncertainty using Stochastic Search Methods", *Computer Aided Chemical Engineering*, **29**, 311-315, 2011.
42. Bounovas V., A.I. Papadopoulos, P. Seferlis, and S. Voutetakis, "Energy Supply Chain Optimization under Demand Variation and Emission Constraints", *Chemical Engineering Transactions*, **25**, 1043-1048, 2011.
43. Papadopoulos A.I., M. Stijepovic, P. Linke, P. Seferlis, and S. Voutetakis, "Power Generation from Low Enthalpy Geothermal Fields by Design and Selection of Efficient Working Fluids for Organic Rankine Cycles", *Chemical Engineering Transactions*, **21**, 61-66, 2010.
44. Damartzis T., and P. Seferlis, "Optimal of Staged Three Phase Reactive Distillation Columns using Non-Equilibrium and Orthogonal Collocation Models", *Industrial and Engineering Chemistry Research*, **49**(7), 3275-3285, 2010.

45. Giannakoudis G., A.I. Papadopoulos, P. Seferlis, and S. Voutetakis, "Optimal Design and Operation Under Uncertainty of Power Systems Using Renewable Energy Sources and Hydrogen Storage", *International Journal of Hydrogen Energy*, **35**(3), 872-891, 2010.
46. Giannakoudis G., A.I. Papadopoulos, P. Seferlis, and S. Voutetakis, "On the Systematic Design and Optimization under Uncertainty of a Hybrid Power Generation System Using Renewable Energy Sources and Hydrogen Storage", *Computer Aided Chemical Engineering*, **28**, 907-912, 2010.
47. Ouzounidou M., D. Ipsakis, S. Voutetakis, S. Papadopoulou, and P. Seferlis, "A combined methanol autothermal steam reforming and PEM fuel cell pilot plant unit: Experimental and simulation studies", *Energy*, **34**(10), 1733-1743, 2009.
48. Kenig E.Y., and P. Seferlis, "Towards Effective Modeling of Reactive Absorption Units", *Chemical Engineering Progress*, **January**, 65-73, 2009.
49. Papadopoulos A.I., and P. Seferlis, "Generic Modeling, Design and Optimization of Industrial Phosphoric Acid Production Processes", *Chemical Engineering & Processing*, **48**, 493-506, 2009.
50. Ipsakis D., S. Voutetakis, P. Seferlis, F. Stergiopoulos, and C. Elmasides, "Power Management Strategies on a Stand-Alone Power System Using Renewable Energy Sources and Hydrogen Storage", *International Journal of Hydrogen Energy*, **34**(16), 7081-7095, 2009.
51. Papadopoulos A.I., and P. Seferlis, "A framework for solvent selection based on optimum separation process design and controllability properties", *Computer Aided Chemical Engineering*, **26**, 177-182, 2009.
52. Ipsakis D., G. Giannakoudis, A.I. Papadopoulos, P. Seferlis, and S. Voutetakis, "Optimization of a stand-alone power system based on renewable energy sources", *Chemical Engineering Transactions,* **18**, 147-152, 2009.
53. Papadopoulos A.I., and P. Seferlis, "Design of Cost Optimal and Environmentally Conscious Phosphoric Acid Production Processes under Uncertainty", *Chemical Product and Process Modeling*, **3**(1), Article 52, 2008.
54. Ipsakis D., S. Voutetakis, P. Seferlis, F. Stergiopoulos, S. Papadopoulou, and C. Elmasides, "The Effect of the Hysteresis Band on Power Management Strategies in a Stand-Alone Power System Energy", *Energy*, **33**(10), 1537-1550, 2008.
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