CURRICULUM VITAE

Athanassios Nikolakopoulos, CEng, MEng, PhD
National Technical University of Athens
School of Chemical Engineering
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EDUCATION

2002-2006 National Technical University of Athens, School of Chemical Engineering, Greece
Ph.D. in Chemical Engineering

2000-2001 National Technical University of Athens, School of Chemical Engineering, Greece
MEng in Process Design in Chemical Engineering

1996-2000 National Technical University of Athens, School of Chemical Engineering, Greece
BSc in Chemical Engineering

ACADEMIC APPOINTMENTS

2008-present National Technical University of Athens, School of Chemical Engineering, GR
Laboratory Teaching Staff of:
- Process Control
- Advanced Process Control
- Process Design
- Advanced Process Design

2008-2013 Hellenic Military University – Army Academy, Mathematics and Engineering Sector, GR
Lecturer, in Operations Research and Quantitative Methods

2014-pesent National Technical University of Athens, School of Chemical Engineering, GR
Research Fellow

2009-2014 National Technical University of Athens, School of Chemical Engineering, GR
Post-Doctoral Research Associate

2001-2006 National Technical University of Athens, School of Chemical Engineering, GR
Doctoral Researcher

RESEARCH EXPERIENCE

2024 - Horizon 2020 – Project SCENARIOS: Strategies for health protection, pollution control and elimination of next generation refractive organic chemicals from the soil, vadose zone and water

Role: *Senior Researcher* – Development of Multi-objective optimization Machine Learning models for the prediction and optimization of critical to the environment properties of chemical substances

2023-2023 Energy Competence Center https://hecc.gr/ Project: SHIMANAGAN - Safe management of hydrogen injection in the natural gas network

Role: *Senior Researcher* – Design of a Model Predictive Control framework for the hydrogen-enriched natural gas network using the Model Predictive Control approach

2023-2023 Energy Competence Center https://hecc.gr/ Project: ALTFUELS@SHIPTYPES - Assessing the Viability of Alternative Fuels for Ship Propulsion Applications

Role: *Senior Researcher* – Overview of environmental footprint minimization process optimization parameters for marine applications using stochastic multiobjective mathematical programming models and ship routing under uncertainty

2023-2023 RESEARCH – CREATE – INNOVATE project code: T2EDK-01976 project DeSulfur: Advanced nanoporous materials for the deep desulfurization of liquid fuels via adsorption in mild conditions.

Role: *Senior Researcher* – Modeling and optimization of the integrated conventional hydrodesulfurization process with the DeSulfur adsorption-based desulfurization process.

2020 - 2024 Horizon 2020 – Project SABYDOMA – "Safety BY Design Of nanoMAterials - From Lab Manufacture to Governance and Communication: Progressing Up the TRL Ladder"

Role: *Senior Researcher* – Modeling and dynamic simulation of the NPs production process, and development of Model Predictive Control of the Nanoparticle production process.

2019 - 2022 RESEARCH – CREATE – INNOVATE project code: T1EDK-01582 project SOLCEMENT - Use of concentrated solar radiation in the cement industry: Design of a suitable, integrated and low carbon footprint process for limestone calcination

Role: *Senior Researcher* – Modeling, optimization and integration of the solar calcination process within the cement production plant.

2017-2019 "Interreg IPA Cross-border Cooperation Programme Greece-the former Yugoslav Republic of Macedonia 2014-2020", Project SYMBIOSIS - "Symbiotic networks of bio-waste sustainable management"

Role: *Senior Researcher* – Design and Simulation of the biomass processing plants and evaluation of the agro-industrial symbiosis potential of the neighboring rural and urban areas.

2017-2019 Horizon 2020 - Bio-based Industries Joint Technology Initiative (BBI-JTI), Research project - 745719: BIOPEN - "Accelerating and supporting business development of bio-based industries and downstream sectors"

Role: *Senior Researcher* – Development of perspective studies for future bio-processes and bio-products for 5 business sectors of the bio-based industry. The 5 Studies included the evaluation of the overall process feasibility and sustainability for the valorization of bio-based resources with respect to technical and economical criteria and by making use of process simulation and economic evaluation computational tools.

2015-2019 Horizon 2020 - Research and Innovation Framework Programmer, Research project - 641942-2: RESYNTEX - "A new circular economy concept: from textile waste towards chemical and textile industries feedstock"

Role: *Senior Researcher* on the Design of the Waste Textile Chemical and Biochemical Recycling Process that included Process Synthesis, Simulation, Optimization, Integration and Economic Evaluation of the recycling plant.

2013-2018 FP7 Marie Curie European Research project – 607415: RENESENG - "Renewable Systems Engineering in Biorefinery Process Design"

Role: *Senior Researcher – Invited Lecturer* on the development of new methods and tools for the Design of 2nd Generation Biorefinery Processes that included Process Synthesis, Simulation, Optimization, Integration and Economic Evaluation of the Biorefinery plants.

2014-2015 7th European Framework Programme for Research and Technological Development (FP7) Research project - 613870: D Factory - "The Micro Algae Biorefinery"

Role: *Senior Researcher* on the Design of 2nd Generation Algae-refining Processes that included Process Synthesis, Simulation, Optimization, Integration and Economic Evaluation of the refining plants.

2012-2012 «ΑΡΧΙΜΗΔΗΣ ΙΙΙ: ΕΝΙΣΧΥΣΗ ΕΡΕΥΝΗΤΙΚΩΝ ΟΜΑΔΩΝ ΣΤΟ ΤΕΙ ΗΠΕΙΡΟΥ» - Τεχνικές Επιχειρησιακής Έρευνας για τη Διαχείριση Αποθεμάτων – Operations Research Techniques for Inventory Management (ORTIM)

2009-2014 7th European Framework Programme for Research and Technological Development (FP7) Research project - 241566: BIOCORE – "Biocommodity refinery", Process Flowsheeting, Integration and Synthesis for the design of future Biorefineries

Role: *Post-Doctoral Research Associate* on the development and deployment of new methods and tools for the Design of 2nd Generation Lignocellulosic Biorefinery Processes that included Process Synthesis, Flowsheeting/Simulation, Optimization, Integration and Economic Evaluation of the Biorefinery plants.

2002-2005 General Secretariat for Research and Technology (GSRT) - Project -01ED38: "Systems Development for the Forecasting of Sales Volume and Production Planning Using Methodologies of Artificial Intelligence" with the collaboration of FAGE S.A. Dairy food industry.

Role: *Doctoral Research Engineer* – Modeling, Simulation, and Novel Algorithms' development for the Optimization of the dairy product manufacturing processes with respect to product standards, demand fulfillment and cost reduction.

2002-2004 Project THALIS -65117900 – National Technical University of Athens "Solving Mixed Integer and non-Linear Programming Problems using Genetic Algorithms"

Role: *Doctoral Research Engineer* - Development of new Metaheuristic Algorithms for the Solution of Mixed Integer and non-Linear Programming Problems arising in the process industry

2000-2001 National Technical University of Athens, School of Chemical Engineering, GR

Role: *MSc Research Engineer* – MEng Thesis on the Development of Genetic Algorithms for the Optimal Design and Control of Chemical Processes

2000-2001 TITAN S.A. Cement Industry, Athens. Industrial Internship
Mathematical Simulation of the rotating kilns' operation for the production of Portland type cement.

Role: *Junior Researcher* – Development of Mathematical Programming Modelling tool for the simulation of the rotating kilns' operation for the production of Portland type cement and the optimization of the fuel consumption

PUBLICATIONS

Academic Theses

Athanassios Nikolakopoulos, "Metaheuristic Algorithms for the Solution of Non-Linear and Complex Combinatorial Optimization Problems", PhD Thesis, National Technical University of Athens, Department of Chemical Engineering, 2006.

Athanassios Nikolakopoulos, "Application of Genetic Algorithms for the Solution of Production Planning Optimization Problems", Master's Thesis, National Technical University of Athens, Department of Chemical Engineering, 2001.

Journal publications

1. Nikolakopoulos, A., Steriotis, T., Charalambopoulou, G., Karagiannakis, G., Dimitrakis, D., Michalis, V., Katsiotis, M. Reducing carbon emissions in cement production through solarization of the calcination process and thermochemical energy storage (2024) Computers and Chemical Engineering, 180, art. no. 108506, . DOI: 10.1016/j.compchemeng.2023.108506

2. Kardamaki, A., Nikolakopoulos, A., Kavousanakis, M., Doganis, P., Sarimveis, H. A model predictive control framework for the production of functional, safe and sustainable nanomaterials (2023) Computer Aided Chemical Engineering, 52, pp. 1597-1602.

3. Nikolakopoulos, A. Circular economy in the textile and chemical industry: The evolution of the first whole textile waste refinery. (2018) Chemical Fibers International, 68 (4), pp. 170-171.

4. Nikolakopoulos, A., Kokossis, A. Targeting and synthesis of single-impurity total water systems using coordinated transhipment models (2018) Clean Technologies and Environmental Policy, 20 (2), pp. 271-289. Cited 3 times.

5. Nikolakopoulos, A., Kokossis, A. Energy and water integration for the design of sustainable total textile waste refinery (2018) Computer Aided Chemical Engineering, 43, pp. 1493-1498.

6. Barla, F., Nikolakopoulos, A., Kokossisa, A. Design of Circular Economy Plants – The Case of Waste Textiles to Chemicals (2018) Computer Aided Chemical Engineering, 44, pp. 1153-1158.

7. Barla, F., Nikolakopoulos, A., Kokossis, A. Design of Circular Economy Plants – The Case of the Textile Waste Biorefinery (2017) Computer Aided Chemical Engineering, 40, pp. 1933-1938.

8. Nikolakopoulos, A., Ganas, I. Economic model predictive inventory routing and control (2017) Central European Journal of Operations Research, 25 (3), pp. 587-609. Cited 1 time.

9. Nikolakopoulos, A. An economic model predictive approach for inventory routing and control with time windows constraints: Application in the distribution of industrial gases (2016) Chemical Engineering Transactions, 52, pp. 925-930.

10. Nikolakopoulos, A., Faskiotis, D., Kokossis, A. Cascade models for targeting and synthesis of total water networks (2016) Chemical Engineering Transactions, 52, pp. 943-948.

11. Nikolakopoulos, A., Faskiotis, D., Kokossis, A. Integrated Transhipment Models for Synchronous Screening of Treatment Technologies and Targeting of Fresh Water and Recycle Flows (2016) Computer Aided Chemical Engineering, 38, pp. 715-720.

12. Nikolakopoulos, A., Kokossis, A. A problem decomposition approach for developing total water networks in lignocellulosic biorefineries (2017) Process Safety and Environmental Protection, 109, pp. 732-752. Cited 7 times.

13. Nikolakopoulos, A., Kokossis, A. A Mathematical Programming Targeting Method to Select Treatment Technologies Ahead of Design (2015) Computer Aided Chemical Engineering, 37, pp. 1091-1096. Cited 1 time.

14. Koufolioulios, D., Nikolakopoulos, A., Pyrgakis, K., Kokossis, A. A mathematical decomposition for the synthesis and the application of total site analysis on multi-product biorefineries (2014) Computer Aided Chemical Engineering, 34, pp. 549-554. Cited 2 times.

15. Nikolakopoulos, A., Thomaidis, L., Kokossis, A. Mathematical programming shortcut screening models for the design of integrated waste treatment systems (2014) Computer Aided Chemical Engineering, 34, pp. 381-386. Cited 3 times.

16. Nikolakopoulos, A., Karagiannakis, P., Galanis, A., Kokossis, A. A water saving methodology for the efficient development of biorefineries (2012) Computer Aided Chemical Engineering, 30, pp. 7-10. Cited 7 times.

17. Mountraki, A.D., Nikolakopoulos, A., Mlayah, B.B., Kokossis, A.C. BIOCORE- A systems integration paradigm in the real-life development of a lignocellulosic biorefinery (2011) Computer Aided Chemical Engineering, 29, pp. 1381-1385. Cited 6 times.

18. Nikolakopoulos, A., Sarimveis, H. A metaheuristic approach for the sequencing by hybridization problem with positive and negative errors (2008) Engineering Applications of Artificial Intelligence, 21 (2), pp. 247-258. Cited 5 times.

19. Nikolakopoulos, A., Sarimveis, H. A threshold accepting heuristic with intense local search for the solution of special instances of the traveling salesman problem (2007) European Journal of Operational Research, 177 (3), pp. 1911-1929. Cited 18 times.

20. Sarimveis, H., Nikolakopoulos, A. A line up evolutionary algorithm for solving nonlinear constrained optimization problems (2005) Computers and Operations Research, 32 (6), pp. 1499-1514. Cited 39 times.

Book chapters

1. Athanassios Nikolakopoulos. A Metaheuristic Reconstruction Algorithm for Solving Bi-level Vehicle Routing Problems with Backhauls for Army Rapid Fielding. (2015) Operations Research/ Computer Science Interfaces Series, 56, pp. 141-157.

2. Athanassios Nikolakopoulos. Army Rapid Fielding by Optimizing Order Picking Routes in Warehouses with Parallel Aisles – Implementation in a Real Case Study. Journal of Computations & Modelling, vol.3, no.4, 2013, 137-163.

Conference publications

1. Athanassios Nikolakopoulos. The SABYDOMA Safety by Process Control approach for the Production of Safe & Sustainable by Design Nanomaterials. (March 2024) "Advanced (Nano)Materials and Technologies: science, research & innovation for safety and sustainability" Summit 2024 (ANTHOS 2024), Vienna, Austria. video recording (from 0h 47min to 1h 4min), Presentation.

2. Philip Doganis, Argyri Kardamaki, Athanassios Nikolakopoulos, Michalis Kavousanakis, Haralambos Sarimveis. Accomplishing SSBD at Production Through the Safety by Process Control Concept. Topic 1 Methods, Tools, And Technologies for SSBD Purposes. 8th International Conference on Environmental, Health and Safety issues related to Nanomaterials, nanoSAFE'23 and NanoSafety Cluster joint conference, June 5-9, 2023 – Maison Minatec, Grenoble, France

3. Nikolakopoulos, A., Steriotis, T., Charalambopoulou, G., Karagiannakis, G., Dimitrakis, D., Konstandopoulos, A.G., Michalis, V., Katsiotis, M. Solar-aided calcination of limestone: First modeling of the SOLCEMENT process (2022) AIP Conference Proceedings, 2445, art. no. 130007.

4. Nikolakopoulos, A., Steriotis, T., Charalambopoulou, G., Karagiannakis, G., Dimitrakis, D., Konstandopoulos, A.G., Michalis, V., Katsiotis, M. Solar-Aided Limestone Calcination in Tandem with Thermochemical Energy Storage and CO2 Capture. 27th SolarPACES Conference, October 2021, On line event, AIP Conference Proceeding, in press.

5. Nikolakopoulos, A., Steriotis, T., Charalambopoulou, G., Karagiannakis, G., Dimitrakis, D., Konstandopoulos, A.G., Michalis, V., Katsiotis, M. Solar-aided calcination of limestone: First modeling of the SOLCEMENT process 26th SolarPACES Conference, October 2020, On line event. (2022) AIP Conference Proceedings, 2445, art. no. 130007.

6. Athanassios Nikolakopoulos, Theodore Steriotis, Georgia Charalambopoulou, George Karagiannakis, Dimitrios Dimitrakis, Athanasios Konstandopoulos, Vasileios Michalis, Marios Katsiotis. Design and Simulation of Solar-Aided Caclination Process with Thermochemical Energy Storage. Proceedings of the 13th Panhellenic Scientific Conference of Chemical Engineering, Patras, Greece, June 2022.

7. A. Kardamaki, A. Nikolakopoulos, P. Doganis, H. Sarimveis. A Model Predictive Control Framework for the Production of Safe and Functional Nanomaterials. Proceedings of the 13th Panhellenic Scientific Conference of Chemical Engineering, June 2022, Patras, Greece.

8. Kardamaki, Argyri; Nikolakopoulos, Athanassios; Doganis, Philip; Sarimveis, Haralambos Production of Safe and Functional Nanomaterials Introducing the Safety By Process Control Concept. NanoWeek 2022 and NanoCommons Final event, June 2022, Limassol, Cyprus,

9. Philip Doganis, Athanassios Nikolakopoulos, Kejun Wu, Andrew Nelson, Haralambos Sarimveis SABYDOMA Project: Introducing Feedback Control to Safety by Design of Nanomaterials. September 24, 2020 / OpenTox virtual 2020

10. Athanassios Nikolakopoulos. Bio-chemical recycling routes for textile waste – research results and pilot plant development. Circular, bio-based, digital The Keys to Europe's Textile Future Annual Textile ETP Conference, 24-25 April 2019, Brussels, Belgium.

11. Athanassios Nikolakopoulos. Outcomes from Biopen: How to increase market uptake for bio-based products. Workshop on Building Sustainable Value Chains for the Bio-based Industry. February 2019, Max Planck Institute for Polymer Research, Mainz, Germany.

12. A. Nikolakopoulos1, F. Barla, J. F. Devaux, A. Kokossis. A Circular Economy Paradigm for Total Waste Textile Refining. Proceedings of the 12th Panhellenic Scientific Conference of Chemical Engineering, May 2019, Athens, Greece.

13. Nikolakopoulos A., Barla F., Devaux J. F., Kokossis A. Design of integrated total waste textile refineries in the context of circular economy. International Sustainable Production and Consumption Conference, 4-5 October 2018, Manchester UK.

14. F. Barla, A. Nikolakopoulos, A. C. Kokossis. Design of Circular Economy Plants – the Case of the Waste Textiles-to-Chemicals. 13th International Symposium on Process Systems Engineering – PSE 2018, July 2018, San Diego, CA, USA.

15. Athanassios Nikolakopoulos, Antonis Kokossis. Cascade models for the synthesis of total water networks. 11th Panhellenic Scientific Conference of Chemical Engineering, 25-27 May 2017, Thessaloniki, Greece.

16. Athanassios Nikolakopoulos. Time constrained model predictive inventory routing and control in industrial gas distribution systems. 11th Panhellenic Scientific Conference of Chemical Engineering, 25-27 May 2017, Thessaloniki, Greece.

17. Nikolakopoulos, Athanassios, Foteini Barla, and Antonios Kokosis. "Targeting Maximum Energy and Water Efficiencies for the Sustainable Total Textile Waste Refinery." 2017 AIChE Annual Meeting. AIChE, 2017.

18. Athanassios Nikolakopoulos. An economic model predictive approach for inventory routing and control with time windows constraints: Application in the distribution of industrial gases. 22nd International Congress of Chemical and Process Engineering CHISA 2016, 19th Conference on Process Integration, Modelling and Optimization for Energy Saving and Pollution Prevention PRES 2016. 27-31 August 2016, Prague, Czech Republic.

19. Athanassios Nikolakopoulos, Dimitrios Faskiotis, Antonis Kokossis. Cascade models for targeting and synthesis of total water networks. 22nd International Congress of Chemical and Process Engineering CHISA 2016, 19th Conference on Process Integration, Modelling and Optimization for Energy Saving and Pollution Prevention PRES 2016. 27-31 August 2016, Prague, Czech Republic.

20. Nikolakopoulos, A., Kokossis, A. Synthesis and targeting of total water networks using two cascade transhipment models coupled with recycle flows (2016) 22nd International Congress of Chemical and Process Engineering, CHISA 2016 and 19th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, PRES 2016, 2, pp. 953-954.

21. Nikolakopoulos, A. Industrial gases supply chain stabilization using model predictive routing and control of the end-user inventories (2016) 22nd International Congress of Chemical and Process Engineering, CHISA 2016 and 19th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, PRES 2016, 2, pp. 1312-1313.

22. Alkiviadis Stamatopoulos, Athanassios Nikolakopoulos, Charalambos Sarimveis. A model predictive method for routing and inventory control at final consumption points: Application to the distribution of industrial gases. 4th Student Conference EEEE: Operations Research – Challenges and Opportunities Inside Crisis. 17-18 December 2015, Athens, Greece.

23. Athanassios Nikolakopoulos, Ioannis Ganas. Inventory routing and control models for the distribution of industrial gases: A multiperiod deterministic and a dynamical predictive approach (2015) Proceedings of the 13th International Symposium on Operational Research, SOR 2015, pp. 72-78.

24. Athanassios Nikolakopoulos, Antonis Kokossis. A Mathematical Programming Targeting Method to Select Treatment Technologies Ahead of Design. Krist V. Gernaey, Jakob K. Huusom and Rafiqul Gani (Eds.), 12th International Symposium on Process Systems Engineering and 25th European Symposium on Computer Aided Process Engineering. 31 May – 4 June 2015, Copenhagen, Denmark © 2015

25. Athanassios Nikolakopoulos, Antonis Kokossis. Targeting and Design for Minimum Water Consumption in Lignocellulosic Biorefineries. In the 23rd European Biomass Conference and Exhibition Online Proceedings, 1-4 June 2015, Vienna, Austria.

26. Athanassios Nikolakopoulos, George Sykokis and Haralambos Sarimveis. Oder Picking and SKU Assignment Optimization Methods: Case Studies for Rectangular Warehouses. 12th Student Conference on Management Science and Technology. 15 May 2015, EEDE Conference Center, Athens, Conference Proceedings.

27. Athanassios Nikolakopoulos, Antonis Kokossis. Targeting Water Flows and Screening Waste Treatment Technologies Trough Integrated Transhipment Models. 10th Panhellenic Scientific

Conference of Chemical Engineering, 4-6 June 2015, Patra, Greece.

28. Athanassios Nikolakopoulos, Lazarus Thomaidis, Antonis Kokossis. Mathematical Programming Shortcut Screening Models for the Design of Integrated Waste Treatment Systems. Mario Eden, John D. Siirola and Gavin P. Towler (Editors) Proceedings of the 8th International Conference on Foundations of Computer-Aided Process Design – FOCAPD 2014, pp. 381-386.

29. A. Nikolakopoulos, A. Galanis, P. Karagiannakis, A. Kokossis. Computational technologies for the development of water efficient biorefineries. 22nd European Biomass Conference and Exhibition - EU BC&E 2014, 23-26 June 2014, Hamburg, Germany.

30. Dimitrios Koufolioulios, Athanassios Nikolakopoulos, Konstantinos Pyrgakis, Antonis Kokossis. A Mathematical Decomposition for the Synthesis and the Application of Total Site Analysis on Multi-product Biorefineries. In Mario Eden, John D. Siirola and Gavin P. Towler (Editors) Proceedings of the 8th International Conference on Foundations of Computer-Aided Process Design – FOCAPD 2014, pp. 549-554.

31. Athanassios Nikolakopoulos, Alexandros Galanis, Panagiotis Karagiannakis and Antonis Kokossis. An Integrated Targeting and Design Method for Saving Water in 2nd Generation Biorefineries.13AICHE Annual Meeting, 3-8 November 2013, San Francisco, California, USA.

32. A. Nikolakopoulos, A. Galanis, K. Karagiannakis, A. Kokosis. Integrated method for targeting and design for maximum water savings in 2nd generation biorefineries. 9th Panhellenic Scientific Conference of Chemical Engineering, 23-25 May 2013, Athens, Greece.

33. Marinella Tsakalova, Athanassios Nikolakopoulos and Antonis Kokossis. On the systematic synthesis screening and integration of real-life biorefineries. Biorefinery for Food, Fuel and Materials, 7-10 April 2013, Wageningen, Netherlands.

34. Athanassios Nikolakopoulos, Ioannis Ganas, Ioannis Konstantaras, Konstantina Skouri. A Hybrid Metaheuristic-Dynamic Programming Algorithm for Integrated Optimization of Manual Order Picking and Sorting Warehouse Operations, 25th European Conference on Operational Research, 8-11 July 2012, Vilnius, Lithuania.

35. Marinella Tsakalova, Athanassios Nikolakopoulos and Antonis Kokossis. On the systematic synthesis screening and integration of real-life biorefineries. In Conference Proceedings of the 12AIChE - 2012 AIChE Annual Meeting, 28 October – 2 November, 2012, Pittsburgh, Pennsylvania, USA .

36. Athanassios Nikolakopoulos, Ioannis Ganas, Ioannis Konstantaras, Konstantina Skouri A Hybrid Metaheuristic-Dynamic Programming Algorithm for Integrated Optimization of Manual Order Picking and Sorting Warehouse Operations. EURO 2012: 25th European Conference on Operational Research, Jul 8, 2012 - Jul 11, 2012, Vilnius, Lithuania.

37. A. Mountraki, A. Nikolakopoulos, B. Benjelloun Mlayah, Antonis C. Kokossis. BIOCORE– A systems integration paradigm in the real-life development of a lignocellulosic biorefinery. 21st European Symposium on Computer Aided Process Engineering – ESCAPE 21 E.N. Pistikopoulos, M.C. Georgiadis and A.C. Kokossis (Editors), Elsevier B.V. (2011) Chalkidiki, Greece. Conference proceedings, pp. 1381-1385.

38. A.D. Mountraki, A.Nikolakopoulos, B.B.Mlayah, A. C. Kokossis. BIOCORE - Synthesis of Novel and Conventional Biomass Conversion Processes towards the sustainable Biorefinery of the Future. 8th European Congress of Chemical Engineering, Berlin, Germany, (2011). Conference proceedings.

39. Aikaterini D. Mountraki, Athanassios Nikolakopoulos, Konstantinos A. Pyrgakis, Bouchra Benjelloun Mlayah and Antonis C. Kokossis. BIOCORE - On a Paradigm for the Design and Synthesis of Real-Life Biorefineries. AIChE 2011 Annual Meeting - International congress on energy 2011, Conference proceedings.

40. Aikaterini Mountraki, Athanassios Nikolakopoulos, B. Benjelloun Mlayah, Antonis Kokossis, Konstantinos Pyrgakis. Biocore – A Modeling approach for the integrated design and development of a real lignocellulosic biorefinery. 8th Panhellenic Scientific Conference of Chemical Engineering, 26-28 May 2011, Thessaloniki, Greece.

41. Nikolakopoulos A, Sarimveis H. A TSP Formulation of the DNA Sequencing Problem. 2nd Multidisciplinary International Conference on Scheduling: Theory and Applications, N.Y., USA, (2005). Conference proceedings p. 8 - 10.

42. Νικολακόπουλος Α. Σαρίμβεης Χ. (2006). Μεταευρετική Μεθοδολογία Επίλυσης Προβλημάτων Δρομολόγησης Στόλου Οχημάτων με Φορτοεκφόρτωση και Χρονικούς Περιορισμούς. 3ο Φοιτητικό συνέδριο διοικητικής επιστήμης και τεχνολογίας, Ελλάδα, Αθήνα.

43. Nikolakopoulos A, Sarimveis H. A Heuristic Approach to the Vehicle Routing Problem with Time Windows and Simultaneous Pick-up and Delivery. Odysseus 2006, Third International Workshop on Freight Transportation and Logistics, Altea, Spain, (2006). Conference proceedings p. 263 - 266.

Process Simulation Textbooks

1. Athanassios Nikolakopoulos, Antonis Kokossis. Introduction to Chemical Process Simulation with Aspen Plus – Part I. Panepistimiakes Ekdoseis kai Syggrammata of NTUA, 2011, Athens, Greece

2. Athanassios Nikolakopoulos, Antonis Kokossis. Introduction to Chemical Process Simulation with Aspen Plus – Part II. Panepistimiakes Ekdoseis kai Syggrammata of NTUA, 2011, Athens, Greece

Review and editorial services

Scientific Journals:

- Computers and Operations Research - Elsevier
- European Journal of Operational Research - Elsevier
- International Journal of Production Research - Taylor and Francis Online
- International Journal of Systems Science - Taylor and Francis Online
- Applied Mathematical Modelling - Elsevier
- Central European Journal of Operations Research - Springer
- Series Operations Research/ Computer Science (ORCS) - Springer
- RAIRO - Operations Research - EDP Sciences
- International Journal of Systems Science – Taylor and Francis Online

Books:

- Chemical Process: Design and Integration, Wiley

Courses Taught

Undergraduate Courses:

2008 – 2013	Operations Research and Quantitative Methods, Department of Mathematics and Engineering, Hellenic Military Academy
2012 - 2013	Supply Chain Management, Department of Mathematics and Engineering, Hellenic Military Academy

Laboratory Teaching in undergraduate courses:

2010 - present	Chemical Process Design and Plant Analysis – Process Simulation Laboratory in Aspen Plus, School of Chemical Engineering, NTUA
2010 - present	Computational Methods of Analysis and Design - Laboratory in GAMS, Aspen Plus, School of Chemical Engineering, NTUA
2010 - present	Clean Industries and Life Cycle Thinking, School of Chemical Engineering, NTUA
2001 - present	Chemical Process Control – Laboratory in MatLab and Simulink, School of Chemical Engineering, NTUA
2001 - present	Advanced Process Control – Laboratory in MatLab and Simulink, School of Chemical Engineering, NTUA
2010 - present	Operations Research – Laboratory in LINDO, School of Chemical Engineering, NTUA

Co-Supervised Theses

2018	Margarita Charalambous, Systematic methodology for the simultaneous minimization

of water and energy in an industrial network, Master's Thesis, NTUA

2017 Xristos Fakas, Economic model predictive control for combined biological phosphorus and nitrogen removal wastewater treatment processes, Master's Thesis, NTUA

2015 Alkiviadis Stamatopoulos, Methodologies of synchronized optimization of vehicle Fleet routing and inventory control at final consumption points, Master's Thesis, NTUA

2015 Dimitrios Faskiotis, Method for synchronized selection of water-treatment processes and calculation of targets for clean water flows and recycles, Master's Thesis, NTUA

2014 Dimitrios Koufolioulios, A mathematical decomposition for the synthesis and the application of total site analysis on multiproduct biorefineries

2014 George Sykokis, Development of a hybrid algorithm for optimal allocation of products in warehouses, Master's Thesis, NTUA

Honors and awards

2006 Scientific Publication Award from the Thomaidis Foundation for the paper: Computers and Operations Research (2005), 32 (6), pp. 1499-1514.

2008 Scientific Publication Award from the Thomaidis Foundation for the paper: European Journal of Operational Research (2007), 177 (3), pp. 1911-1929.

2009 Scientific Publication Award from the Thomaidis Foundation for the paper: Engineering Applications of Artificial Intelligence (2008), 21 (2), pp. 247-258.

Professional Memberships

2000-present: Member of the Greek Technical Chamber (Chartered engineer)

2001-present: Member of the Greek Association of Chemical Engineers

2017-2019: Member of the American Institute of Chemical Engineers

Language Skills

- Greek (Mother language)
- English
- French
- Italian (Basic command)

Computers Skills

Programming Languages:

- Python
- Fortran

- Visual Basic
- MatLab programming language

Optimization Software

- General Algebraic Modeling System (GAMS)
- LINGO
- LINDO
- Solver Foundation

Mathematical programming modeling languages

- General Algebraic Modeling System (GAMS)
- LINGO
- LINDO
- Solver Foundation

Mathematical packages:

- MatLab

Simulation Software:

- Simulink
- Aspen Dynamics
- Aspen Plus
- HYSYS
- gPROMS