

Curriculum Vitae

Name: Vassilis S. Kouikoglou

Address: Technical University of Crete
Department of Production Engineering and Management
University Campus, Chania 73100, GREECE

Phone: +30 28210 37238

Email: vkouikoglou@tuc.gr

EDUCATION

- Diploma in electrical engineering, National Technical University of Athens, Athens, Greece, 1985
- Ph.D. in production engineering and management, Technical University of Crete, Chania, Greece, 1989

EXPERIENCE

Dec. 2004 to present: Professor, Department of Production Engineering and Management (DPEM), Technical University of Crete, Greece

Dec. 2017 to present: Director of the Computer Aided Manufacturing (CAM) Laboratory, DPEM

Sep. 2005–Aug. 2007: Chairman, DPEM

Aug 2000–Dec. 2004: Associate Professor, DPEM

Sep. 1995–Aug 2000: Assistant Professor, DPEM

Sep. 1991–Aug. 1995: Adjunct Assistant Professor, DPEM

1990–Sep. 1991: Mechanical engineer, Engineer Corps, Greek Army

1986–1989: Teaching assistant, DPEM

ORGANIZATIONS

- IEEE, senior member
- Technical Chamber of Greece, member
- Sigma Xi, member

TAUGHT COURSES

- Production systems (inventory control, demand forecasting, scheduling)
- Production networks - CAM (queueing theory)
- Simulation (discrete-event modeling)
- Stochastic processes
- Quality control
- Material requirements planning
- Systems reliability, maintenance, and replacement

- Production planning and scheduling (graduate, previous title: Production scheduling)
- Production planning and control (graduate)
- Analysis and design of production lines and production networks (graduate)
- Sustainability of systems (graduate short course)

DISTINCTIONS

- Best paper award, 2012 World Automation Congress, Puerto Vallarta, Mexico
- Award for Excellence in Teaching 2017, Technical University of Crete

RESEARCH INTERESTS

- Production systems analysis, simulation, and optimization
- Sustainable development

EDITORIAL RESPONSIBILITIES

- Journal of Intelligent and Robotic Systems, Springer: Executive Advisory Board (2018 to present), Editor-At-Large (2015–2018), Senior Editor (2009–2014), Associate Editor (2008)
- ISRN Industrial Engineering, Hindawi; member of editorial board (2013–2014)
- 5th (2009) and 6th (2010) IEEE Conference on Automation Science and Engineering; Associate Editor
- 4th (2005), 5th (2007), 6th (2009), 7th (2011) International Conferences on Management of Technological Changes; member of the Scientific Committees
- 4th International Symposium and 26th National Conference on Operational Research, Chania, Crete, Greece, June 4-6, 2015; 6th International Symposium and 28th National Conference on Operational Research, June 8-10, 2017, Thessaloniki, Greece; 7th International Symposium & 29th National Conference on Operational Research, June 14-16, 2018, Chania, Crete, Greece; 8th International Symposium and 30th National Conference on Operational Research, May 16-18, 2019, Patras, Greece; member of Scientific Committees.
- 15th (2007), 21st (2013), 24th (2016), 25th (2017), 26th (2018) Mediterranean Conference on Control and Automation (MED); member of International Program Committees.

PUBLICATIONS

Books

1. V. S. Kouikoglou and Y. A. Phillis, *Hybrid Simulation Models of Production Networks*, Kluwer, 2001
2. R. Zhang, Y.A. Phillis, and V. S. Kouikoglou, *Fuzzy Control of Queuing Systems*, Springer, 2005
3. Y. A. Phillis and V. S. Kouikoglou, *Fuzzy Measurement of Sustainability*, Nova Science Publishers, 2009
4. V. S. Kouikoglou and D. Konstantas, *Simulation of Discrete Event Systems* (in Greek), DISIGMA Publications, 2016

Book Chapters

1. Y. A. Phillis and V. S. Kouikoglou, "Minimax estimation and control of

multiplicative systems," *Control and Dynamic Systems*, C. T. Leondes (Ed.), 31, pp. 93–124, 1989

2. Y. A. Phillis and V. S. Kouikoglou, "Techniques in modeling and control policies for production networks," *Control and Dynamic Systems*, C. T. Leondes (Ed.), 47, pp. 1–50, 1991
3. Y. A. Phillis, V. S. Kouikoglou, and V. Kouloumpis, "Sustainability ranking and critical sustainability factors of nations," in *Ecological Economics Research Trends*, C. C. Pertsova (Ed.), Nova Science Publishers, ISBN 1-60021-941-1, pp. 149–170, 2008.
4. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "Approaches for measuring sustainability," in *Global Sustainable Development and Renewable Energy Systems*, P. Olla (Ed.), Information Science Reference (IGI Global), ISBN 978-1-4666-1625-7, pp. 101–130, 2012
5. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "A fuzzy paradigm for the sustainability evaluation of energy systems," in *Assessment and Simulation Tools for Sustainable Energy Systems*, F. Cavallaro (ed.), Green Energy and Technology 129, Springer-Verlag London, pp. 205–224, 2013. https://doi.org/10.1007/978-1-4471-5143-2_10
6. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "Energy sustainability of countries," in *Handbook of Research on Sustainable Development and Economics*, K. D. Thomas (ed.), pp. 96–117, IGI Global, 2015. <https://doi.org/10.4018/978-1-4666-8433-1.ch006>
7. V. S. Kouikoglou, E. Grigoroudis, and Y. A. Phillis, "National energy sustainability and ranking of countries," *Energy Systems Evaluation (Volume 2)*, J. Ren (ed.), Springer, Cham, pp. 63–101, 2021.

Journal Articles

1. V. S. Kouikoglou, "A model for two-stage production lines with scrapping," **Foundations of Computing and Decision Sciences**, 15(2), pp. 77–93, 1990
2. V. S. Kouikoglou and Y. A. Phillis, "An exact discrete-event model and control policies for production lines with buffers," **IEEE Transactions on Automatic Control**, 36(5), pp. 515–527, 1991. <https://doi.org/10.1109/9.76358>
3. V. S. Kouikoglou and Y. A. Phillis, "Trace bounds on the covariances of continuous-time systems with multiplicative noise," **IEEE Transactions on Automatic Control**, 38(1), pp. 138–142, 1993. <https://doi.org/10.1109/9.186326>
4. V. S. Kouikoglou, "A note on the design of k-out-of-n systems," **Microelectronics and Reliability**, 33(3), p. 445, 1993. [https://doi.org/10.1016/0026-2714\(93\)90032-T](https://doi.org/10.1016/0026-2714(93)90032-T)
5. V. S. Kouikoglou and Y. A. Phillis, "Minimax design of two-state k-out-of-n systems," **Applied Stochastic Models and Data Analysis**, 9(3), pp. 245–250, 1993
6. N. C. Tsourveloudis, V. S. Kouikoglou, and Y. A. Phillis, "Fuzzy regression for the prediction of Paraquat poisonings in Crete," **Systems Analysis Modeling Simulation**, 13(3-4), pp. 239–245, 1993.
7. V. S. Kouikoglou, "Single sampling plans for attributes satisfying an arbitrary set of constraints—a graphical approach," **Microelectronics and Reliability**, 34(6), pp. 1071–1077, 1994. [https://doi.org/10.1016/0026-2714\(94\)90071-X](https://doi.org/10.1016/0026-2714(94)90071-X)
8. V. S. Kouikoglou and Y. A. Phillis, "Discrete event modeling and optimization of production lines with random rates," **IEEE Transactions on Robotics and**

- Automation**, 10(2), pp. 153–159, 1994. <https://doi.org/10.1109/70.282540>.
9. V. S. Kouikoglou and Y. A. Phillis, "An efficient discrete-event model for production networks of general geometry," **IIE Transactions**, 27(1), pp. 32–42, 1995. <https://doi.org/10.1080/07408179508936715>
 10. V. S. Kouikoglou and N. C. Tsourveloudis, "Eigenvalue bounds on the solutions of coupled Lyapounov and Riccati equations," **Linear Algebra and Its Applications**, 235, pp. 247–259, 1996. [https://doi.org/10.1016/0024-3795\(94\)00145-6](https://doi.org/10.1016/0024-3795(94)00145-6)
 11. Y. A. Phillis and V. S. Kouikoglou, "A continuous-flow model for unreliable production networks of the finite queue type," **IEEE Transactions on Robotics and Automation**, 12(4), pp. 505–515, 1996. <https://doi.org/10.1109/70.508434>
 12. V. S. Kouikoglou and Y. A. Phillis, "A continuous-flow model for production networks with finite buffers, unreliable machines, and multiple products," **International Journal of Production Research**, 35(2), pp. 381–397, 1997. <https://doi.org/10.1080/002075497195812>
 13. Y. A. Phillis, V. S. Kouikoglou, D. Surlas, and V. Manousiouthakis, "Design of serial production systems using discrete event simulation and nonconvex programming techniques," **International Journal of Production Research**, 35(3), pp. 753–766, 1997. <https://doi.org/10.1080/002075497195696>
 14. V. S. Kouikoglou and Y. A. Phillis, "Review of a fast simulation method for the analysis of queuing networks," **Applied Stochastic Models and Data Analysis**, 13(2), pp. 73–83, 1997. [https://doi.org/10.1002/\(SICI\)1099-0747\(199706\)13:2%3C73::AID-ASM297%3E3.0.CO;2-8](https://doi.org/10.1002/(SICI)1099-0747(199706)13:2%3C73::AID-ASM297%3E3.0.CO;2-8)
 15. V. S. Kouikoglou, "Sensitivity analysis and decomposition of unreliable production lines with blocking," **Annals of Operations Research**, 93, pp. 245–264, 2000. <https://doi.org/10.1023/A:1018975923886>
 16. V. S. Kouikoglou, "Optimal rate allocation in unreliable, assembly/disassembly production networks with blocking," **IEEE Transactions on Robotics and Automation**, 16(4), pp. 429–434, 2000. <https://doi.org/10.1109/70.864238>
 17. V. S. Kouikoglou and Y. A. Phillis, "Design of product specifications and control policies in a single-stage production system," **IIE Transactions**, 34, pp. 591–600, 2002. <https://doi.org/10.1080/07408170208928896>
 18. V. S. Kouikoglou, "An efficient discrete event model of assembly/disassembly production networks," **International Journal of Production Research**, 40(17), pp. 4485–4503, 2002. <https://doi.org/10.1080/00207540210155846>
 19. L. A. Andriantiatsaholiniaina, V. S. Kouikoglou, and Y. A. Phillis, "Evaluating strategies for sustainable development: Fuzzy logic reasoning and sensitivity analysis," **Ecological Economics**, 48(2), pp. 149–172, 2004. <https://doi.org/10.1016/j.ecolecon.2003.08.009>
 20. Y. A. Phillis, V. S. Kouikoglou, and L. A. Andriantiatsaholiniaina, "Sustainable development: a definition and assessment," **Environmental Engineering and Management Journal**, 2(4), pp. 345–355, 2003
 21. S. Ioannidis, V. S. Kouikoglou, and Y. A. Phillis, "Coordinating quality, production, and sales in manufacturing systems," **International Journal of Production Research**, 42(18), pp. 3947–3956, 2004. <https://doi.org/10.1080/00207540410001696357>
 22. S. Ioannidis, V. S. Kouikoglou, and Y. A. Phillis, "Analysis of admission and inventory control policies for production networks," **IEEE Transactions on**

- Automation Science and Engineering**, 5(2), pp. 275–288, 2008. <https://doi.org/10.1109/TASE.2007.897614>
23. S. Ioannidis and V. S. Kouikoglou, "Revenue management in single-stage CONWIP production systems," **International Journal of Production Research**, 46(22), pp. 6513–6532, 2008. <https://doi.org/10.1080/00207540701455343>
 24. V. D. Kouloumpis, V. S. Kouikoglou, and Y. A. Phillis, "Sustainability assessment of nations and related decision making using fuzzy logic," **IEEE Systems Journal**, 2(2), pp. 224–236, 2008. <https://doi.org/10.1109/JSYST.2008.925256>
 25. Y. A. Phillis, V. S. Kouikoglou, and X. Zhu, "Fuzzy assessment of material recyclability and its applications," **Journal of Intelligent and Robotic Systems**, 55(1), pp. 21–38, 2009. <https://doi.org/10.1007/s10846-008-9290-x>
 26. G. K. Saharidis, V. S. Kouikoglou, and Y. Dallery, "Centralized and decentralized control policies for a two-stage stochastic supply chain with subcontracting," **International Journal of Production Economics**, 117(1), pp. 117–126, 2009. <https://doi.org/10.1016/j.ijpe.2008.10.001>
 27. V. S. Kouikoglou and Y. A. Phillis, "On the monotonicity of hierarchical sum-product fuzzy systems," **Fuzzy Sets and Systems**, 160(24), pp. 3530–3538, 2009. <https://doi.org/10.1016/j.fss.2009.02.001>
 28. G. Giannakis, V. S. Kouikoglou, and S. Nikitas, "Workflow analysis of production lines with complete inspection and rework loops," **International Journal of Production Research**, 48(24), pp. 7321–7336, 2010. <https://doi.org/10.1080/00207540903469050>
 29. Y. A. Phillis, V. S. Kouikoglou, and V. Manousiouthakis, "A review of sustainability assessment models as system of systems," **IEEE Systems Journal**, 4(1), pp. 15–25, 2010. <https://doi.org/10.1109/JSYST.2009.2039734>
 30. A. A. Economopoulos and V. S. Kouikoglou, "Lead-time analysis and a control policy for production lines," **International Journal of Production Research**, 49(7), pp. 2019–2034, 2011. <https://doi.org/10.1080/00207541003627845>
 31. V. S. Kouikoglou and Y. A. Phillis, "Application of a fuzzy hierarchical model to the assessment of corporate social and environmental sustainability," **Corporate Social Responsibility and Environmental Management**, 18(4), pp. 209–219, 2011. <https://doi.org/10.1002/csr.241>
 32. A. A. Economopoulos, V. S. Kouikoglou, and E. Grigoroudis, "The base stock/base backlog control policy for a make-to-stock system with impatient customers," **IEEE Transactions on Automation Science and Engineering**, 8(1), pp. 243–249, 2011. <https://doi.org/10.1109/TASE.2010.2052802>
 33. Y. A. Phillis, E. Grigoroudis, and V. S. Kouikoglou, "Sustainability ranking and improvement of countries," **Ecological Economics**, 70(3), pp. 542–553, 2011. <https://doi.org/10.1016/j.ecolecon.2010.09.037>
 34. Y. A. Phillis and V. S. Kouikoglou, "System-of-Systems hierarchy of biodiversity conservation problems," **Ecological Modelling**, 235–236, pp. 36–48, 2012. <https://doi.org/10.1016/j.ecolmodel.2012.03.032>
 35. S. Ioannidis, O. Jouini, A. A. Economopoulos, and V. S. Kouikoglou, "Control policies for single-stage production systems with perishable inventory and customer impatience," **Annals of Operations Research**, 209(1), 115–138, 2013. <https://doi.org/10.1007/s10479-012-1058-9>

36. Y. A. Phillis, A. M. Madni, E. Grigoroudis, F. Kanellos, V. S. Kouikoglou, S. Papaefthimiou, "Why climate action is urgent," **The Bridge**, 44(3), 30–37, 2014
37. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "SAFE 2013: Sustainability of countries updated," **Ecological Indicators**, 38, pp. 61–66, 2014. <https://doi.org/10.1016/j.ecolind.2013.10.022>
38. F. D. Kanellos, E. Grigoroudis, C. Hope, V. S. Kouikoglou, and Y. A. Phillis, "Optimal GHG emission abatement and aggregate economic damages of global warming," **IEEE Systems Journal**, 11(4), pp. 2784–2793, 2017. <https://doi.org/10.1109/JSYST.2014.2376493>
39. E. Grigoroudis, F. D. Kanellos, V. S. Kouikoglou, and Y. A. Phillis, "Optimal abatement policies and related behavioral aspects of climate change," **Environmental Development**, 19, pp. 10–22, 2016. <https://doi.org/10.1016/j.envdev.2016.04.002>
40. E. Grigoroudis, F. D. Kanellos, V. S. Kouikoglou, and Y. A. Phillis, "The challenge of the Paris Agreement to contain climate change," **Intelligent Automation and Soft Computing**, 24(2), pp. 319–330, 2018. <https://doi.org/10.1080/10798587.2017.1292716>
41. Y. A. Phillis, V. S. Kouikoglou, and C. Verdugo, "Urban sustainability assessment and ranking of cities," **Computers, Environment and Urban Systems**, 64, pp. 254–265, 2017. <https://doi.org/10.1016/j.compenvurbsys.2017.03.002>
42. D. Konstantas, S. Ioannidis, V. S. Kouikoglou, and E. Grigoroudis, "Linking product quality and customer behavior for performance analysis and optimization of make-to-order manufacturing systems," **International Journal of Advanced Manufacturing Technology**, 95(1–4), pp. 587–596, 2018. <https://doi.org/10.1007/s00170-017-1225-x>
43. E. Gkika, D. Chochlakis, Y. Tselentis, C. Zopounidis, V. Kouikoglou, K. Gkikas, A. Psaroulaki, "A retrospective data analysis of Legionella pneumophila diagnostic procedures and their impact on patients' management: The experience of a rapid point-of-care test," **International Journal of Data Science**, 4(2), pp. 101–116, 2019. <https://doi.org/10.1504/IJDS.2019.100319>
44. Y. A. Phillis, N. Chairetis, E. Grigoroudis, F. D. Kanellos, V. S. Kouikoglou, "Climate security assessment of countries," **Climatic Change**, 148(1–2), pp. 25–43, 2018. <https://doi.org/10.1007/s10584-018-2196-0>
45. E. Gkika, A. Psaroulaki, Y. Tselentis, E. Angelakis, and V. Kouikoglou, "Can point-of-care testing shorten hospitalisation length of stay? An exploratory investigation of infectious agents using regression modelling," **Health Informatics Journal**, 25(4), pp. 1606–1617, 2019. <https://doi.org/10.1177/1460458218796612>
46. E. Grigoroudis, V. S. Kouikoglou, Y. A. Phillis, and F. D. Kanellos, "Energy sustainability: a definition and assessment model," **Operational Research**, 21, pp. 1845–1885, 2021. <https://doi.org/10.1007/s12351-019-00492-2>
47. A. Phillis, E. Grigoroudis, and V. S. Kouikoglou, "Assessing national energy sustainability using multiple criteria decision analysis," **International Journal of Sustainable Development & World Ecology**, 28(1), pp. 18–35, 2020. <https://doi.org/10.1080/13504509.2020.1780646>
48. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "SAFE 2019: Updates and new sustainability findings worldwide," **Ecological Indicators**, 121, art. no. 107072, 2021. <https://doi.org/10.1016/j.ecolind.2020.107072>
49. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "Transportation sustainability and relevant ranking of European countries," **Journal of Intelligent and**

Robotic Systems, 106(2), art. no. 49, 2022. <https://doi.org/10.1007/s10846-022-01736-8>

50. Y. A. Phillis, V. S. Kouikoglou, E. Grigoroudis, and F. D. Kanellos, "On a mathematical theory of sustainability assessment," **Proceedings of the European Academy of Sciences & Arts**, 1 (1), pp. 1–11, 2022. <https://doi.org/10.5281/zenodo.7283241>
51. V. S. Kouikoglou and Y. A. Phillis, "Sensitivity analysis of sustainability indicators using a shifted geometric assessment model," **International Journal of Sustainable Development & World Ecology**, 30(8), pp. 938–948, 2023. <https://doi.org/10.1080/13504509.2023.2231866>.
52. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "Allocation of healthcare resources in national health systems under climate change," **Circular Economy and Sustainability**, 4, pp. 651–670, 2024. <https://doi.org/10.1007/s43615-023-00301-1>.
53. E. Grigoroudis, V. S. Kouikoglou, and Y. A. Phillis, "Agricultural sustainability assessment and national policy-making using an axiomatic mathematical model," **Environmental and Sustainability Indicators**, 22, p. 100401, 2024. <https://doi.org/10.1016/j.indic.2024.100401>.