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Publications

Book Chapters

- B1. H. D. Karatza**, “Simulation of Parallel and Distributed Systems Scheduling, Concepts, Issues and Approaches”, Chapter 4 in APPLIED SYSTEM SIMULATION: Methodologies and Applications, G. Papadimitriou and M. Obaidat Editors, Kluwer Academic Publisher, 2003, pp.61-80.
- B2. H.D. Karatza**. “Scheduling in Distributed Systems”, in Performance Tools and Applications to Networked Systems, Editors: Maria Carla Calzarossa and Erol Gelenbe (eds.), LNCS Vol. 2965/2004, Springer-Verlag Heidelberg, 2004, pp.336-356.
- B3. H. D. Karatza**, “Performance of Scheduling Strategies in Distributed Systems”, In Performance Evaluation of Parallel, Distributed and Emergent Systems, G. Min and M. Ould-Khaoua, Editors, Nova Science Publishers, in Volume 1 in Distributed, Cluster and Grid Computing Series, 2006, pp. 183-205.
- B4. H. D. Karatza**, “A simulation-based Performance Analysis of Epoch Task Scheduling in Distributed Processors”, in Communication Networks and Computer Systems, J. Barria Editor, World Scientific, Imperial College Press, 2006, pp. 69-86.
- B5. H. D. Karatza**, “Periodic Task Cluster Scheduling in Distributed Systems”, in Computer System Performance Modeling in Perspective, E. Gelenbe Editor, World Scientific, Imperial College Press, 2006, pp. 257-276.
- B6. F. Loukos and H. D. Karatza**, “Cooperation in Mobile Peer-to-Peer Systems”, in Mobile Peer-to-Peer Computing for Next Generation Distributed Environments: Advancing Conceptual and Algorithmic Applications, IGI Global, May 2009, pp. 118-131.
- B7. K. Karaoglanoglou and H. Karatza**, “Trust Calculation & Management in P2P and Grid Systems”, in the Handbook of Research on P2P and Grid Systems for Service-Oriented Computing: Models, Methodologies and Applications, Edited by Nick Antonopoulos, Georgios Exarchakos, Maozhen Li and Antonio Liotta, IGI Global, 2010, pp. 774-795.
- B8. I. Moschakis and H. Karatza**, “Enterprise HPC on the Clouds”, in the Cloud Computing for Enterprise Architectures, Edited by Z. Mahmood and R. Hill , Springer, Part 3, pp. 227-246, 2011.
- B9. K. Karaoglanoglou and H. Karatza**, “Resource Discovery in Large Scale Grid Systems”, ComplexHPC book, John Wiley & Sons, 2013.

Journal Publications

- J1. H.D. Karatza**. “Simulation study of multitasking of open computer networks“, Computer Systems Science and Engineering Journal, CRL Publishing Ltd, Vol.1, No 4, Oct.1986, pp.193-204.
- J2. H.D.Karatza**. “Simulation study of multitasking of closed computer system networks“, Computer Systems Science and Engineering Journal, CRL Publishing Ltd, Vol.2, No 1, Jan.1987, pp.42-51.
- J3. H.D.Karatza**. “A Simulation model of multitasking in Parallel processing“, International Journal of Modelling and Simulation, ACTA Press, Vol.7, No 1, 1987, pp.37-42.
- J4. H.D.Karatza**. “Simulation models for parallel processing within Programs“, International Journal of Modelling and Simulation, ACTA Press, Vol.8, No 3, 1988, pp.78-82.

- J5. H.D.Karatzas:** "Simulation Study of a MSIMD Computer System Network", International Journal of Modelling and Simulation, ACTA Press, Vol.11, No 3, 1991, pp.75-82.
- J6. H.D.Karatzas.** "Simulation of Load Balancing and Multitasking in a Homogeneous Distributed System Model", Computer Systems Science and Engineering Journal, CRL Publishing Ltd, Vol.6, No 1, Jan.1991, pp.37-44.
- J7. H.D.Karatzas.** "Simulation Study of Load Balancing in a Heterogeneous Distributed System Model". International Journal of Modelling and Simulation, ACTA Press, Vol.14, No 1, 1994, pp.28-33.
- J8. H.D.Karatzas.** "Simulation study of a system with two processors linked in tandem". Journal of Systems and Software, Elsevier, Vol.26, 1994, pp.285-292.
- J9. C.Reeves and H.D.Karatzas.** "An Experimental Investigation of a Multi-processor Scheduling System". Periodica Polytechnica Electrical Engineering, Technical University of Budapest, Vol. 41, No 3, 1997, 231-239.
- J10. H.D.Karatzas.** "Simulation Study of Task Scheduling and Resequencing in a Multiprocessing System". Simulation, SCS, April 1997, Special Issue: Modeling and Simulation of Computer Systems and Networks: Part Two, pp.241-247.
- J11. H.D.Karatzas.** "Task Routing and Resequencing in a Multiprocessor System". Journal of Systems and Software, Elsevier, June 1998, Vol. 41/3, pp.189-197.
- J12. H.D.Karatzas.** "Cache Affinity and Resequencing in a Shared - Memory Multiprocessing System". Journal of Systems and Software, Elsevier, 2000, Vol. 51, No.1, pp.7-18.
- J13. H.D. Karatzas.** "A Comparative Analysis of Scheduling Policies in a Distributed System using Simulation". International Journal of Simulation: Systems, Science & Technology, UK Simulation Society, Dec. 2000, Vol. 1(1-2), pp. 12-20.
- J14. H.D. Karatzas.** "Job Scheduling in Heterogeneous Distributed Systems". Journal of Systems and Software, Elsevier, 2001, Vol. 56(3), pp. 203-212.
- J15. H.D. Karatzas.** "Performance Analysis of Gang Scheduling in a Distributed System Under Processor Failures". International Journal of Simulation: Systems, Science & Technology, UK Simulation Society, 2001, Vol. 2(1), pp. 14-23.
- J16. H.D. Karatzas and R.C. Hilzer.** "A Simulation Study of Epoch Load Sharing in Distributed Systems". Simulation: Transactions of the Society for Modeling and Simulation International, 2002, Vol. 78(7), pp. 461-471.
- J17. H.D. Karatzas.** "Gang Scheduling Performance under Different Distributions of Gang Size". Parallel and Distributed Computing Practices, Nova Science Publishers, 2001, Vol. 4 (4), pp.433-449.
- J18. K.G. Zerfiridis, and H.D. Karatzas.** "Mobile Agents as a Middleware for Data Dissemination". Neural, Parallel & Scientific Computations, Dynamic Publishers, Atlanta, 2002, Vol. 10 (3), pp. 313-323.
- J19. H.D. Karatzas.** "Task Scheduling Performance in Distributed Systems with Time Varying Workload", Neural, Parallel & Scientific Computations, Dynamic Publishers, Atlanta, 2002, Vol. 10 (3), pp. 325-338.
- J20. H.D. Karatzas.** "A Comparison of Load Sharing and Job Scheduling in a Network of Workstations", International Journal of Simulation: Systems, Science & Technology, UK Simulation Society, September 2003, Volume 4, issue no: 3&4, pp. 4-11.
- J21. H.D. Karatzas.** "Scheduling Parallel and Sequential Jobs in a Partitionable Parallel System", International Journal of Simulation: Systems, Science & Technology, UK Simulation Society, May 2003, Volume 4, no: 1&2, pp. 31-40.
- J22. H.D. Karatzas and R.C. Hilzer.** "Parallel Job Scheduling in Homogeneous Distributed Systems". Simulation: Transactions of the Society for Modeling and Simulation International, Sage Publications, Thousand Oaks, CA, May, 2003, Vol. 79 (5), pp. 287-298.
- J23. H.D. Karatzas.** "Simulation Study of Multitasking in Distributed Server Systems with Variable Workload", Simulation Practice and Theory Journal, Elsevier, 2004, Vol 12/7-8 pp 591-608.
- J24. K.G. Zerfiridis, and H.D. Karatzas.** "Brute Force Web Search for Wireless Devices Using Mobile Agents". Journal of Systems and Software, Elsevier, 69(1-2) pp. 195-206, 2004.

- J25.K.G. Zerfiridis and H.D. Karatza.** “File Distribution Using a Peer-to-Peer Network – A Simulation Study”. Journal of Systems and Software, Elsevier, Vol 73/1 pp. 31-44, 2004.
- J26.C.X. Mavromoustakis, and H.D. Karatza,** “Agent-based throughput response in presence of node and/or link failure (on demand) for circuit switched telecommunication networks”. Computer Communications, Elsevier, Vol 27/3 pp 230-238, 2004.
- J27.C.X. Mavromoustakis, and H.D. Karatza,** “Split agent-based routing in interconnected networks”. The International Journal of Communication Systems (IJCS), Wiley, Vol. 17, Issue 4, pp. 303-320, 2004.
- J28.K.G. Zerfiridis and H.D. Karatza,** “Itinerary Based Segmented Dissemination on a Peer-To-Peer Network”, Simulation: Transactions of the Society for Modeling and Simulation International, Sage Publications, Thousand Oaks, CA, Vol. 80, No. 10, pp. 501-510, 2004.
- J29.C.X. Mavromoustakis, and H.D. Karatza,** “Adaptive Traffic-based Control Method for Energy Conservation in Wireless Devices”. Simulation Modeling Practice and Theory Journal, Elsevier, Vol. 13/3, pp. 213-232, 2005.
- J30. D. Filippopoulos and H.D. Karatza,** “A Dynamic Programming Model of Two Heterogeneous Clusters with Co-allocation of Jobs”. International Journal of Simulation: Systems, Science & Technology, UK Simulation Society, Vol. 6, No. 3-4, 2005, pp. 4-14.
- J31.C.X. Mavromoustakis, and H.D. Karatza,** “Optimized QoS Priority Routing for Service Tunability and Overhead Reduction using Swarm based Active Network Scheme”. Computer Communications, Elsevier, Volume 29, Issue 6, April 2006, pp. 765-780.
- J32.C.X. Mavromoustakis, and H.D. Karatza,** “On the Efficiency and Performance Evaluation of the Bandwidth Clustering Scheme for Adaptive and Reliable Resource Allocation”. Journal of Systems and Software, Elsevier, 2006, Volume 79, Issue 8, pp 1064-1078.
- J33.C.X. Mavromoustakis, and H.D. Karatza,** “Performance Evaluation of an On Demand Tunable Resource Allocation Apparatus Using Constrained Active Network”. Journal of Simulation Practice and Theory (SIMPRA), Elsevier, 2006, Volume 14, Issue 6, pp. 768-786.
- J34.H.D. Karatza.** “Scheduling Gangs in a Distributed System”, International Journal of Simulation: Systems, Science & Technology, UK Simulation Society, January 2006, Volume 7, issue no: 1, pp. 15-22.
- J35. D. Filippopoulos and H.D. Karatza.,** “An M/M/2 Parallel System Model with Pure Space Sharing Among Rigid Jobs”. Mathematical and Computer Modelling, Elsevier, Vol 45/5-6, pp 491-530, March 2007.
- J36.C.X. Mavromoustakis, and H.D. Karatza,** "Dispersed information diffusion with level and schema-based coordination in mobile peer to peer networks ". Cluster Computing, Springer, (Computer Communications & Networks), Springer Netherlands, Volume 10, Issue 1, (March 2007), pp 33-45.
- J37. C.X. Mavromoustakis, and H.D. Karatza,** “Quality of Service Measures of Mobile Ad-hoc Wireless Networks using Energy Consumption Mitigation with Asynchronous Inactivity Periods”, Simulation: Transactions of the Society for Modeling and Simulation International, Sage Publications, Vol. 83, No. 1, Jan. 2007, pp. 107-122.
- J38. D. Filippopoulos and H.D. Karatza,** “Dynamic non-preemptive re-allocation policies between two sites with reconfigurable servers”, Journal of Simulation Modelling Practice and Theory (SIMPRA), Elsevier, Vol. 5, Issue 9, October 2007, pp. 1192-1210.
- J39.C.X. Mavromoustakis, and H.D. Karatza,** “Under storage constraints of epidemic backup node selection using HyMIS architecture for data replication in mobile peer to peer networks”. Journal of Systems and Software, Elsevier, Vol. 81, Issue 1, January 2008, pp. 100-112.
- J40. D. Filippopoulos and H.D. Karatza,** “A two-class parallel system with general service times of the parallel class”, Journal of Computer & System Sciences, Elsevier, Special issue on Performance Analysis and Evaluation of Parallel, Cluster, and Grid Computer Systems", Vol. 74, Issue 6, September 2008, pp. 942-964.
- J41. H.D. Karatza,** “The Impact of Critical Sporadic Jobs on Gang Scheduling Performance in Distributed Systems”, Simulation: Transactions of the Society for Modeling and Simulation International, Sage

Publications, Special Issue on Performance Evaluation of Computer and Telecommunication Systems, Vol. 84, No. 2-3, 2008, pp. 89-102.

- J42. K. Karaoglanoglou and H. Karatza**, “Resource Discovery in a Dynamical Grid based on Re-routing Tables”, Simulation Modelling Practice and Theory, Elsevier, Vol. 16, 2008, 704–720.
- J43. W.-T. Tsai, X. Sun; Q. Huang, H. Karatza**, “An Ontology-Based Collaborative Service-Oriented Simulation Framework with Microsoft Robotics Studio”, Simulation Modelling Practice and Theory, Elsevier, Vol. 16, Issue 9, October 2008, pp.1392-1414.
- J44. F. Loukos and H.D. Karatza**, “Reputation based Friend-to-Friend networks”, Peer-to-Peer Networking and Applications, Springer, Vol. 2, No. 1, March 2009, pp. 13-23.
- J45. H.D. Karatza**, “Performance of Gang Scheduling Strategies in a Parallel System”, Simulation Modelling Practice and Theory, Elsevier, Vol. 17, Issue 2, February 2009, pp 430-441.
- J46. G.L. Stavrinides and H.D. Karatza**, “Fault-Tolerant Gang Scheduling in Distributed Real-Time Systems Utilizing Imprecise Computations”, Simulation: Transactions of the Society for Modeling and Simulation International, Sage Publications, Vol. 85, No. 8, 2009, pp.525-536.
- J47. Z. Papazachos and H. Karatza**, “The Impact of Task Service Time Variability on Gang Scheduling Performance in a Two-Cluster System”, Simulation Modelling Practice and Theory, 17 (2009), pp. 1276–1289.
- J48. S. Zikos and H. Karatza**, “Communication Cost Effective Scheduling Policies of Nonclairvoyant Jobs with Load Balancing in a Grid”, The Journal of Systems and Software, Elsevier, Vol. 82, Issue 12, 2009, pp. 2103-2116.
- J49.C.X. Mavromoustakis, and H.D. Karatza**, “Real time performance evaluation of asynchronous time division traffic-aware and delay-tolerant scheme in ad-hoc sensor networks”, International Journal of Communication Systems, Wiley, Vol. 23, 2010, pp. 167–186.
- J50. S. Zikos and H. Karatza**, “The Impact of Service Demand Variability on Resource Allocation Strategies in a Grid System”, ACM Transactions on Modeling and Computer Simulation (TOMACS), Vol. 20, Issue 4, Article No. 19, October 2010, pp. 19:1-19:29.
- J51. G.L. Stavrinides and H.D. Karatza**, “Scheduling Multiple Task Graphs with End-to-End Deadlines in Distributed Real-Time Systems Utilizing Imprecise Computations”, Journal of Systems and Software, Elsevier, 83 (2010) 1004–1014.
- J52. Z. Papazachos and H. Karatza**, “Performance Evaluation of Bag of Gangs Scheduling in a Heterogeneous Distributed System”, Journal of Systems and Software, Elsevier, Vol. 83 (2010), pp. 1346–1354.
- J53.C.X. Mavromoustakis, and H.D. Karatza**, “A tiered-based asynchronous scheduling scheme for delay constrained energy efficient connectivity in asymmetrical wireless devices”, Journal of Supercomputing, Springer, Volume 59, Issue 1 (2012), pp. 61-82.
- J54.C.X. Mavromoustakis, and H.D. Karatza**, “A Gossip-based optimistic replication for efficient delay-sensitive streaming using an interactive middleware support system”, IEEE Systems Journal, IEEE, Vol. 4, Issue: 2, (2010), pp: 253 - 261.
- J55.C.X. Mavromoustakis, and H.D. Karatza**, “Community oriented neighboring feedback for efficient end-to-end delay-sensitive MP2P streaming via temporal relay-based replication”, Journal of Algorithms & Computational Technology, Multi-Science Publishing, UK, Vol. 5, Issue 2, pp. 177-198, 2011.
- J56.Z. Papazachos and H. Karatza**, “Gang Scheduling in a Two-Cluster System Implementing Migrations and Periodic Feedback”, Simulation: Transactions of the Society for Modeling and Simulation International, Sage Publications, December 2011 87(12), pp. 1021-1031.
- J57.K. Gkoutioudi and H. Karatza**, “Task Cluster Scheduling in a Grid System”, Simulation Modelling Practice and Theory, Elsevier, Vol. 18, Issue 9, Oct. 2010, pp.1242-1252.
- J58. S. Zikos and H. Karatza**, “Performance and energy aware cluster-level scheduling of compute-intensive jobs with unknown service times”, Simulation Modelling Practice and Theory, Elsevier, 19 (2011), pp.239–250.

- J59. Ioannis A. Moschakis and Helen D. Karatza**, “Evaluation of Gang Scheduling Performance and Cost in a Cloud Computing System”, Journal of Supercomputing, Springer, 59(2), pp. 975-992 (2012).
- J60. G.L. Stavrinides and H.D. Karatza**, “Scheduling Multiple Task Graphs in Heterogeneous Distributed Real-Time Systems by Exploiting Schedule Holes with Bin Packing Techniques”, Simulation Modelling Practice and Theory, Elsevier, 19 (2011), pp. 540–552.
- J61. S. Zikos and H. Karatza**, “A clairvoyant site allocation policy based on service demands of jobs in a computational grid”, Simulation Modelling Practice and Theory, Elsevier, Vol. 19, Issue 6, June 2011, pp. 1465-1478.
- J62. F. Loukos, H.D. Karatza and C.X. Mavromoustakis**, “AntP2PR: An ant intelligence inspired routing scheme for Peer-to-Peer networks”, Simulation Modelling Practice and Theory, Elsevier, 19(2): 649-661 (2011).
- J63. K. Karaoglanoglou and H. Karatza**, “Resource Discovery in a Grid System: Directing Requests to Trustworthy Virtual Organizations based on Global Trust Values”, Journal of Systems and Software, Elsevier, Vol. 84, Iss. 3, pp. 465-478, 2011.
- J64. K. Karaoglanoglou and H. Karatza**, “Acquiring Knowledge in a Grid System via a Resource Discovery Scheme”, International Journal of Modeling, Simulation, and Scientific Computing (IJMSSC), World Scientific, Volume: 2, Issue: 1 (March 2011), pp. 1-28.
- J65. C.X. Mavromoustakis, and H.D. Karatza**, “Embedded socio-oriented model for end-to-end reliable stream schedules by using collaborative outsourcing in MP2P systems”, The Computer Journal, 54(8), pp. 1235-1247 (2011).
- J66. Z. Papazachos and H. Karatza**, “Scheduling of Frequently Communicating Tasks”, International Journal of Communication Systems, Wiley, Vol. 25, Issue 2, pp.146–157, 2012, DOI: 10.1002/dac.1260, 2012.
- J67.Z. Papazachos and H. Karatza**, “Gang Scheduling in Multi-Core Clusters Implementing Migrations”, Future Generation Computer Systems, Elsevier, Vol. 27, Issue 8, Oct. 2011, pp. 1153-1165, 2011.
- J68.G. Terzopoulos and H. Karatza**, “Performance evaluation of a real-time grid system using power-saving capable processors”, Journal of Supercomputing, Springer, Vol. 61, Number 3 (2012), pp. 1135-1153, 2011, DOI 10.1007/s11227-011-0689-y.
- J69.G.L. Stavrinides and H.D. Karatza**, “Scheduling Real-Time DAGs in Heterogeneous Clusters by Combining Imprecise Computations and Bin Packing Techniques for the Exploitation of Schedule Holes”, Future Generation Computer Systems, Elsevier, Vol. 28, No. 7, pp. 977-988, July 2012.
- J70.K.Z. Gkoutioudi, and H.D. Karatza**, “Multi-criteria job scheduling in Grid using an Accelerated Genetic Algorithm”, Journal of Grid Computing, Springer, June 2012, Vol. 10, Issue 2, pp. 311-323.
- J71. C.X. Mavromoustakis, and H.D. Karatza**, “Performance evaluation of opportunistic resource sharing scheme using socially-oriented outsourcing in wireless devices”, The Computer Journal, Vol.56(2), pp. 184-197, 2013.
- J72. Srinivas R. Chakravarthy, and Helen Karatza**, Two-server parallel system with pure space sharing and Markovian arrivals, Computers & Operations Research, Elsevier, Vol 40(1), pp. 510-519, 2013.
- J73.G. Terzopoulos and H. Karatza**, “Performance evaluation and energy consumption of a real-time heterogeneous grid system using DVS and DPM”, Simulation Modelling Practice and Theory, Elsevier, Volume 36, August 2013, pp. 33–43, 2013.
- J74.Ioannis A. Moschakis and Helen D. Karatza**, “Towards scheduling for Internet-of-Things applications on Clouds: A Simulated Annealing approach”, Concurrency and Computation: Practice and Experience, Wiley, vol. 27 no. 8, pp. 1886 – 1899, 2015.
- J75. Fotis Loukos, Helen Karatza and Vana Kalogeraki**, “Real-time data dissemination in Mobile Peer-to-Peer networks”, Journal of Systems and Software, Elsevier, 90: 179-190, 2014.
- J76.G. Terzopoulos and H. Karatza**, “Energy Efficient Real-time Heterogeneous Cluster Scheduling with Node Replacement due to Failures”. The Journal of Supercomputing, 68(2): 867-889 (2014).

- J77. Ioannis A. Moschakis and Helen D. Karatza**, “Multi-criteria scheduling of Bag-of-Tasks applications on heterogeneous interlinked Clouds with Simulated Annealing, Journal of Systems and Software, Elsevier, vol. 101, pp. 1-14, 2015.
- J78. Ioannis A. Moschakis and Helen D. Karatza**, “A meta-heuristic optimization approach to the scheduling of Bag-of-Tasks applications on heterogeneous Clouds with multi-level arrivals and critical jobs”, Simulation Modelling Practice and Theory, Elsevier, Vol. 57, Sept. 2015, pp. 1-25.
- J79. G. Da Costa, T. Fahringer, J.-A. Rico-Gallego, I. Grasso, A. Hristov, H. D. Karatza, A. Lastovetsky, F. Marozzo, D. Petcu, G. L. Stavrinides, D. Talia, P. Trunfio, H. Astsatryan**, “Exascale Machines Require New Programming Paradigms and Runtimes”, Supercomputing Frontiers and Innovation, Vol. 2, No. 2, 2015, pp. 6-27.
- J80. M. Bagein, J. Barbosa, V. Blanco, I. Brandic, S. Cremer, S. Fremal, H. D. Karatza, L. Lefevre, T. Mastelic, A. Oleksiak, A. Orgerie, G. L. Stavrinides and S. Varrette**, “Energy efficiency for ultrascale systems: challenges and trends from nesus project”, Supercomputing Frontiers and Innovations, Publishing Center of South Ural State University, vol. 2, no. 2, pp. 105-131, Sep. 2015.
- J81. G. Terzopoulos and Helen D. Karatza**. Power-aware Bag-of-Tasks scheduling on heterogeneous platforms. Cluster Computing, Springer, June 2016, Vol. 19, Issue 2, pp. 615-631.
- J82. G. L. Stavrinides, F. R. Duro, H. D. Karatza, J. G. Blas and J. Carretero**, Different Aspects of Workflow Scheduling in Large-Scale Distributed Systems, Simulation Modelling Practice and Theory, Elsevier, Vol. 70, pp. 120-134, 2017.
- J83. I. Mavridis and H. Karatza**, Performance evaluation of cloud-based log file analysis with Apache Hadoop and Apache Spark, Journal of Systems and Software, Vol. 125, March 2017, pp. 133–151.
- J84. D. Tychalas and H. Karatza**, “High Performance System based on Cloud and beyond: Jungle Computing”, Journal of Computational Science, Elsevier, 2017.
- J85. G. L. Stavrinides and H. D. Karatza**, Scheduling real-time bag-of-tasks applications with approximate computations in SaaS clouds, Concurrency and Computation: Practice and Experience, Wiley, 2017.
- J86. G. L. Stavrinides and H. D. Karatza**, “The impact of checkpointing interval selection on the scheduling performance of real-time fine-grained parallel applications in SaaS clouds under various failure probabilities”, Concurrency and Computation: Practice and Experience, Wiley, 2017.

Conference Proceedings Publications

- C1. H.D.Karatza**. “Simulation Study of Load Balancing in a Heterogeneous Distributed System Model”. Proceedings of the 10th International Conference of Applied Informatics, 10-12 February 1992, Innsbruck, IASTED, pp.288-89.
- C2. H.D.Karatza**. “Simulation Study of Preemptive and Non-Preemptive Load Distributing”. Proceedings of the UK 1992 Performance Engineering Workshop, Imperial College, 21-22 Sept. 1992, pp.1-19.
- C3. C.Reeves and H.D.Karatza**. “Dynamic sequencing of a Multi-Processor System: A Genetic Algorithm approach”. Proceedings of the International Conference on Neural Networks and Genetic Algorithms, Innsbruck, 13-16 April 1993, Springer-Verlang, Vienna, pp.491-95.
- C4. H.D. Karatza**. “Simulation Study of Load Sharing in a Heterogeneous Multiserver System”. Proceedings of the European Simulation Symposium (ESS) 93, Delft, Oct.1993, SCS, pp.471-476.
- C5. H.D. Karatza**. “Simulation of a MSIMD System with Resequencing”. Proceedings of the Conference on Massively Parallel Computing Systems, Ischia (Italy), 2-6 May 1994, IEEE, pp.339-342.
- C6. H.D. Karatza**. “Simulation Study of a Two server System with Preemption and Resequencing”. Proceedings of the European Simulation Multiconference (ESM) 94, Barcelona, 1-3 June 1994, SCS, pp.151-155.

- C7. H.D. Karatza.** “Simulation Study of a Multicomputer System with a Shared Resource”. Proceedings of the CISS-First Joint Conference of International Simulation Societies, Zurich, 22-25 Aug. 1994, SCS, pp.382-386.
- C8. H.D. Karatza and R.C. Huntsinger.** “Load Sharing and Resequencing in Nonhomogeneous Two Server Systems”. Proceedings of the United Kingdom Simulation Society Conference, UKSS95, UKSS, North Berwick, 19-21 April 1995, pp.19-23.
- C9. H.D.Karatza and R.C.Huntsinger.** “Load Balancing and Resequencing in a Homogeneous Distributed System”. Proceedings of the 1995 Summer Computer Simulation Conference, SCSC'95, SCS, July 24-26, 1995, Ottawa, Ontario, Canada, pp.790-794.
- C10. H.D.Karatza.** “Simulation Study of Multitasking and Resequencing in a Homogeneous Distributed System”, Proceedings of the Eurosim Congress '95, TU Vienna, Vienna, September 11-15, 1995, Elsevier Publishers P.V., pp.541-46.
- C11. H.D.Karatza.** “Simulation Study of Two-Stage Parallel Processing Systems with Resequencing”, Proceedings of the 7th European Simulation Symposium (ESS 95), SCS, October 26-28, 1995, Erlangen-Nuremberg, pp.464-468.
- C12. H.D.Karatza.** “Simulation Study of Sender-Initiated Load Sharing with Resequencing”, Proceedings of the Summer Computer Simulation Conference, SCSC 96, 21-25 July 1996, Portland (Oregon), SCS, pp.497-501.
- C13. H.D.Karatza.** “Sender-Initiated Versus Receiver-Initiated Adaptive Load Sharing with Resequencing”, Proceedings of the 8th European Simulation Symposium & Exhibition, Genoa, Italy, October 24-26, 1996, SCS, pp.546-550.
- C14. H.D.Karatza.** “Multitasking and Resequencing in a Two-Stage Multiprocessing System”, Proceedings of the Winter Simulation Conference, eds. J.M.Charnes, D.M.Morrice, D.T.Brunner and J.J.Swain, 8-11 December 1996, Coronado, California, ACM, IEEE, SCS, pp.1247-1251.
- C15. A.A. Karageorgos and H.D.Karatza.** “Performance Issues of Task Routing and Task Scheduling with Resequencing in Homogeneous Distributed Systems”, Proceedings of the 30th Annual Simulation Symposium (part of the Simulation MultiConference 97), 6-10 April 1997, Atlanta, GA, IEEE Computer Society Press, pp.56-63.
- C16. H.D. Karatza and R.C. Huntsinger.** “Multitasking and Resequencing in a Shared Memory Multiprocessing System”. Proceedings of the 1997 Summer Computer Simulation Conference, SCS, Eds. M.S. Obaidat, and J. Illgen, July 13-17, Arlington, Virginia, pp.112-117.
- C17. H.D. Karatza.** “Rejection Blocking versus Transfer Blocking in a System with Two Processors Linked in Series”. Proceedings of the 1st World Congress on Systems Simulation (WCSS '97), IEEE Singapore Section - SCS, Eds. Y.M.Teo, W.C. Wong, T.I. Oren and R. Rimane, September 1-3, 1997, Singapore, pp.498-502.
- C18. H.D. Karatza.** “Assignment of programs in a Distributed System with Resequencing”. Proceedings of the 31st Annual Simulation Symposium (SS'98)(Advanced Simulation Technologies Conference (ASTC'98)), Boston, MA, IEEE Computer Society, April 5-9, 1998, pp. 34-41.
- C19. H.D. Karatza.** “Eager Scheduling versus Lazy Scheduling with Resequencing”. Proceedings of the Symposium on Performance Evaluation of Computer and Telecommunication Systems '1998 (SPECTS '98) - 1998 Summer Computer Simulation Conference (SCSC '98), SCS, M. Obaidat and H.Khalid, Eds., Reno, Nevada, July 19-22, pp. 261-267.
- C20. H.D. Karatza and R.C.Hilzer.** “Processor Failures in a Shared - Memory Multiprocessor System with Resequencing”. Proceedings of the High Performance Computing Symposium '99, (Part of the

Advanced Simulation Technologies Conference (ASTC'99)), San Diego, California, April 11-15, 1999, SCS, pp. 243-248.

- C21. H.D. Karatza.** "A Simulation-Based Performance Analysis of Gang Scheduling in a Distributed System". Proceedings of the 32nd Annual Simulation Symposium (Advanced Simulation Technologies Conference (ASTC'99)), San Diego, CA, IEEE Computer Society, April 11-15, 1999, pp. 26-43.
- C22. H.D. Karatza.** "A Two-Stage Multiprocessor System with Preemption and Resequencing". Proceedings of the 13th European Simulation Multiconference, Warsaw, Poland, June 1-4, 1999, Vol. II, SCS, pp.59-63.
- C23. H.D. Karatza.** "Gang Scheduling in a Distributed System with Processor Failures". Proceedings of the UK Performance Engineering Workshop (UKPEW'99), University of Bristol, July 22-23, 1999, Bristol, UK, pp. 199-208.
- C24. H.D. Karatza.** "Coscheduling in a Partitionable Parallel Processing System". Proceedings of the 7th Hellenic Conference on Informatics, August 26-29, 1999, Ioannina, Greece, University of Ioannina Press, pp.IV.29-IV.37.
- C25. H.D. Karatza.** "A Simulation Model of Task Cluster Scheduling in Distributed Systems". Proceedings of the 7th IEEE Workshop on Future Trends of Distributed Computing Systems (FTDCS '99), IEEE Computer Society Press, December 20-22, 1999, Cape Town, pp. 163-168.
- C26. H.D. Karatza.** "Scheduling Strategies for Multitasking in a Distributed System". Proceedings of the 33rd Annual Simulation Symposium (SS'2000) (Advanced Simulation Technologies Conference (ASTC'2000)), Washington, DC., CA, IEEE Computer Society Press, April 16-20, 2000, pp. 83-90.
- C27. H.D. Karatza.** "Gang Scheduling and I/O Scheduling in a Multiprocessor System". Proceedings of SPECTS'2K, 2000 SCS Symposium on Performance Evaluation of Computer and Telecommunication Systems, Eds. Mohammad Obaidat, Franco Davoli, and Marco Ajmone Marsan, July 16-20, 2000, Vancouver, BC, Canada, SCS, pp. 245-252.
- C28. H.D. Karatza.** "Processor and I/O Scheduling in a Multiprogrammed Parallel System". Proceedings of 4th International Conference on Systemics, Cybernetics and Informatics, (SCI'2000), July 23-26, 2000, Orlando, Florida, International Institute of Informatics and Systemics, Volume VIII, Computer Science and Engineering: Part II, pp. 520-525.
- C29. H.D. Karatza.** "A Simulation based Performance Analysis of Scheduling in a Parallel System", Proceedings of 12th European Simulation Symposium and Exhibition (ESS 2000), Hambourg, Germany, September 28-30, 2000, SCS, pp.582-586.
- C30. H.D. Karatza.** "A Simulation Model of Backfilling and I/O Scheduling in a Partitionable Parallel System". Proceedings of Winter Simulation Conference, ACM, IEEE, SCS, Orlando, Florida, December 2000, pp. 496-505.
- C31. H.D. Karatza.** "Scheduling Jobs with Different Characteristics in a Partitionable Parallel System". Proceedings of the UKSim 2001 Conference, UK Simulation Society, Cambridge, England, March 28-30, 2001, pp. 223-229.
- C32. H.D. Karatza and R.C. Hilzer.** "Epoch Load Sharing in a Network of Workstations". Proceedings of the 34th Annual Simulation Symposium, IEEE Computer Society Press, SCS, Seattle, Washington, April 22-26, 2001, pp. 36-42.
- C33. H.D. Karatza.** "Task Cluster Scheduling and I/O Scheduling in a Workstation Cluster". Proceedings of the 15th European Simulation Multiconference, (Analytical and Stochastic Modeling Techniques), SCS, Prague, June 6-9, 2001, pp. 705-709.
- C34. H.D. Karatza.** "Epoch Scheduling in a Distributed System". Proceedings of the Eurosim 2001 Congress, Eurosim, Delft, Netherlands, June 26-19, 2001, 6 pages.

- C35. H.D. Karatza and I.D. Scherson.** “Scheduling Job Classes in a Distributed System”. Proceedings of SPECTS'2001, 2001 SCS Symposium on Performance Evaluation of Computer and Telecommunication Systems, SCS, Orlando, Florida, July 2001, pp. 322-329.
- C36. H.D. Karatza.** “Performance of Scheduling Strategies in a Multiprocessor System with Varying Workload”, Proceedings of the Simulation Workshop, The Operational Research (OR) Society, Birmingham, UK, March 20-21, 2002, pp. 91-96.
- C37. H.D. Karatza.** “Gang Scheduling Performance on a Cluster of Non-Dedicated Workstations”, Proceedings of the 35th Annual Simulation Symposium, IEEE Computer Society Press, SCS, San Diego, California, April 14-18, 2002, pp. 115-121.
- C38. H.D. Karatza and R.C. Hilzer.** “Scheduling a Job Mix in a Partitionable Parallel System”. Proceedings of the 35th Annual Simulation Symposium, IEEE Computer Society Press, SCS, San Diego, California, April 14-18, 2002, pp. 235-241.
- C39. H.D. Karatza.** “Scheduling Issues in a Partitionable Parallel System”, Proceedings of the 16th European Simulation Multiconference, ESM2002, SCS, Darmstadt, Germany, June 3-5, 2002, pp. 522-526.
- C40. H.D. Karatza.** “Epoch Task Cluster Scheduling in a Distributed System”, Proceedings of the 2002 International Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS 2002, SCS, San Diego, California, July 14-19, 2002, pp. 259-265.
- C41. H.D. Karatza and R.C. Hilzer.** “Load Sharing in Heterogeneous Distributed Systems”, Proceedings of the Winter Simulation Conference, ACM, IEEE, SCS, San Diego, California, December 8-11, 2002, pp. 489-496.
- C42. H.D. Karatza and R.C. Hilzer.** “Performance Analysis of Parallel Job Scheduling in Distributed Systems”, Proceedings of the 36th Annual Simulation Symposium, IEEE Computer Society Press, SCS, Orlando, Florida, March 30 - April 2, 2003, pp.109-116.
- C43. K.G. Zerfiridis, and H.D. Karatza..** “Dissemination Scenarios in Peer-to-Peer Networks”, Proceedings of the 36th Annual Simulation Symposium, IEEE Computer Society Press, SCS, Orlando, Florida, March 30 - April 2, 2003, pp.309-316 .
- C44.K.G. Zerfiridis, and H.D. Karatza.** “Centralized and Decentralized Service Discovery on a Peer-to-Peer Network - A Simulation Study”, Sixth United Kingdom Simulation Society Conference, UKSim 2003, Emmanuel College, Cambridge, England, 9th-11th April 2003, pp.171-177.
- C45. H.D. Karatza.** “Co-Scheduling in a Parallel System Under Time Varying Workload”, Sixth United Kingdom Simulation Society Conference, UKSim 2003, Emmanuel College, Cambridge, England, 9th-11th April 2003, pp. 181-187.
- C46.K.G. Zerfiridis, and H.D. Karatza.** “Large Scale Dissemination using a Peer-to-Peer Network”, Proceedings of the 3rd International Workshop on Global and Peer-to-Peer Computing on Large Scale Distributed Systems, IEEE/ACM International Symposium on Cluster Computing and the Grid 2003, Tokyo, Japan, 12-15 May 2003, pp. 421-427.
- C47. H.D. Karatza.** “Gang Scheduling in a Distributed System under Processor Failures and Time-varying Gang Size”, Proceedings of the 9th IEEE Workshop on Future Trends of Distributed Computing Systems (FTDCS '03), IEEE Computer Society Press, May 28-30 2003, San Juan, Puerto Rico, pp. 330-336.
- C48.K.G. Zerfiridis, and H.D. Karatza.** “Bandwidth Management in a Centralized Large Scale Dissemination Network - A Simulation Study”. Proceedings of the 17th European Simulation Multiconference (ESM 2003), Nottingham, England, June 9-11, 2003, pp. 385-390.

- C49. C.X. Mavromoustakis and H.D. Karatza**, “On the Extensibility Properties and Performance Measures of Circuit Switched Telecommunication Networks, using Agent-based Distributed Routing Algorithm”. Proceedings of 2003 International Symposium on Performance Evaluation of Computer and Telecommunication Systems-SPECTS, July 20 - 24, 2003, Montreal, Canada, pp. 240-247.
- C50.K.G. Zerfiridis, and H.D. Karatza**. “Fault Tolerant Peer-to-Peer Dissemination Network”. Proceedings of Euro-Par 2003 International Conference on Parallel and Distributed Computing, Klagenfurt, Austria, 26-29 August, 2003, Springer-Verlang Berlin Heidelberg, LNCS 2790, pp. 1257-1264.
- C51. H.D. Karatza**. “Performance Analysis of a Distributed System under Time-varying Workload and Processor Failures”, Proceedings of the 1rst Balkan Conference on Informatics (BCI2003), November 21-23, 2003, Thessaloniki, Greece, Publishing Centre T.E.I. of Thessaloniki, pp. 502-516.
- C52.K.G. Zerfiridis, and H.D. Karatza**. “Optimized Dissemination of Highly Anticipated Content over an Itinerary Based P2P Network”. Proceedings of the 37th Annual Simulation Symposium, IEEE Computer Society Press, SCS, Arlington, Virginia, April 18-22, 2004, pp. 265-272.
- C53. C.X. Mavromoustakis and H.D. Karatza**, “Adaptive Energy Conservation Model using Dynamic Caching for Wireless Devices”. Proceedings of the 37th Annual Simulation Symposium, IEEE Computer Society Press, SCS, Arlington, Virginia, April 18-22, 2004, pp. 257-264.
- C54. C.X. Mavromoustakis and H.D. Karatza**, “An on demand path marking and capacity reservation method using Split Agent”. Proceedings of the Workshop on Challenges of Large Applications in Distributed Environments (CLADE), in conjunction with the thirteenth IEEE International Symposium on High-Performance Distributed Computing (HPDC-13), Honolulu, Hawaii, 07 June, 2004, pp. 128-137.
- C55.H.D. Karatza**, “Epoch Task Scheduling in Distributed Server Systems”, Proceedings of 2004 High-Performance Computing in Simulation, Track in ESM 2004, (18th European Simulation Multiconference). Magdeburg, Germany, 13-16 June 2004, SCS, Erlangen, Germany, pp. 103-108.
- C56. D. Filippopoulos and H.D. Karatza**, “On the Performance Benefits of Dynamically Co-allocating Parallel Jobs in Heterogeneous Clusters”, Proceedings of the 20th Annual UK Performance Engineering Workshop, UKPEW2004, July 7 & 8, 2004, Inprint and Design, University of Bradford, pp. 62-70.
- C57. H.D. Karatza and R.C. Hilzer**. “Scheduling Sequential Jobs and Gangs in a Distributed Server System”. Proceedings of the 5th EUROSIM Congress on Modelling and Simulation, September 06-10, 2004, ESIEE Paris, SCité Descartes, Marne la Vallée, FRANCE, ISBN 3-901608-28-1 Publisher: EUROSIM-FRANCOSIM-ARGESIM, 2004, pp. 17-22.
- C58. C.X. Mavromoustakis and H.D. Karatza**, “Handling Delay Sensitive Contents using Adaptive Traffic-based Control Method for Minimizing Energy Consumption in Wireless Devices”. Proceedings of 38th Annual Simulation Symposium (ANSS), IEEE Computer Society Press, SCS, San Diego, CA, April 2-8, 2005, pp. 295-302.
- C59. C.X. Mavromoustakis and H.D. Karatza**, “Bandwidth Clustering for Reliable and Prioritized Network Routing using Split Agent-based method”. Proceedings of International Workshop on Assurance in Distributed Systems and Networks (ADSN 2005) (in conjunction with the 24th International Conference on Distributed Computing Systems (ICDCS 2005), IEEE Computer Society, Columbus, Ohio, USA, June 6, 2005, pp. 89-94.
- C60. C.X. Mavromoustakis and H.D. Karatza**, “Performance Measures of Swarm based Active Network for Multiclass Packet Routing-A Simulation study”, Proceedings of 2005 High-Performance

Computing & Simulation, Track in ECMS 2005, (19th European Conference on Modeling and Simulation). Riga, Latvia, 1-4 June 2005, ECMS, Riga, Latvia, pp. 794-801.

- C61. C.X. Mavromoustakis and H.D. Karatza**, “Reliable File Sharing Scheme for Mobile Peer-to-Peer Users Using Epidemic Selective Caching”. Proceedings of the IEEE International Conference on Pervasive Services (ICPS), 11-14 July 2005, Santorini, pp. 169-177.
- C62. C.X. Mavromoustakis and H.D. Karatza**, “Segmented File Sharing with Recursive Epidemic Placement Policy for Reliability in Mobile Peer-to-Peer Devices”. Proceedings of the 13th Annual Meeting of the IEEE International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS), Georgia Tech, Atlanta, Georgia, September 26-29, 2005, pp. 371-380.
- C63. C.X. Mavromoustakis and H.D. Karatza**, “Epidemic Collaborative Geocast for Reliable Segmented File Sharing in Mobile Peer-to-Peer Devices”, Proceedings of the 10th Panhellenic Conference on Informatics, PCI 2005, November 11-13, 2005, Volos, Greece, Lecture Notes in Computer Science Series by Springer-Verlag, Springer-Verlag Berlin Heidelberg 2005, LNCS 3746, pp. 211-222.
- C64. C.X. Mavromoustakis and H.D. Karatza**, “Swarm-based Active Tunable Routing for Overhead Reduction in Multiservice networks”. Proceedings of 39th Annual Simulation Symposium (ANSS), IEEE Computer Society Press, SCS, Huntsville, AL, April 2 - 6, 2006, pp. 294-303.
- C65. C.X. Mavromoustakis and H.D. Karatza**, “On the Performance Analysis of Recursive Data Replication Scheme for File Sharing in Mobile Peer-to-Peer Devices Using the HyMIS Scheme”. Proceedings of the 5th International Workshop on Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems (PMEO-PDS 2006) in conjunction with IEEE International Parallel & Distributed Processing Symposium (IPDPS), Rhodes Island, Greece, April 25-29, 8 pages (CD), 2006.
- C66. H.D. Karatza**, “Performance Analysis of Gang Scheduling in a Partitionable Parallel System”. Proceedings of 2006 High-Performance Computing & Simulation, Track in ECMS 2006, (20th European Conference on Modeling and Simulation). 28-31 May 2006, ECMS, Bonn, Germany, pp. 699-704.
- C67. C.X. Mavromoustakis and H.D. Karatza**, “Epidemic Collaborative Replication for Maintaining File Sharing Reliability in Mobile Peer-to-Peer devices”. Proceedings of the International Symposium on Performance Evaluation of Computer and Telecommunication Systems-SPECTS 2006, July 24-28, 2006, Calgary, Canada, pp. 129-136.
- C68. D. Filippopoulos and H. Karatza**, “A Two-Class Parallel Queue with Pure Space Sharing Among Rigid Jobs and General Service Times”. Proceedings of the First International Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS), Pisa, Italy, October 11-13, 2006, ACM, 10 pages.
- C69. Maria Ioannidou and Helen Karatza**, “Multi-site scheduling with multiple job reservations and forecasting methods”, Proceedings of the 2006 International Symposium on Parallel and Distributed Processing and Applications (ISPA-06), Sorrento, Italy, December 1-4, 2006, Springer, Lecture Notes in Computer Science 4330, pp. 894-903.
- C70. C.X. Mavromoustakis and H.D. Karatza**, “Performance measures of stream-oriented power consumption for asymmetrical communication in wireless ad-hoc networks”. Proceedings of 40th Annual Simulation Symposium (ANSS), IEEE Computer Society Press, SCS, Norfolk, VA, March 25 - 28, 2007, pp. 310-317.
- C71. H.D. Karatza**, “Performance of Gang Scheduling Policies in the Presence of Critical Sporadic Jobs in Distributed Systems”. Proceedings of the International Symposium on Performance Evaluation of Computer and Telecommunication Systems-SPECTS 2007, July 16-18, 2007, San Diego, CA, pp. 547-554.

- C72. C.X. Mavromoustakis, H.D. Karatza**, “An optimal adaptive approach using behavioral promiscuous caching and storage-capacity characteristics for energy conservation in asymmetrical wireless devices”, Proceedings of the 12th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD '07), Athens, Greece, 7 September, 2007 (Part of the 18th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2007)), 8 pages (CD).
- C73. S. Zikos and H.D. Karatza**, “Resource Allocation Strategies in a 2-level Hierarchical Grid System”, Proceedings of the 41st Annual Simulation Symposium (ANSS), IEEE Computer Society Press, SCS, April 13-16, 2008, Ottawa, Canada, pp. 157-174.
- C74. G. Stavrinides and H.D. Karatza**, “Performance Evaluation of Gang Scheduling in Distributed Real-Time Systems with Possible Software Faults”, Proceedings of the 2008 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS 2008), June 16-18, Edinburgh, UK, pp. 1-7.
- C75. K. Karaoglanoglou and H. Karatza**, “Resource Discovery in a Grid System based on Matchmaking-Routers”, Proceedings of the Panhellenic Conference on Informatics (PCI 2008), 28-30 August 2008, Samos, Greece, IEEE Computer Society, pp. 73-77.
- C76. C.X. Mavromoustakis, H.D. Karatza**, “End-to-end layered asynchronous scheduling scheme for energy aware QoS provision in asymmetrical wireless devices”, Proceedings of the AQuSerM: Advances in Quality of Service Management Workshop, part of the 12th IEEE EDOC Conference 2008, 18th September, 2008, München, Germany, pp. 96-104.
- C77. Z. Papazachos, and H. Karatza**, “Performance Evaluation of Gang Scheduling in a Two-Cluster System with Migrations”, Proceedings of the 8th International Workshop on Performance Modeling, Evaluation, and Optimization of Ubiquitous Computing and Network Systems (PMEO-UCNS 2009) in conjunction with IEEE International Parallel & Distributed Processing Symposium (IPDPS), Rome, Italy, May 25-29, 2009, 8 pages in CD Proceedings.
- C78. K. Karaoglanoglou, and H. Karatza**, “Performance Evaluation of a Resource Discovery Scheme in a Grid Environment Prone to Resource Failures”, Proceedings of the 8th International Workshop on Performance Modeling, Evaluation, and Optimization of Ubiquitous Computing and Network Systems (PMEO-UCNS 2009) in conjunction with IEEE International Parallel & Distributed Processing Symposium (IPDPS), Rome, Italy, May 25-29, 2009, 8 pages in CD Proceedings.
- C79. Z. Papazachos, and H. Karatza**, “Scheduling Gangs with Different Distributions in Gangs’ degree of Parallelism in a Multi-Site System”, the Proceedings of the 4th Balkan Conference in Informatics, IEEE CPS, Thessaloniki, Greece, September 17th- 19th, 2009, pp.121-126.
- C80. Z. Papazachos, and H. Karatza**, “Gang Scheduling in a Two-Cluster System with Critical Sporadic Jobs and Migrations”, Proceedings of the 2009 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS 2009), Istanbul, Turkey, 13-16 July, 2009, pp.41-48.
- C81. C.X. Mavromoustakis, H.D. Karatza**, “Enabling High Throughput for Delay Sensitive Streams using Epidemic Replication in Clustered MP2P Devices”, in Proceedings of the ICST/ACM International Mobile Multimedia Communications Conference (MobiMedia 2009), Workshop on Internet Multimedia Subsystem (IMS) and Related Services, London, UK, 7-9th September 2009.
- C82.S. Dimitriadou and H.D. Karatza**, “Multi-Site Allocation Policies on a Grid and Local Level”, Proceedings of the Fourth International Workshop on Practical Applications of Stochastic Modelling (PASM'09), (Mascots 2009 Workshop), 24 Sept. 2009, Imperial College, London, Elsevier's ENTCS (Electronic Notes in Theoretical Computer Science), Vol. 261, 22 Febr. 2010, pp. 163-179.

- C83. S. Dimitriadou and H.D. Karatza**, “Job Scheduling in a Distributed System Using Backfilling with Inaccurate Runtime Computations”, to appear in the Proceedings of the 4th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2010), IEEE Computer Society, Krakow, Poland, Febr. 15-18, 2010, pp. 329-336.
- C84. S. Zikos and H. Karatza**, “Clairvoyant site allocation of jobs with highly variable service demands in a computational grid”, Proceedings of the 9th International Workshop on Performance Modeling, Evaluation, and Optimization of Ubiquitous Computing and Networked Systems (PMEO-UCNS'10), in conjunction with IPDPS 2010, April 19-23, 2010, Atlanta, USA (sponsored by IEEE Computer Society and ACM SIGARCH), 8 pages in CD Proceedings.
- C85. Z. Papazachos, and H. Karatza**, “Gang Scheduling with Precedence Constraints”, Proceedings of the 2010 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS 2010), Ottawa, Canada, 11-14 July, 2010, pp. 331-337.
- C86. G. Stavrinides and H.D. Karatza**, “The Impact of Input Error on the Scheduling of Task Graphs with Imprecise Computations in Heterogeneous Distributed Real-Time Systems”, Proceedings of the 18th International Conference on Analytical and Stochastic Modelling Techniques and Applications(ASMTA'11), Springer, LNCS, Vol. 6751, pp.273-287, Venice, Italy, 20-22 June 2011.
- C87. F. Loukos and H.D. Karatza**, “SPECT: A System for Peer-to-Peer Economic Transactions”, Proceedings of ISCC 2011 (16th IEEE International Symposium on Computer Communications), June 28-July 1, 2011, Corfu, Greece, pp.1081-1084.
- C88. I. Moschakis and H.D. Karatza**, “Performance and Cost evaluation of Gang Scheduling in a Cloud Computing System with Job Migrations and Starvation Handling”, Proceedings of ISCC 2011 (16th IEEE International Symposium on Computer Communications), June 28-July 1, 2011, Corfu, Greece, pp. 418-423.
- C89. K. Karaoglanoglou, and H. Karatza**, “Directing Requests in a Large-Scale Grid System based on Resource Categorization”, 2011 International Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS 2011, June 27-30, 2011, The Hague, Netherlands, pp. 9-15.
- C90. C.X. Mavromoustakis, and H.D. Karatza**, “On the large scale performance evaluation of an end-to-end V-HYMIS reliable streaming scheme under delay sensitive traffic with finite capacity and intermittent connectivity”, Proceedings of the 7th Annual UK Performance Engineering Workshop (UKPEW 2011), Bradford, UK, 7-8 July, 2011, pp. 226-240.
- C91. K.Z. Gkoutioudi, and H.D. Karatza**, “A simulation study of multi-criteria scheduling in grid based on genetic algorithms”, ISPA 2012, Madrid, 10-13 July 2012, pp. 317-324.
- C92.K. Karaoglanoglou, and H. Karatza**, “Directing Requests and Acquiring Knowledge in a Large-Scale Grid System”, 2012 International Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS 2012, Genoa, Italy, July 8-11, 2012.
- C93.I. Moschakis and H.D. Karatza**, “Parallel Job Scheduling on a Dynamic Cloud Model with Variable Workload and Active Balancing”, 16th Panhellenic Conference on Informatics (PCI 2012), Piraeus, Greece, 5 - 7 October 2012, pp. 93-98.
- C94.G. Terzopoulos and H.D. Karatza**, “Maximizing performance and energy efficiency of a real-time heterogeneous 2-level grid system using DVS”, 16th IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications (DS-RT 2012), Dublin, Ireland, pp.185-191.
- C95.G. Terzopoulos and H.D. Karatza**, “Power-aware load balancing in heterogeneous clusters”, 2013 International Symposium on Performance Evaluation of Computer and Telecommunication Systems, SPECTS 2013, Toronto, Canada, July 7-10, 2013, pp. 148-154.

- C96.G. Terzopoulos and H.D. Karatza**, “Dynamic Voltage Scaling Scheduling on Power-Aware Clusters under Power Constraints”, 17th IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications (DS-RT 2013), Delft, Netherlands, Oct. 30 – Nov. 1, 2013.
- C97.G. Terzopoulos and H.D. Karatza**, “Bag-of-Task Scheduling on Power-aware Clusters using a DVFS-based mechanism”, The 10th Workshop on High-Performance, Power-Aware Computing (HPPAC 2014), 28th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2014), May 19-23, 2014, Phoenix, Arizona.
- C98.G.L. Stavrinides, H.D. Karatza**, “The impact of resource heterogeneity on the timeliness of hard real-time complex jobs”, Workshop on Distributed Sensor Systems for Assistive Environments, The 7th ACM International Conference on Pervasive Technologies Related to Assistive Environments, PETRA 2014, May 27-30, Rhodes, Greece.
- C99.H.D. Karatza**, “Scheduling Jobs with Different Characteristics in Distributed Systems”, 2014 International Conference on Computer, Information and Telecommunication Systems (CITS 2014), Jeju Island, South Korea, 7-9 July 2014.
- C100.G.L. Stavrinides, H.D. Karatza**, “Scheduling Real-Time Jobs in Distributed Systems - Simulation and Performance Analysis”, NESUS Cost Action IC1305 Workshop, Porto, 27-28 August 2014.
- C101. K. Skenteridou, and H. Karatza**, “Job Scheduling in a Grid Cluster”, The 2015 International Conference on Computer, Information and Telecommunication Systems (CITS 2015), Gijón, Spain, July 15-17, 2015.
- C102. Z. Papazachos, and H. Karatza**, “Scheduling Bags of Tasks and Gangs in a Distributed System”, The 2015 International Conference on Computer, Information and Telecommunication Systems (CITS 2015), Gijón, Spain, July 15-17, 2015.
- C103. G.L. Stavrinides, H.D. Karatza**, “A cost-effective and QoS-aware approach to scheduling real-time workflow applications in PaaS and SaaS clouds”, In Proceedings of the 3rd International Conference on Future Internet of Things and Cloud (FiCloud'15), Rome, Italy, Aug. 2015.
- C104. D. Tychalas and H. Karatza**, “A Cloud System for Health Care”, 19th Panhellenic Conference on Informatics (PCI 2015), 1-3 October 2015, Athens, Greece (short paper).
- C105.Ilias Mavridis and Eleni Karatza**, “Log File Analysis in Cloud with Apache Hadoop and Apache Spark”, Proc. of 2nd International Workshop on Sustainable Ultrascale Computing Systems (NESUS 2015), Sept. 2015.
- C106. G. Terzopoulos and H.D. Karatza**, “Bag-of-Tasks load balancing on Power-aware Clusters”, The 24th Euromicro International Conference on Parallel, Distributed and Network-Based Processing, PDP 2016, Heraklion, Crete, 17-19 Febr. 2016.
- C107.M. Bombardieri, Castanò, S., Curcio, F., Furfaro, A., and Karatza, H. D.**, “Honeypot-powered Malware Reverse Engineering”, 3rd IEEE International Symposium on Software Defined Systems (SDS-2016), Berlin, Germany.
- C108. G.L. Stavrinides, H.D. Karatza**, “Scheduling different types of applications in a SaaS cloud”, in Proceedings of the 6th International Symposium on Business Modeling and Software Design (BMSD'16), Rhodes, Greece, Jun. 2016, pp.144-151.
- C109. G. L. Stavrinides and H. D. Karatza**, “Scheduling real-time parallel applications in SaaS clouds in the presence of transient software failures”, in Proceedings of the 2016 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS'16), Montreal, Canada, Jul. 2016, pp. 633-640.
- C110. G. L. Stavrinides and H. D. Karatza**, “Simulation-Based Performance Evaluation of an Energy-Aware Heuristic for the Scheduling of HPC Applications in Large-Scale Distributed Systems”, in Proceedings of ENERGY-SIM 2017, 23rd April 2017, L’Aquila, Italy, in conjunction with the 8th ACM International Conference on Performance Engineering (ACM ICPE) 2017, pp. 49-54.
- C111. G. L. Stavrinides and H. D. Karatza**, “Periodic scheduling of mixed workload in distributed systems”, in Proceedings of the 23rd ICE/IEEE International Technology Management Conference, Madeira Island, Portugal, 27-29 Jun. 2017.

- C112. I. Mavridis and H. Karatza**, "Performance and Overhead Study of Containers Running on Top of Virtual Machines", in Proceedings of the 1st International Workshop in Requirements Engineering and Design for Big Data Analytics and Applications (REDBDAA), 19th IEEE Conference on Business Informatics, Thessaloniki, Greece, July 2017.
- C113. G. L. Stavrinides and H. D. Karatza**, "The Effect of Workload Computational Demand Variability on the Performance of a SaaS Cloud with a Multi-Tier SLA", in Proceedings of the 5rd International Conference on Future Internet of Things and Cloud (FiCloud'17), Prague, Czech Republic, Aug. 2017, IEEE.
- C114. G. L. Stavrinides and H. D. Karatza**, "The impact of data locality on the performance of a SaaS cloud with real-time data-intensive applications", in Proceedings of the 21st IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications (DS-RT'17), Rome, Italy, October 18-20, 2017.

Other Publications

- A1. H.D. Karatza**. "Parallel Discrete Event Simulation of Queueing Network Models", Edinburgh Parallel Computing Center (EPCC) Project Directory 1994-1995, pp.18-19.
- A2. H. D. Karatza**. "Introduction to the Special Issue: Modeling and Simulation Applications in Scheduling Multiprocessor Systems". Simulation Journal, SCS, Volume 77, No. 5-6, pp. 167-168, 2001.
- A3. H. D. Karatza**. "Current Trends in Modelling and Simulation of Parallel and Distributed Systems". Editorial Paper, International Journal of Simulation: Systems, Science & Technology, The UK Simulation Society - Special Issue: "Modeling and Simulation of Parallel and Distributed Systems", Volume 3, Numbers 1-2, June 2002, pp. 1-4.
- A4. H. D. Karatza**. "Introduction to the Special Issue: Computer Systems". The Journal of Systems and Software, Elsevier, Volume 71, Issue 3, May 2004, pp. 199-200.
- A5. H. D. Karatza**. "Introduction to the Special Issue: Modeling and Simulation of Distributed Systems and Networks". Simulation Modelling Practice and Theory Journal, Elsevier, Vol 12/3-4, pp 183-185, 2004.
- A6. H. D. Karatza**. "Introduction to the Special Issue: "Performance Modeling and Analysis of Computer Systems and Networks". The Journal of Systems & Software, Elsevier, Vol 73/1 pp 1-2, 2004.
- A7. H. D. Karatza**. Introduction to the Special Issue: "Modeling and Simulation Applications in Cluster and Grid Computing". SIMULATION: Transactions of the Society for Modeling and Simulation International, Vol. 80/4-5, pp. 179-180, 2004.
- A8. H. D. Karatza**. Introduction to the Special Issue: "On Modeling and Simulation of Emerging Wireless and Sensor Network Technologies and Applications". SIMULATION: Transactions of the Society for Modeling and Simulation International, Vol. 81/6, pp. 397-398, 2005.
- A9. H. D. Karatza and G. K. Theodoropoulos**. Introduction to the Special Issue: "Distributed Systems Simulation". Simulation Modelling Practice and Theory Journal, Elsevier, Vol. 14, Issue 6, August 2006, 677-678.
- A10. H. D. Karatza and R. Fujimoto**. Introduction to the Special Issue: "Recent Advances in Network Modeling and Simulation". SIMULATION: Transactions of the Society for Modeling and Simulation International, Vol. 82, Number 2, February 2006, pp. 91-92.
- A11. H. D. Karatza**. Introduction to the Special Issue: "On Internet and Wireless Network Performance". SIMULATION: Transactions of the Society for Modeling and Simulation International, Vol. 82, No. 5, May 2006, pp. 277-278.

- A12. H. D. Karatza.** Introduction to the Special Issue: “New Challenges in Large-Scale Computer Systems and Network Modeling and Simulation”. SIMULATION: Transactions of the Society for Modeling and Simulation International, Vol. 83, No. 3, pp. 215-216, 2007.
- A13. Emmanuel Jeannot, Ramin Yahyapour, Daniel Grosu, Helen D. Karatza:** Introduction. Topic 3 : Scheduling and Load Balancing. Euro-Par 2009: 165-165.
- A14. Allen D. Malony, Helen D. Karatza, William J. Knottenbelt, Sally McKee: Introduction.** Topic 2: Performance Prediction and Evaluation. Euro-Par 2012: 52-53
- A15. H. D. Karatza and C. Mavromoustakis,** “Introduction to the Special Issue on Simulation-based Performance Evaluation of Infrastructures for the Internet of Things: Connectivity and resource considerations in the mobility Era”, Simulation Modelling Practice and Theory, 34 (2013) pp. 157–158.
- A16. H.D. Karatza,** “Energy efficiency in Grids and Clouds”, Simulation Modelling Practice and Theory, Elsevier, Special Issue, Vol. 39, pp. 1-2, 2013.
- A17. H.D. Karatza,** “Resource Management in Mobile Clouds”, Simulation Modelling Practice and Theory, Elsevier, Special Issue, Vol. 50, pp.1-2, 2015.
- A18. H.D. Karatza and J. Carretero,** “Techniques and Applications for Sustainable Ultrascale Computing Systems”, Simulation Modelling Practice and Theory, Elsevier, Special Issue, Vol. 58, pp. 1-2, 2015.
- A19. R. Duwairi and H. Karatza,** “Advances on Information and Communication Systems”, Simulation Modelling Practice and Theory, Vol. 64, pp.1-2, May 2016.
- A20. H.D. Karatza,** “Smart Cities and Internet of Things”, Simulation Modelling Practice and Theory, Elsevier, Special Issue, Vol. 73, pp.1-2, April 2017.
- A21. Joanna Kolodziej, Horacio González-Vélez, H.D. Karatza,** “High-Performance Modelling and Simulation for Big Data Applications”, Simulation Modelling Practice and Theory, Elsevier, Special Issue, Vol. 76, pp.1-2, August, 2017.