

Dr. Ioannis Dimitriou

CONTACT INFORMATION	Associate Professor Department of Mathematics Probability, Statistics & Operations Research Group University of Ioannina University Campus Ioannina, 45110, Greece	 	<i>Tel:</i> +3026510 08260 <i>E-mail:</i> idimit@uoi.gr, <i>WWW:</i> Personal website
GENERAL INFORMATION	Date of Birth: Place of Birth:		13 November 1980 Athens, Greece
RESEARCH INTERESTS	Applied probability, Queueing theory, Stochastic operations research, Stochastic models, Performance analysis.		
ACADEMIC APPOINTMENTS	Associate Professor Dept. of Mathematics, University of Ioannina, Ioannina, 45110, Greece. Assistant Professor Dept. of Mathematics, University of Patras, Patras, 26504, Greece. Lecturer Dept. of Mathematics, University of Patras, Patras, 26504, Greece. Adjunct Teaching Staff , Hellenic Open University, Greece. Marie Curie Fellow ERCIM Alain Bensoussan Fellowship Programme, co-funded by the European Commission under the FP7 Marie-Curie action named ABCDE. Hosting Institution: INRIA, Sophia-Antipolis, MAESTRO Team, France. Scientific coordinator: Dr. Philippe Nain. Postdoctoral researcher Foundation for Research and Technology-Hellas (FORTH), Institute of Computer Science, Telecommunications and Networks Laboratory – Developing the Foundations for Modeling and Analysis of Spectrum Markets (CoRLAB) General Secretariat for Research and Technology, Program “ <i>Αριστεία</i> ”, Research Excellence, Investigator-driven, 2012. – Supervisor: Professor Maria Papadopoulou Postdoctoral researcher Department of Mathematics, Aristotle University of Thessaloniki • Postdoctoral scholarship awarded by the Research Committee of Aristotle University of Thessaloniki – Project title: Developing queueing models for the performance analysis of power-aware wireless systems and data centers. – Supervisor: Professor George Tsaklidis Adjunct Lecturer Department of Business Administration of Food and Agricultural Enterprises. University of Western Greece. Research Adjunct Department of Accounting, Technological Institute of Epirus, Greece.	24 August 2022– Now 5 September 2019–23 August 2022 2 July 2014–4 September 2019 October 2021–Now 1 May 2014–31 July 2014 1 September 2013–21 July 2014 1 January 2013–31 December 2013 March 2013 to July 2013 February 2013 to July 2013	

- Postdoctoral Researcher** October 2011 to July 2012
 Department of Electrical and Electronic Engineering, Imperial College, London, UK
 – FP7 Project (P24736 EESD) FIT4Green, October 2011-June 2012.
 – Supervisor: Professor Erol Gelenbe
- Adjunct Lecturer** March 2011 to August 2011
 Department of Business Administration of Food and Agricultural Enterprises. University of Western Greece.
- Adjunct Lecturer** February 2011 to July 2011
 Department of Economics University of Patras, Greece.
- Research Adjunct** October 2010 to July 2011
 Department of Applied Foreign Languages in Management and Commerce, Technological Institute of Epirus, Greece.
- Laboratorial Adjunct** October 2007 to July 2009
 (i) Department of Finance and Auditing and (ii) Department of Accounting, Technological Institute of Epirus, Greece.

EDUCATION

University of Ioannina, Greece

Ph.D. in Mathematics, Dept. of Mathematics, April 2009

- Thesis Topic: *New results on the theory of retrial queues*
- Adviser: Associate Professor Dr. Christos Langaris
- Area of Study: Queueing theory, stochastic processes

M.Sc in Statistics and Operations Research, Dept. of Mathematics, November 2005

- Thesis Topic: *Phase-type (PH) distributions, a survey*
- Adviser: Associate Professor Dr. Christos Langaris
- Area of Study: Applied probability

BSc in Mathematics, Dept. of Mathematics, November 2003

- Emphasis on Statistics and Operations Research.

REFEREED
PUBLICATIONS

- [1] I. Dimitriou (2024). On dual risk models with proportional gains and dependencies. Accepted. Probability in the Engineering and Informational Sciences, November 2024, doi:10.1017/S0269964824000214 (<https://arxiv.org/abs/2402.12178>, Initial submission).
- [2] I. Dimitriou, D. Fiems (2024). Some reflected autoregressive processes with dependencies, Queueing Systems, vol. 106 (1), pp. 67-127, <https://link.springer.com/article/10.1007/s11134-023-09899-3>.
- [3] I. Adan, I. Dimitriou (2023). A finite compensation procedure for a certain class of two-dimensional random walks, Indagationes Mathematicae, vol 34 (5), pp. 891-935, <https://doi.org/10.1016/j.indag.2023.05.007>.
- [4] I. Dimitriou (2023). A single server retrial queue with event-dependent arrival rates. Annals of Operations Research, vol. 331, pp. 1053-1088, <https://doi.org/10.1007/s10479-023-05263-z>.

- [5] I. Dimitriou (2023). The generalized join the shortest orbit queue system: Stability, exact tail asymptotics and stationary approximations, *Probability in the Engineering and Informational Sciences*, vol 37, pp. 154-191 doi:10.1017/S0269964821000528.
- [6] I. Dimitriou (2023). The Asymmetric Join the Shortest Orbit Queue: Analysis via a Dimensionality Reduction. In: Hyytiä, E., Kavitha, V. (eds) *Performance Evaluation Methodologies and Tools. VALUETOOLS 2022. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, vol 482. Springer, Cham. <https://doi.org/10.1007/978-3-031-31234-2-11>.
- [7] I. Dimitriou, (2022). Stationary analysis of certain Markov-modulated reflected random walks in the quarter plane. *Annals of Operations Research*, vol 310, pp. 35-387, <https://doi.org/10.1007/s10479-020-03676-8> (Arxiv preprint).
- [8] I. Dimitriou (2021). The Join the Shortest Orbit Queue System with a Finite Priority Line. *Springer Verlag Lecture Notes in Computer Science (LNCS)*, vol 13104, pp. 375-395.
- [9] I. Dimitriou, (2021). On partially homogeneous nearest-neighbour random walks in the quarter plane and their application in the analysis of two-dimensional queues with limited state-dependency, *Queueing Systems* 98 (1-2), pp. 95-143.
- [10] N. Pappas, I. Dimitriou, Z. Chen, (2021). On the Benefits of Network-level Cooperation in IoT Networks with Aggregators. *Performance Evaluation*, 147, <https://doi.org/10.1016/j.peva.2021.102196>.
- [11] I. Dimitriou, (2021). Analysis of the Symmetric Join the Shortest Orbit Queue, Accepted, *Operations Research Letters*, 49 (1), pp. 23-29 (Arxiv preprint).
- [12] I. Dimitriou, N. Pappas, (2021). A Random Access G-network: Stability, Stable Throughput, and Queueing Analysis. *Probability in the Engineering and Informational Sciences*, 35 (1), pp. 111-137. (Arxiv preprint).
- [13] M. Saxena, I. Dimitriou, S. Kapodistria, (2020). Analysis of the shortest relay queue policy in a cooperative random access network with collisions. *Queueing Systems*, 94 (1-2), pp. 39-75 .
- [14] I. Dimitriou, (2019). Stationary Analysis of a Tandem Queue with Coupled Processors Subject to Global Breakdowns. *Springer Verlag Lecture Notes in Computer Science (LNCS)*, vol. 11688, pp. 240-259.
- [15] I. Dimitriou, (2019). On the power series approximations of a structured batch arrival two-class retrial system with weighted fair orbit queues. *Performance Evaluation*, 132, pp. 38-56, <https://doi.org/10.1016/j.peva.2019.04.001>.
- [16] I. Dimitriou, N. Pappas, (2019). Performance Analysis of a Cooperative Wireless Network with Adaptive Relays. *Ad Hoc Networks* 87, pp. 157-173.

- [17] I. Dimitriou, (2018). A two-class queueing system with constant retrial policy and general class dependent service times. *European Journal of Operational Research* 270 (3), pp. 1063-1073
- [18] I. Dimitriou, N. Pappas, (2018). Stable Throughput and Delay Analysis of a Random Access Network With Queue-Aware Transmission. *IEEE Transactions on Wireless Communications* 17 (5), pp. 3170-3184 ([Arxiv preprint](#)).
- [19] N. Pappas, Z. Chen, I. Dimitriou, (2018). Throughput and Delay Analysis of Wireless Caching Helper Systems with Random Availability. *IEEE Access* 6(1), pp. 9667-9678.
- [20] E. Morozov, I. Dimitriou, (2017). Stability Analysis of a Multiclass Retrial System with Coupled Orbit Queues. *Springer Verlag Lecture Notes in Computer Science (LNCS)*, vol. 10497, pp. 85-98.
- [21] I. Dimitriou, N. Pappas, (2017). Stability and Delay Analysis of an Adaptive Channel-Aware Random Access Wireless Network. *Springer Verlag Lecture Notes in Computer Science (LNCS)*, vol. 10378, pp. 63-80.
- [22] I. Dimitriou, (2017). Modeling and Analysis of a Relay-Assisted Cooperative Cognitive Network. *Springer Verlag Lecture Notes in Computer Science (LNCS)*, vol. 10378, pp. 47-62.
- [23] I. Dimitriou, (2017). Dynamic balancing in finite processor sharing queues with guard bandwidth policy, multiclass retrial users and signals. *Performance Evaluation* 114, pp. 1-15.
- [24] I. Dimitriou, (2017). A queueing system for modeling cooperative wireless networks with coupled relay nodes and synchronized packet arrivals. *Performance Evaluation* 114, pp. 16-31.
- [25] I. Dimitriou, (2017). A two class retrial system with coupled orbit queues. *Probability in the Engineering and Informational Sciences* 31 (2), pp. 139-179.
- [26] G. Fortetsanakis, I. Dimitriou, M. Papadopouli, (2017). A Game-Theoretical Analysis of Wireless Markets using Network Aggregation. *IEEE Transactions on Mobile Computing* 16(3), pp. 602-616.
- [27] I. Dimitriou, (2016). A retrial queue to model a two-relay cooperative wireless system with simultaneous packet reception. *Springer Verlag Lecture Notes in Computer Science (LNCS)*, vol. 9845, pp 123-139.
- [28] I. Dimitriou, (2016). A queueing model with two types of retrial customers and paired services. *Annals of Operations Research* 238 (1), pp. 123-143.
- [29] I. Dimitriou, (2016). Queueing analysis of the DRX power saving mechanism in fault-tolerant 3GPP LTE wireless networks. *Annals of Operations Research* 239(2), pp. 521-552

- [30] I. Dimitriou, S. Alouf, A. Jean-Marie, (2015). A Markovian queueing system for modeling a smart green base station. Springer Verlag Lecture Notes in Computer Science (LNCS), vol 9272, pp. 3-18.
- [31] I. Dimitriou, (2015). Performance modeling of cellular systems with finite processor sharing queues in random environment, guard policy and flex retrial users. Springer Verlag Lecture Notes in Computer Science (LNCS), vol 9081, pp. 43-58.
- [32] I. Dimitriou, (2015). A retrial queue for modelling fault-tolerant performance systems with checkpointing and rollback-recovery. Computers & Industrial Engineering, vol 79, pp. 156-167.
- [33] I. Dimitriou, (2014). A queueing system with probabilistic inhomogeneous vacations for modeling power-saving in wireless systems with retransmissions. In: Czachorski T., Gelenbe E., Lent R. (eds) Information Sciences and Systems 2014. Springer, Cham.
- [34] I. Dimitriou, (2014). A modified vacation queueing model and its application on the Discontinuous Reception power saving mechanism in unreliable Long Term Evolution networks. Performance Evaluation, vol 77, pp. 37-56.
- [35] I. Dimitriou, (2013). A batch arrival priority queue with recurrent repeated demands, admission control and hybrid failure recovery discipline. Applied Mathematics and Computation, vol 219 (24), pp 11327-11340.
- [36] I. Dimitriou. (2013). A mixed priority retrial queue with negative arrivals, unreliable server and multiple vacations. Applied Mathematical Modelling, vol 37(3), pp 1295-1309.
- [37] I. Dimitriou, (2013). Analysis of a priority retrial queue with dependent vacation scheme and application to energy saving in wireless communication systems. The Computer Journal, vol 56 (11), pp 1363-1380 (Accepted on 2012), doi:10.1093/comjnl/bxs125.
- [38] I. Dimitriou. (2013). A preemptive resume priority retrial queue with state dependent arrivals, unreliable server and negative customers. TOP, vol 21 (3), pp 542-571 (Accepted on 2011), doi:10.1007/s11750-011-0198-4.
- [39] C. Langaris, I. Dimitriou. (2010). A queueing system with n-phases of service and (n-1)-types of retrial customers, European Journal of Operational Research, vol 205, Issue 3, pp 638-649.
- [40] I. Dimitriou, C. Langaris. (2010). A repairable queueing model with two-phase service, start-up times and retrial customers, Computers and Operations Research, vol 37, Issue 7, pp 1181-1190.
- [41] I. Dimitriou, C. Langaris. (2009). A queueing model with start-up/close-down times and retrial customers, Stochastic Models, vol 25, Issue 2, pp 248-269.

- [42] I. Dimitriou, C. Langaris. (2008). Analysis of a retrial queue with two-phase service and server vacations, *Queueing Systems*, vol 60 (1-2), pp 111-129.
- SUBMITTED/IN PREPARATION [43] I. Dimitriou, On generalized Markov-dependent queueing and risk models based on copulas. In preparation, November 2024.
- [44] I. Dimitriou, On vector-valued functional equations with multiple recursive terms. In preparation, December 2024.
- [45] I. Dimitriou, On Markov-dependent reflected autoregressive processes, Submitted, April 2024 (<https://arxiv.org/abs/2404.10361>).
- [46] I. Dimitriou, Join the shortest orbit queue with priorities. In preparation, March 2022.
- [47] I. Dimitriou, On the Symmetric Join the Shortest Queue G-Network, In preparation, October 2019.
- THESES [48] I. Dimitriou. (2009). New results on the theory of queueing systems with retrial customers. Department of Mathematics, University of Ioannina, PhD Thesis.
- [49] I. Dimitriou. (2005). Phase type distributions: A survey. Department of Mathematics, University of Ioannina, MSc Thesis.
- INTERNATIONAL CONFERENCE PUBLICATIONS [50] I. Dimitriou (2024). On dual risk models with dependence structure, Accepted in 33rd European Conference on Operational Research (EURO 2024), 30th June – 3rd July 2024, Copenhagen, Denmark.
- [51] I. Dimitriou (2023). On some reflected autoregressive processes with dependencies, 21st INFORMS Applied Probability Conference, June 28-30, 2023 in Nancy, France.
- [52] I. Dimitriou (2022). The asymmetric join the shortest orbit queue: Analysis via a dimensionality reduction. Accepted for presentation (short paper, ACM Digital Library) VALUETOOLS 2022, November 16-18, 2022, Online Event.
- [53] I. Dimitriou (2021). The Join the Shortest Orbit Queue System with a Finite Priority Line. 26th International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2021) Online event, Japan, December 13-14, 2021,
- [54] I. Dimitriou (2021). The M/G/1 retrial queue with event-dependent arrivals. 13th International Workshop on Retrial Queues and Related Topics (WRQ 2021), 6-8 December 2021, CMS College (Autonomous), Kottayam, India.
- [55] I. Dimitriou (2021). The generalized join the shortest queue system with retrials: Stability, exact tail asymptotics & stationary approximations. 13th International Workshop on Retrial Queues and Related Topics (WRQ

- 2021), 6-8 December 2021, CMS College (Autonomous), Kottayam, India.
- [56] I. Dimitriou (2021). Stationary analysis of the Join the Shortest Orbit Queue with a Priority Line. Accepted in EURO 2021 Athens conference, 11-14 July 2021, Athens, Greece.
- [57] I. Dimitriou, T. Phung-Duc (2020). Analysis of Cognitive Radio Networks with Cooperative Communication. Accepted for presentation (short paper, ACM Digital Library) VALUETOOLS 2020, May 18-20, 2020, Tsukuba, Japan.
- [58] I. Dimitriou, (2019). Stationary Analysis of a Tandem Queue with Coupled Processors Subject to Global Breakdowns. Accepted for presentation in 14th International Conference on Queueing Theory and Network Applications (QTNA 2019), Ghent, August 27-29, 2019.
- [59] I. Dimitriou, N. Pappas, (2019). A queue-based random access scheme in network-level cooperative wireless networks. Accepted for presentation in IEEE International Conference on Communications (ICC): Mobile and Wireless Networks Symposium, 20-24 May 2019, Shanghai, China (Acceptance rate 39%).
- [60] I. Dimitriou, E. Morozov, T. Morozova, (2019). A multiclass retrial system with coupled orbits and service interruptions: verification of stability conditions. In Proceedings **FRUCT24**, Moscow, Russia, 8-12 April 2019.
- [61] E. Morozov, T. Morozova, I. Dimitriou, (2018). Simulation of multiclass retrial system with coupled orbits. In **SMARTY 2018**, pp. 6–16, 21-25 September 2018, Petrozavodsk, Karelia, Russia.
- [62] N. Pappas, I. Dimitriou, Z. Chen, (2018). Network-level Cooperation in Random Access IoT Networks with Aggregators. Accepted in the 30th International Teletraffic Congress, Vienna, Austria, 4 - 7 September 2018 (Proceedings in IEEE Explore).
- [63] M. Saxena, I. Dimitriou, S. Kapodistria, (2018) Analysis of the shortest relay queue policy in a cooperative random access network. Accepted for presentation in the 3rd European Conference on Queueing Theory (ECQT 2018), Jerusalem, Israel, 2-4 July 2018.
- [64] I. Dimitriou, (2018). Performance modelling of a two-user interference-limited random access network with collisions. Accepted in Stochastic Networks Meeting, Edinburgh, UK, 25-29 June 2018.
- [65] I. Dimitriou, N. Pappas, (2018). Performance Analysis of an Adaptive Queue-Aware Random Access Scheme with Random Traffic, Accepted for presentation in IEEE ICC 2018 Wireless Networking Symposium (Acceptance rate 39.99%).
- [66] I. Dimitriou, (2018). Queueing models with state-dependent parameters: New results and applications to next generation communication networks

- information. Accepted for presentation in the 7th meeting of the EURO Working Group on Stochastic Modelling (StochMod 2018), Lancaster, UK, June 13-15, 2018.
- [67] I Dimitriou, K. Katsanou, (2018). Stationary analysis of an adaptive two-class retrial system under the join the shortest orbit queue policy. Accepted for presentation in the 7th meeting of the EURO Working Group on Stochastic Modelling (StochMod 2018), Lancaster, UK, June 13-15, 2018.
- [68] E. Morozov, I. Dimitriou, (2017). Stability Analysis of a Multiclass Retrial System with Coupled Orbit Queues. Accepted for presentation in the 14th European Workshop on Performance Engineering (EPEW 2017) Berlin, Germany, September 7-8 2017.
- [69] I. Dimitriou, (2017). A system with coupled processors and simultaneous arrivals. AIP Proceedings 1863, 200007 (2017), [Link](#), (Proceedings of SAMMA 2016, ICNAAM).
- [70] I. Dimitriou, N. Pappas, (2017). Stability and Delay Analysis of an Adaptive Channel-Aware Random Access Wireless Network. Accepted in the 24rd International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2017), Newcastle, UK.
- [71] I. Dimitriou, (2017). Modeling and Analysis of a Relay-Assisted Cooperative Cognitive Network. Accepted in the 24rd International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2017), Newcastle, UK.
- [72] I. Dimitriou, (2016). A retrial queue to model a two-relay cooperative wireless system with simultaneous packet reception. Accepted in the 23rd International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2016), Cardiff, Wales, UK. 24-26 August 2016.
- [73] I. Dimitriou, (2016). Two-class retrial queues for modeling cooperative wireless networks with coupled relay nodes, Accepted for presentation in the 11th International Workshop on Retrial queues (WRQ 2016), Amsterdam, Netherlands, August 31-September 2, 2016.
- [74] I. Dimitriou, (2016). A queueing system to model cooperative wireless networks with coupled relay nodes and simultaneous packet reception. Accepted for presentation in the 2nd European Conference on Queueing Theory (ECQT 2016), Toulouse, France, 18-20 July 2016.
- [75] I. Dimitriou, (2015). A two-class retrial system with coupled orbit queues. 18th INFORMS Applied Probability Conference held on the campus of Koc University in Istanbul, Turkey. July 5th - 8th, 2015
- [76] I. Dimitriou, S. Alouf, A. Jean-Marie, (2015). A Markovian queueing system for modeling a smart green base station. Accepted for presentation in the 12th European Workshop on Performance Engineering (EPEW 2015) Madrid, Spain, 31 August and 1 September, 2015.

- [77] I. Dimitriou, (2015). Performance modeling of cellular systems with finite processor sharing queues in random environment, guard policy and flex retrial users. Accepted for presentation in 22nd International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2015), to be held in Albena, Bulgaria, 26-29 May 2015.
- [78] I. Dimitriou, (2015). On a two coupled processor system with negative customers. Accepted for presentation at the 10th International Conference on Stochastic Models of Manufacturing and Service Operations - SMMSO 2015, to be held in Volos, Greece, 1-6 June 2015.
- [79] I. Dimitriou, (2014). A retrial queue with two-types of customers and paired services. Presented at the First European Conference on Queueing Theory (ECQT 2014), Ghent, Belgium, 20-22 August 2014.
- [80] I. Dimitriou, (2014). A queueing system with probabilistic inhomogeneous vacations for modeling power-saving in wireless systems with retransmissions. Accepted for presentation at the 29th International Symposium on Computer and Information Sciences, October 27-28th, 2014, Krakow, Poland.
- [81] I. Dimitriou, (2012). Analysis of a priority retrial queue with dependent vacation scheme and application to energy saving in wireless communication systems. Presented in 9th International Workshop on Retrial Queues (WRQ), 28-30 June 2012, Pablo de Olavide University, Seville, Spain.
- [82] I. Dimitriou, (2012). An unreliable vacation queueing model and its application on the DRX mechanism for power saving in 3GPP LTE. In proceedings of Imperial College Energy and Performance Colloquium (ICEP 2012), Imperial College London, 29 May-1 June 2012, pp: 68-71.
- [83] I. Dimitriou, C. Langaris, (2008). A queueing system with n phases of service, vacations and retrial customers. (Abstract) Abstracts of the 7th International Workshop on Retrial Queues, Athens, Greece, pp 14.
- [84] Ch. Koutsantoni, I. Dimitriou, (2022). The M/G/1 queue with multiple/single vacations and event dependent arrival rates. Greek Statistical Institute, 19-22 May 2022, Athens, Greece.
- [85] I. Dimitriou, (2019). Stationary Analysis of an ALOHA-type Random-Access Network under the Join-the-Shortest-Queue routing policy. Greek Statistical Institute, 30 May - 1 June 2019, Ioannina, Greece.
- [86] I. Dimitriou, (2009). Stability and Queueing Analysis of Adaptive Cooperative Wireless Networks. Greek Statistical Institute, 30 May - 1 June 2019, Ioannina, Greece.
- [87] K. Katsanou, I. Dimitriou, (2018). Stationary analysis of an adaptive two-class retrial system under the join the shortest orbit queue policy. 31th Pan-Hellenic Statistical Conference, Greek Statistical Institute, May 4-6, 2016, Lamia, Greece.

DOMESTIC
CONFERENCE
PUBLICATIONS

- [88] I. Dimitriou, M. Markou, (2016). A queueing system in random environment with impatient customers, signals and variable batch departures. 29th Pan-Hellenic Statistical Conference, Greek Statistical Institute, May 4-7, 2016, Naousa, Greece.
- [89] I. Dimitriou, A. Kaltsas, (2016). A multiserver queueing system with asynchronous vacations for modeling energy saving in data centers. 29th Pan-Hellenic Statistical Conference, Greek Statistical Institute, May 4-7, 2016, Naousa, Greece.
- [90] I. Dimitriou, E. Zisimopoulou, (2016). A retrial queueing system with applications in the modeling of internet/TCP traffic. 29th Pan-Hellenic Statistical Conference, Greek Statistical Institute, May 4-7, 2016, Naousa, Greece.
- [91] I. Dimitriou, (2011). A state dependent unreliable retrial queue with preemptive resume priorities and negative customers. 24th Pan-Hellenic Statistical Conference, Greek Statistical Institute, April 27, May 1, 2011, Patras, Greece.
- [92] I. Dimitriou, (2009). A retrial queueing model with discretionary priorities and multiple vacations. (Abstract) Abstracts of the 22th Pan-Hellenic Conference in Statistics, Greek Statistical Institute, Chania, Crete, Greece, pp 11.
- [93] I. Dimitriou, C. Langaris, (2008). A queueing system with 3-phases of service, vacations and retrial customers. Proceedings of 21th Pan-Hellenic Conference in Statistics, Greek Statistical Institute, Karlovasi, Samos, Greece, pp: 149-156.
- [94] I. Dimitriou, C. Langaris, (2007). A queueing model with start-up/close-down times and retrial customers. Proceedings of 20th Pan-Hellenic Conference in Statistics, Greek Statistical Institute, Nicosia, Cyprus, pp: 155-162.
- [95] I. Dimitriou, C. Langaris, (2007). Analysis of a retrial queue with two-phase service and server vacations. (Abstract) Abstracts of the 19th National Conference of Operational Research Society of Greece, Arta, Greece, pp 42.
- OTHER
PUBLICATIONS
- [96] I. Dimitriou. (2009). A gated type multiclass retrial queue with structured batch arrivals, priorities and vacations. Technical Report, Department of Mathematics, University of Ioannina, Number 20, Volume June-December 2009, pp 1-13.
- [97] I. Dimitriou. (2012). A multiserver queue with vacations and timers in Markovian environment for managing energy consumption in data centers. Imperial College, Technical report, May 2012.

EDITED
CONFERENCE
PROCEEDINGS

- [98] Phung-Duc, T. and Dimitriou, I., Eds., Proceedings of Symposium on Stochastic Models: Methods and Applications (SAMMA 2016 within the ICNAAM 2016, Rhodes, Greece, 19-25 September 2016.), AIP Conference Proceedings, Vol. 1863, 200001, 2017. [DOI: 10.1063/1.4992372]
- [99] Phung-Duc, T. and Dimitriou, I. and Vatamidou, E. Eds., Proceedings of Symposium on Stochastic Models: Methods and Applications (SAMMA 2017 within the ICNAAM 2017, 25-30 September 2017, Thessaloniki, Greece.), AIP Conference Proceedings 1978(1):190001. [DOI: 10.1063/1.5043828]
- [100] Ballarini, P., Castel, H., Dimitriou, I., Iacono, I., Phung-Duc, T., Walraevens, J., Eds., Proceedings of the 17th European Performance Engineering Workshop (EPEW 2021) and the 26th International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2021), "Performance Engineering and Stochastic Modeling", Springer-Verlag Lecture Notes in Computer Science, vol. 13104, <https://doi.org/10.1007/978-3-030-91825-5>.

GRANTS

1. Financially supported for research excellence by the Empeirikeion foundation (2024-2026).
2. Travel grant, 7th meeting of the EURO Working Group on Stochastic Modelling (StochMod 2018), Lancaster, UK, June 13-15, 2018.
3. Marie Curie Fellow, ERCIM Alain Bensoussan Fellowship Programme, co-funded by the European Commission under the FP7 Marie-Curie action named ABCDE (1 year contract, 1 May 2014-31 April 2015).
 - Hosting Institution: INRIA, Sophia-Antipolis, MAESTRO Team, France, 2014-2015.
 - Supervisor: Dr. Philippe Nain.
4. Post Doctoral fellowship "Research Excellence", 1/1/2013-31/12/2013, Aristotle University of Thessalonica Research Committee
 - Hosting Department: Department of Mathematics
 - Supervisor: Professor George Tsaklidis.
5. Visiting grant (1 month) by FWO (Belgium) to visit Dept. of Telecommunications and Information Processing, Ghent University, Belgium, June 2023. Host: D. Fiems.

SCHOLARSHIPS

1. Supported from State Scholarships Foundation of Greece (IKY) for MSc Degree at Mathematics Department, University of Ioannina, Greece (2004-2005).
2. Supported from State Scholarships Foundation of Greece (IKY) for PhD Degree at Mathematics Department, University of Ioannina, Greece (2006-2008).

CITATIONS

See Google Scholar: 679, h-index: 16, i10-index: 22.

TEACHING
EXPERIENCE

Department of Mathematics, University of Ioannina, Greece,

Associate Professor

September 2022–

- Introduction to Probability (Undergraduate course, Fall, lectures 5 hours per week). Dept. of Mathematics, University of Ioannina, Greece.
- Stochastic Processes (Undergraduate course, Fall, lectures 3 hours per week).
- Queueing Theory (Undergraduate course, Spring, lectures 3 hours per week).
- Seminar Course on Markov Decision Processes and Reinforcement Learning (Undergraduate seminar course, Spring 2025, lectures 3 hours per week).
- Special Topics in Operations Research (MSc program on Statistics and Operations Research, Postgraduate course, Spring, lectures 3 hours per week).

Department of Mathematics, University of Patras, Greece,

Assistant Professor

September 2019–September 2023

- Data-driven Probabilistic Models in Decision Making Process (MSc program on Computational Data Science and Statistical Analytics (MCDA), Spring, lectures 3 hours per week). Dept. of Mathematics, University of Patras, Greece.
- Introduction to Stochastic Processes (Undergraduate course, Fall, lectures 4 hours per week).
- Stochastic Models in Operations Research (Undergraduate course, Spring, lectures 4 hours per week).
- Probability I (Undergraduate course, Fall, lectures 5 hours per week).

Lecturer

September 2018–September 2019

- Data-driven Probabilistic Models in Decision Making Process (MSc program on Computational Data Science and Statistical Analytics (MCDA), Spring, lectures 3 hours per week). Dept. of Mathematics, University of Patras, Greece.

September 2014–September 2019

- Stochastic Processes (MSc program on "Computer and Decision Mathematics", co-organized with Computer Engineering & Informatics Department).
- Operations Research (MSc program on "Computer and Decision Mathematics", co-organized with Computer Engineering & Informatics Department).
- Introduction to Stochastic Processes (Undergraduate course, Fall, lectures 4 hours per week).
- Mathematics I (Undergraduate course, Fall 2014, lectures 4 hours per week, Dept. of Geology, University of Patras, Greece).

- Probability and Stochastic processes (Undergraduate course, Spring, lectures 4 hours per week, Dept. of Materials Science, University of Patras, Greece).
- Introduction to queueing systems (Undergraduate course, Fall, lectures 4 hours per week).

September 2014–September 2018

- Queueing Theory (MSc program on "Computer and Decision Mathematics", co-organized with Computer Engineering & Informatics Department).

Hellenic Open University, Greece

Teaching Staff **October 2023–July 2024, October 2024– Now**

- Stochastic Mathematics. Master in Mathematics (MSM), Hellenic Open University, Greece.

Teaching Staff **October 2021–July 2022**

- Research Methodology. Tourism Management, Hellenic Open University, Greece.

Department of Business Administration of Food and Agricultural Enterprises, University of Western Greece,

Adjunct Lecturer **March 2013 to July 2013**

- Operations Research (lectures 3 hours per week).

Department of Accounting, Technological Institute of Epirus, Greece,

Research Adjunct **February 2013 to July 2013**

- Business Statistics (lectures 8 hours per week).

Department of Finance and Auditing, Technological Institute of Epirus, Greece,

Laboratorial Adjunct **October 2012 to January 2013**

- Business Statistics (lectures 4 hours per week).

Department of Economics, University of Patras, Greece,

Adjunct Lecturer **February 2011 to July 2011**

- Operations Research-Applications (lectures 3 hours per week).

Department of Business Administration of Food and Agricultural Enterprises, University of Western Greece,

Adjunct Lecturer **March 2011 to August 2011**

- Operations Research (lectures 3 hours per week).
- Financial Mathematics (lectures 5 hours per week).

Department of Applied Foreign Languages in Management and Commerce, Technological Institute of Epirus, Greece,

Research Adjunct

October 2010 to July 2011

- Operations Research (lectures 4 hours per week).
- Business Statistics (lectures 3 hours per week plus laboratorial work 4 hours per week).

**Department of Finance and Auditing and Department of Accounting,
Technological Institute of Epirus, Greece,**

Laboratorial Adjunct

October 2007 to July 2009

- Mathematics for Economists (lectures 5 hours per week).
- Operations Research (lectures 4 hours per week).
- Business Statistics (lectures 4 hours per week).

STUDENTS

Completed MSc Theses

- E. Zisimopoulou, (2016). Retrial queueing systems: a review and an application. (MSc Thesis, in Greek, Nemertes DSpace).
- M. Markou, (2016). On queueing models with impatient customers in random environment: an overview and an application. (MSc Thesis, in Greek, Nemertes DSpace).
- A. Kaltsas, (2016). Vacation queueing models with applications in energy saving. (MSc Thesis, in Greek, Nemertes DSpace).
- K. Katsanou, (2018). Performance analysis of a cooperative wireless network. (MSc Thesis, in Greek, Nemertes DSpace).
- Ch. Koutsantoni (2022), Analytic methods in queues with event-dependent arrival rates.

Completed BSc Theses

- I. Ktorides, (2017). Markovian queueing models with applications to relay-assisted networks.
- D. Kintos, (2017). Birth-death queueing systems and the method of phases.
- G. Vasilakopoulos, (2018). Game theoretical aspects of queueing theory (completed June 2018).
- C. Papachristou, (2020). Brownian motion and the Black-Scholes model (Completed July 2020, In Greek, Nemertes DSpace).

EDITORIAL

Associate Editor

RESPONSIBILITIES

- *Methodology and Computing in Applied Probability*

AND SERVICES

Referee Service

- *Computers and Operations Research*
- *Journal of Systems Science and Systems Engineering*
- *Central European Journal of Operational Research*
- *Applied Mathematical Modelling*
- *Operational Research (OPSEARCH)*
- *Queueing Systems*
- *Asia Pacific Journal of Operational Research*
- *OR Spectrum*
- *Probability in the Engineering and Informational Sciences*
- *TOP Transactions in Operations Research (Spanish Society of Statistics and Operations Research (SEIO))*

- *Mathematical and Computer Modelling*
- *International Journal of Computer Mathematics*
- *Quality Technology and Quantitative Management*
- *Annals of Operations Research*
- *KSII Transactions on Internet and Information Systems*
- *Performance Evaluation*
- *Applied Mathematics and Computation*
- *European Journal of Operational Research*
- *Computers and Industrial Engineering*
- *Computer Networks*
- *RAIRO - Operations Research*
- *ACM Transactions on Modeling and Performance Evaluation of Computing Systems (TOMPECS)*
- *ACM Transactions on Modeling and Computer Simulation (TOMACS)*
- *Methodology and Computing in Applied Probability*
- *IEEE Transactions on Communications*
- *IEEE Transactions on Wireless Communications*
- *IEEE Communication Letters*
- *IEEE Transactions on Communications*
- *IEEE Transactions on Mobile Computing*
- *IEEE Access*
- *IEEE Systems Journal*
- *Journal of Operations Research Society (JORS)*
- *Annals of Telecommunications*
- *SIAM Journal on Applied Mathematics*
- *International Journal of Computer Mathematics: Computer Systems Theory*
- *International Journal of Applied Mathematics and Computer Science (AMCS)*
- *International Journal of Systems Science: Operations & Logistics*
- *Journal of Industrial and Management Optimization*
- *AMS Mathematical Reviews*
- *International Journal of Electronics*

CONTRIBUTION
TO
INTERNATIONAL
CONFERENCES

- Program Committee Member for the 23rd International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2016), Cardiff, UK.
- Program Committee Member for the 24rd International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2017), Newcastle, UK.
- Co-Organizer of the 1st Symposium on Stochastic Models: Methods and Applications (SAMMA 2016), 14th International Conference of Numerical Analysis and Applied Mathematics, 19-25 September 2016, Rodos Palace Hotel, Rhodes, Greece (with with Dr. Tuan Phung-Duc (Tokyo Institute of Technology, Tokyo, Japan)).
- Co-Organizer of the 2nd Symposium on Stochastic Models: Methods and Applications (SAMMA 2017), 15th International Conference of Numerical Analysis and Applied Mathematics, 25-30 September 2017, The MET Hotel, Thessaloniki, Greece (with with Dr. Tuan Phung-Duc (Tokyo Institute of

Technology, Tokyo, Japan), and Dr. Eleni Vatamidou University of Lausanne, Switzerland)).

- Sub-reviewer for the 13th International Conference on Queueing Theory and Network Applications (QTNA 2018), Tsukuba City, Japan, July 25-27, 2018.
- Program Committee Member for the European Simulation and Modelling conference (ESM 2018) to be held in Ghent, Belgium, October 2018.
- Program Committee Member for the 14th International Conference on Queueing Theory and Network Applications (QTNA 2019), Ghent, Belgium, August 27-29, 2019.
- Program Committee Member for the 24rd International Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA 2019), Moscow, Russia, October 21-25, 2019.
- Program Committee Member for the 16th European Performance Engineering Workshop (EPEW 2019), Milan, Italy, November 28-29 2019.
- Program Committee Member for the 2nd International Workshop on Stochastic Modeling and Applied Research of Technology (SMARTY 2020), Petrozavodsk, Karelia, Russia, August 16-20, 2020.
- Session organiser for the EURO 2021 Athens conference, 11-14 July 2021, Athens, Greece in the stream “Performance Evaluation of Queues” organized by Baris Balcioglu. Session title: “Queues, random walks and related models: Methods and Applications”.
- Program Committee Member for the 17th European Performance Engineering Workshop (EPEW 2021), Online event, December 9-11 2021.
- TPC co-chair (with Assos. Prof. Tuan Phung-Duc, Univ. of Tsukuba, Japan, and J. Walraevens, Ghent University, Belgium) for the 26th International Conference on Analytical & Stochastic Modelling Techniques & Applications–ASMTA 2021, Online event, December 11-14 2021.
- Organiser of the stream “Performance Evaluation of Queues” for the EURO 2022, 3-6 July 2022, Espoo, Finland (with Oualid Jouini (Centrale Supélec, Université Paris-Saclay, Paris, France) and Benjamin Legros (EM Normandie, Laboratoire Métis, Paris, France)).
- Program Committee Member for the 18th European Performance Engineering Workshop (EPEW 2022), Santa Pola, Alicante (Spain) September, 21-23, 2022.
- Program Committee Member for EAI VALUETOOLS 2022-15th EAI International Conference on Performance Evaluation Methodologies and Tools November 16-18, 2022 Ghent, Belgium.
- Program Committee Member for the 10th International Workshop on Applied Probability (IWAP 2023), Thessaloniki, Greece, June, 7-10 2023.
- Program Committee Member for the IFIP PERFORMANCE 2023, Evanston, Chicago, USA, November, 13-17, 2023.
- Session organiser for the EURO 2024 Copenhagen conference, 30th June – 3rd July 2024 Technical University of Denmark (DTU), Copenhagen, Denmark in the stream “Advances in Stochastic Modelling and Learning Methods” organized by Flora Spieksma, Odysseas Kanavetas (Leiden University).
- Program Committee Member for the IV European Conference on Queueing Theory (ECQT 2024) Lisbon, 7-10 July, 2024.
- Program Committee Member for the 28rd International Conference on An-

alytical & Stochastic Modelling Techniques & Applications (ASMTA 2024), June 14th 2024, Workshop through ACM SIGMETRICS / IFIP PERFORMANCE 2024 (<https://asmta.eu/>)

PROFESSIONAL
EXPERIENCE

PhD Examination Committee Member

- Faculty of Engineering and Architecture of Ghent University, Department of Telecommunications and Information Processing, Belgium.
- Examinee: Arnaud Devos (Awarded: 20 May 2022).
- Thesis title: Analysis of a Two-Class Queueing Model with Randomly Alternating Service.

Referee for Research Proposals

- Research Foundation – Flanders (FWO), Belgium (2017, 2018).
- Hellenic Foundation for Research and Innovation (HFRI), Greece (2017, Research Projects for Postdoctoral Researchers).

Marie Curie Fellow

1 May 2014-31 July 2014

ERCIM Alain Bensoussan Fellowship Programme, co-funded by the European Commission under the FP7 Marie-Curie action named ABCDE.
Hosting Institution: INRIA, Sophia-Antipolis, MAESTRO Team, France.
Scientific coordinator: Dr. Philippe Nain.

Postdoctoral researcher

1 September 2013-21 July 2014

Foundation for Research and Technology-Hellas (FORTH), Institute of Computer Science, Telecommunications and Networks Laboratory
– Developing the Foundations for Modeling and Analysis of Spectrum Markets (CoRLAB) General Secretariat for Research and Technology, Program “*Αριστεία*”, Research Excellence, Investigator-driven, 2012.
– Supervisor: Associate Professor Maria Papadopouli

Postdoctoral Researcher

October 2011 to July 2012

Imperial College, London, UK

- Funding: FP7 Project (P24736 EESD) FIT4Green, October 2011-June 2012, Department of Electrical and Electronic Engineering, ISN Group, Imperial College, London, UK.
– Supervisor (PI): Professor Erol Gelenbe
- Performance and stochastic modelling for power saving in large data centers

PROFESSIONAL
MEMBERSHIPS

- EURO Working Group on Stochastic Modeling
- Professional member (no 6271326) of the Association for Computing Machinery (ACM), 2018.

SKILLS PROFILE

Languages:

- Greek (native), English (First Certificate in English, University of Cambridge).

Computer skills:

- MS Office, Latex, Mathematica, SPSS, LINDO, MATLAB.

ACADEMIC
INVITATIONS

- Inria, MAESTRO Group, Sophia-Antipolis, France. September 4-9, 2016. Host: K. Avrachenkov.
- TU/e, Stochastics Group, Eindhoven, Netherlands. May 28-June 11, 2017. Host: S. Kapodistria, O. Boxma.
- Dept. of Mathematics, Aristotle University of Thessaloniki, Greece. November 27-28, 2019. Host: G. Tsaklidis, A. Papadopoulou.
- Dept. of Telecommunications and Information Processing, Ghent University, Belgium, June 2023. Host: D. Fiems, J. Walraevens.

INVITED TALKS

- I. Dimitriou. (2011). Mixed priority retrial queues with negative arrivals. Department of Mathematics, University of Ioannina, Greece,
- I. Dimitriou. (2012). Applied probability applications. Department of Mathematical Sciences. University of Essex, 20 March 2012.
- I. Dimitriou. (2013). Performance Analysis of the Discontinuous Reception (DRX) power saving method in 3GPP LTE: A queueing perspective. FORTH-Institute of Computer Science, Herakleion-Greece, 24 January 2013.
- I. Dimitriou. (2013). Multiclass retrial queues with preemptive priorities. Invited talk in the 7th Young European Queueing Theorists (YEQT IIV) workshop held in EURANDOM/TU Eindhoven in November 4-5-6, 2013.
- I. Dimitriou. (2016). Two-class retrial queues for modeling cooperative wireless networks with coupled relay nodes. MAESTRO group, INRIA, 7 September 2016.
- I. Dimitriou. (2019). Interacting queues in the modelling of modern telecommunication systems. Dept. of Mathematics, Aristotle University of Thessaloniki, Greece. November 27-28, 2019.
- I. Dimitriou. (2023). On queues and reflected autoregressive processes with dependencies. Department of Telecommunications and Information Processing, SMACS Group, Ghent University, Belgium, 15 June 2023.
- 21th INFORMS Applied Probability Society Conference, June 28-30, 2023, Nancy, France. Invited talk for the session: “Random Walks and Product-Forms”, organised by Ivo Adan (TU/e, the Netherlands).
- I. Dimitriou. (2023). A finite compensation procedure for a certain class of two-dimensional random walks (Joint work with Ivo Adan). Cohen Centennial 2023, Applied Probability workshop, Eurandom, TU/e Eindhoven, NL, 28-29 August 2023.

REFERENCES AVAILABLE TO CONTACT

Dr. Erol Gelenbe (e-mail: e.gelenbe@imperial.ac.uk)

- Professor, Electrical and Electronic Engineering, Imperial College, London, UK
- ◇ South Kensington Campus, London SW6 2BT, UK
- ★ *Professor Gelenbe was PI on the EU grant that funded my postdoctoral position.*

Dr. Nikolaos Pappas (e-mail: nikolaos.pappas@liu.se)

- Associate Professor, Docent, Department of Computer and Information Science, Linköping University, Sweden.

Dr. Christos Langaris (e-mail: clagar@cc.uoi.gr)

- Associate Professor, Department of Mathematics
University of Ioannina, Greece
- ◇ University of Ioannina Campus, Ioannina, 45110, Greece
- ★ *Dr. Langaris was my supervisor during my postgraduate studies.*

Dr. George Tsaklidis (e-mail: tsaklidi@math.auth.gr)

- Associate Professor, Department of Mathematics
Aristotle University of Thessaloniki, Greece
- ◇ 54124, Thessalonica, Greece
- ★ *Professor Tsaklidis was my supervisor during my postdoc in Mathematics
Department of A.U.TH..*

Dr. Philippe Nain (e-mail: philippe.nain@inria.fr)

- Principal researcher, Inria Research Centre: Grenoble - Rhone-Alpes
- ◇ Ecole Normale Supérieure de Lyon, LIP, 46 allée d'Italie, 69364 Lyon Cedex
07, France
- ★ *Dr. Nain was my supervisor during my postdoc at INRIA, Sophia Antipolis,
France.*

Dr. Alain Jean-Marie (e-mail: AlainJean-Marie@inria.fr)

- Principal researcher, Inria Research Centre: Sophia-Antipolis
- ◇ LIRMM, UMR CNRS/Université de Montpellier (anciennement: Montpellier
2), Département d'Informatique, France
- ★ *Dr. Jean-Marie was my supervisor during my postdoc at INRIA, Sophia
Antipolis, France.*

MORE
INFORMATION

More information and auxiliary documents can be found at
[Google Scholar](#)
[ResearchGate](#)
[Academia](#)
[Linkedin](#)
[ORCID](#)