Antonio Gómez-Corral

Personal details

Title, first name, surname: Dr. Antonio Gómez-Corral
Male/female: Male
Date and place of birth: 18/03/1969, Madrid, Spain

Contact information

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Academic positions

August 1998 – now: Associate Professor; Department of Statistics and OR, Faculty of Mathematics, Complutense University of Madrid

October 1993 – August 1998: Assistant Professor; Department of Statistics and OR, School of Informatics, Complutense University of Madrid

Research positions

February 2016 – February 2018: Head of Department (Applied Mathematics); ICMAT – Instituto de Ciencias Matemáticas

October 2013 – January 2019: Faculty researcher; ICMAT – Instituto de Ciencias Matemáticas; see http://www.icmat.es

September 2003 – October 2003: Visiting Professor; Laboratoire de Mathématiques Appliquées; Department of Mathematics; Université de Pau et des Pays de l'Adour; Pau. Collaborator: Florin Avram

January 1997 – September 1997: Postdoctoral Fellow; Marine Technology and Engineering Unit; Instituto Superior Técnico – Technical University of Lisbon; Lisbon. Collaborator: María Fernanda Ramalhoto

Graduate and Master

University/College of Higher Education: Complutense University of Madrid, Faculty of Mathematics
Date: June 1992 (Graduate); June 1993 (Master)

Main subject: Mathematics. Statistics and OR (Graduate); Markov chains and related models (Master)
Supervisor: Professor Miguel Martín Díaz (Master)

Doctorate

University/College of Higher Education: Complutense University of Madrid, Faculty of Mathematics
Date: October 1996
Title of thesis: *Retrial Queues with Negative Arrivals* (cum laude)
Supervisor ('promotor'): Professor Jesús R. Artalejo

Indicators in Scopus

Documents listed in Scopus: 59
Co-authors: 18
h-index: 18
Citations received since 1996: 1415 total citations

Research projects

1. *Stochastic Modelling in Queueing Systems with Retrials and Priorities.* Complutense University of Madrid (UCM), PR161/93-4777. May 1994 – May 1995. (Coordinator: Jesús R. Artalejo)
2. *Retrial Queues with Negative Arrivals*. DGES (National Board), PB95-0416. With participants from UCM and University of La Laguna. September 1996 – September 1999. (Coordinator: Jesús R. Artalejo)
3. *Advances in Retrial Queueing Theory*. European Commission, INTAS-96-0828. With participants from UCM, Technical University of Lisbon, Vrije University Amsterdam, Moscow State University, National University, Peoples' Friendship University of Russia, Belarius State University, and Ioannina University. October 1997 – October 2000. (General coordinator: Jesús R. Artalejo)
4. *Some Topics in Retrial Queueing Theory*. UCM, PR64/99-8501. October 1999 – December 2000. (Coordinator: Antonio Gómez-Corral)
5. *Retrial Queuing Systems: Analytic Solutions and Algorithmic Methods.* DGES (National Board), PB98-0837. November 1999 – November 2002. (Coordinator: Jesús R. Artalejo)
6. *Busy Periods and Waiting Times in Retrial Queuing Systems.* DGINV (National Board), BFM2002-02189. With participants from UCM, University of Málaga, and University Pablo de Olavide. (Coordinator: Jesús R. Artalejo).
7. *Queuing Systems with Blocking: Computational Techniques and Applications to Engineering.* DGINV (National Board), MTM2005-01248. With participants from UCM, University of Málaga, University Pablo de Olavide, and University of Athens. December 2005 – December 2008. (Coordinator: Jesús R. Artalejo)
8. *Stochastic Models in Biology and Queuing Theory: Contributions from the Use of Matrix-analytic Methods and Other Algorithmic Techniques*. DGINV (National Board), MTM2008-01121. With participants from UCM, University of Málaga, University Pablo de Olavide, and University of Athens. January 2009 – December 2011. (Coordinator: Jesús R. Artalejo)

9. *Stochastic Models in Epidemics and Populations*. Spanish Department of Sciences and Innovation, MTM2011-23864. With participants from UCM, the University of Athens and the University of Leeds. January 2012 – September 2015. (Coordinator: Jesús R. Artalejo, until June 2013; Antonio Gómez-Corral, since September 2013)
10. *Stochastic Models and Statistical Aspects in Epidemics*. Spanish Department of Sciences and Innovation, MTM2014-58091-P. With participants from UCM and the University of Leeds. January 2015 – December 2017. (Coordinator: Antonio Gómez-Corral)
11. *Stochastic Differential Games: Breaking Fifty Years of the Paradigm.* Spanish Department of Sciences and Innovation, MTM2015-72907-EXP. With participants from CSIC, UAM, UC3M and UCM. May 2017 – April 2019. (Coordinator: Antonio Gómez-Corral)
12. *Contributions to Stochastic Models in Epidemiology.* Spanish Department of Sciences and Innovation, PGC2018-097704-B-100. With participants from UCM, UNED, University of Leeds, Università degli Studi di Salerno, Universidad Nova de Lisboa, Tsukuba University, Universidad Pontificia Comillas and CEBAS-CSIC. January 2019 – December 2021. (Coordinator: Antonio Gómez-Corral)

Books

1. J.R. Artalejo, A. Gómez-Corral. *Retrial Queueing Systems. A Computational Approach*. Springer-Verlag, 2008.
2. M. de León, A. Gómez-Corral. *Las Matemáticas de la Biología.* Editorial Catarata, 2019. (In Spanish)

Papers

1. J.R. Artalejo, A. Gómez-Corral (1995) Information theoretic analysis for queueing systems with quasi-random input, *Mathematical and Computer Modelling* **22**: 65-76.
2. M. Martín, A. Gómez-Corral (1995) On the *M/G/1* retrial queueing system with linear control policy, *TOP* **3**: 285-305.
3. J.R. Artalejo, A. Gómez-Corral (1996) Stochastic analysis of the departure and quasi-input processes in a versatile single server queue, *Journal of Applied Mathematics and Stochastic Analysis* **9**: 171-183.
4. J.R. Artalejo, A. Gómez-Corral (1997) Steady state solution of a single-server queue with linear repeated requests, *Journal of Applied Probability* **34**: 223-233.
5. J.R. Artalejo, A. Gómez-Corral (1998) Generalized birth and death processes with applications to queues with repeated attempts and negative arrivals, *OR Spektrum* **20**: 5-14.
6. M.F. Ramalhoto, A. Gómez-Corral (1998) Some decomposition formulae for *M/M/r/r+d* queues with constant retrial rate, *Stochastic Models* **14**: 123-145.
7. J.R. Artalejo and A. Gómez-Corral (1998) Analysis of a stochastic clearing system with repeated attempts, *Stochastic Models* **14**: 623-645.
8. J.R. Artalejo, A. Gómez-Corral (1998) Unreliable retrial queues due to service interruptions arising from facsimile networks, *JORBEL. The Belgian Journal of Operations Research, Statistics and Computer Science* **38**: 31-41

9. A. Gómez-Corral (1999) Stochastic analysis of a single server retrial queue with general retrial times, *Naval Research Logistics* **46**: 561-581.
10. J.R. Artalejo, A. Gómez-Corral (1999) On a single server queue with negative arrivals and request repeated, *Journal of Applied Probability* **36**: 907-918.
11. J.R. Artalejo, A. Gómez-Corral (1999) Performance analysis of a single-server queue with repeated attempts, *Mathematical and Computer Modelling* **30**: 79-88.
12. A. Gómez-Corral, M.F. Ramalhoto (1999) On the stationary distribution of a Markovian process arising in the theory of multiserver retrial queueing systems, *Mathematical and Computer Modelling* **30**: 141-158.
13. J.R. Artalejo, A. Gómez-Corral (1999) Computation of the limiting distribution in queueing systems with repeated attempts and disasters, *RAIRO - Recherche Opérationelle* **33**: 371-382.
14. G.I. Falin, A. Gómez-Corral (2000) On a bivariate Markov process arising in the theory of single-server retrial queues, *Statistica Neerlandica* **54**: 67-78.
15. A. Gómez-Corral, M.F. Ramalhoto (2000) On the waiting time distribution and the busy period of a retrial queue with constant retrial rate, *Stochastic Modelling and Applications* **3**: 37-47.
16. A. Gómez-Corral (2001) On extreme values of orbit lengths in *M/G/1* queues with constant retrial rate, *OR Spektrum* **23**: 395-409.
17. J.R. Artalejo, A. Gómez-Corral, M.F. Neuts (2001) Analysis of multiserver queues with constant retrial rate, *European Journal of Operational Research* **135**: 123-135.
18. A. Gómez-Corral (2002) Analysis of a single-server retrial queue with quasi-random input and non-preemptive priority, *Computers and Mathematics with Applications* **43**: 767-782.
19. A. Gómez-Corral (2002) A tandem queue with blocking and Markovian arrival process, *Queueing Systems* **41**: 343-370.
20. A. Gómez-Corral (2002) On a tandem G-network with blocking, *Advances in Applied Probability* **34**: 626-661.
21. A. Gómez-Corral (2002) A matrix-geometric approximation for tandem queues with blocking and repeated attempts, *Operations Research Letters* **30**: 360-374.
22. A. Gómez-Corral (2002) Discussion on the invited paper 'Discrete time queues and matrix-analytic method' by A.S. Alfa, *TOP* **10**: 147-210; pp. 188-191.
23. J.R. Artalejo, A. Gómez-Corral (2003) Channel idle periods in computer and telecommunication systems with customer retrials, *Telecommunication Systems* **24**: 29-46.
24. A. Gómez-Corral (2004) Sojourn times in a two-stage queueing network with blocking, *Naval Research Logistics* **51**: 1068-1089.
25. A. Gómez-Corral (2005) On a finite-buffer bulk-service queue with disasters, *Mathematical Methods of Operations Research* **61**: 57-84.
26. A. Gómez-Corral, A. Krishnamoorthy, V.C. Narayanan (2005) The impact of self-generation of priorities on multi-server queues with finite capacity, *Stochastic Models* **21**: 427-447.
27. J.R. Artalejo, A. Gómez-Corral (2005) Waiting time in the *M/M/c* queue with finite retrial group, *Bulletin of Kerala Mathematics Association* **2**: 1-17. (Invited paper)

28. Avram, A. Gómez-Corral (2006) On bulk-service *MAP/PH^{L,N}/1/N* G-queues with repeated attempts, *Annals of Operations Research* **141**: 109-137.
29. F. Avram, A. Gómez-Corral (2006) On the optimal control of a two-queue polling model, *Operations Research Letters* **34**: 339-348.
30. A. Gómez-Corral (2006) A bibliographical guide to the analysis of retrial queues through matrix analytic techniques, *Annals of Operations Research* **141**: 163-191.
31. A. Gómez-Corral, M.E. Martos (2006) Performance of two-stage tandem queues with blocking: The impact of serveral flows of signals, *Performance Evaluation* **63**: 910-938.
32. J.R. Artalejo, A. Economou, A. Gómez-Corral (2007) Applications of maximum queue lengths to call center management, *Computers and Operations Research* **34**: 983-996.
33. J.R. Artalejo, A. Gómez-Corral (2007) A note on the busy period of the *M/G/1* queue with finite retrial group, *Probability in the Engineering and Informational Sciences* **21**: 77-82.
34. A. Economou, A. Gómez-Corral (2007) The batch Markovian arrival process subject to renewal generated geometric catastrophes, *Stochastic Models* **23**: 211-233.
35. J.R. Artalejo, A. Gómez-Corral (2007) Waiting time analysis of the *M/G/1* queue with finite retrial group, *Naval Research Logistics* **54**: 524-529.
36. J.R. Artalejo, A. Gómez-Corral (2007) Modelling communication systems with phase type service and retrial times, *IEEE Communications Letters* **11**: 955-957.
37. J.R. Artalejo, A. Economou, A. Gómez-Corral (2008) Algorithmic analysis of the *Geo/Geo/c* retrial queue, *European Journal of Operational Research* **189**: 1042-1056.
38. A. Gómez-Corral, M.E. Martos (2008) A.B. Clarke's tandem queue revisited - Sojourn times, *Stochastic Analysis and Applications* **26**: 1111-1135.
39. A. Gómez-Corral, M.E. Martos (2009) Marked Markovian arrivals in a tandem G-network with blocking, *Methodology and Computing in Applied Probability* **11**: 621-649.
40. S.R. Chakravarthy, A. Gómez-Corral (2009) The influence of delivery times on repairable *k-out-of-N* systems with spares, *Applied Mathematical Modelling* **33**: 2368-2387.
41. A. Gómez-Corral (2010) On the applicability of the number of collisions in *p*-persistent CSMA/CD protocols, *Computers & Operations Research* **37**: 1199-1211.
42. J.R. Artalejo, A. Gómez-Corral (2010) A state-dependent Markov-modulated mechanism for generating events and stochastic models, *Mathematical Methods in the Applied Sciences* **33**: 1342-1349.
43. J.R. Artalejo, A. Gómez-Corral, Q.M. He (2010) Markovian arrivals in stochastic modeling: A survey and some new results, *SORT. Statistics and Operations Research Transactions* **34**: 101-144. (Invited paper with discussion)
44. A. Economou, A. Gómez-Corral, S. Kanta (2011) Optimal balking strategies in single-server queues with general service and vacation times, *Performance Evaluation* **68**: 967-982.

45. A. Gómez-Corral, M. López García (2012) Extinction times and size of the surviving species in a two-species competition process, *Journal of Mathematical Biology* **64**: 255-289.
46. A. Gómez-Corral, M. López García (2012) On the number of births and deaths during an extinction cycle, and the survival of a certain individual in a competition process, *Computers & Mathematics with Applications* **63**: 236-259.
47. A. Gómez-Corral, M. López García (2013) Modeling host-parasitoid interactions with correlated events, *Applied Mathematical Modelling* **37**: 5452-5463.
48. A. Gómez-Corral, M. López García (2013) Maximum population sizes in host-parasitoid models, *International Journal of Biomathematics* **6**: article 1350002 (28 pages). DOI: 10.1142/S1793524513500022.
49. A. Gómez-Corral, M. López García (2014) Maximum queue lengths during a fixed time interval in the *M/M/c* retrial queue. *Applied Mathematics and Computation* **235**: 124-136.
50. A. Gómez-Corral, M. López García (2014) Control strategies for a stochastic model of host-parasite interaction in a seasonal environment. *Journal of Theoretical Biology* **354**: 1-11.
51. A. Economou, A. Gómez-Corral, M. López-García (2015) A stochastic SIS epidemic model with heterogeneous contacts. *Physica A: Statistical Mechanics and Applications* **421:** 78-97.
52. A. Gómez-Corral, M. López-García (2015) Lifetime and reproduction of a marked individual in a two-species competition process. *Applied Mathematics & Computation* **264:** 223-245.
53. E. Almaraz, A. Gómez-Corral, M.T. Rodríguez-Bernal (2016) On the time to reach a critical number of infections in epidemic models with infective and susceptible immigrants. *BioSystems* **144:** 68-77.
54. A. Gómez-Corral, M. López-García (2017) On SIR epidemic models with generally distributed infectious periods: Number of secondary cases and probability of infection. *International Journal of Biomathematics* **10:** 1750024 (13 pages).
55. J.R. Artalejo, A. Gómez-Corral, M. López-García, C. Molina-París (2017) Stochastic descriptors to study the fate and potential of naive T cell clonotypes in the periphery. *Journal of Mathematical Biology* **74:** 673-708.
56. A. Gómez-Corral, M. López-García (2018) Perturbation análisis in finite LD-QBD processes and applications to epidemic models. *Numerical Linear Algebra with Applications* **25:** 2160.
57. A. Gómez-Corral, M. López García (2018) A within-host stochastic model for nematode infection. *Mathematics* **6:** 143.
58. E. Almaraz, A. Gómez-Corral (2018) On SIR-models with Markov-modulated events: length of an outbreak, total size of the epidemic and number of secondary cases. *Discrete and Continuous Dynamical Systems-Series B* **23:** 2153-2176.
59. E. Almaraz, A. Gómez-Corral (2019) Number of infections suffered by a focal individual in a two-strain SIS-model. *Mathematical Methods in the Applied Sciences* **42:** 4318-4330.

60. J. Amador, D. Armesto, A. Gómez-Corral (2019) Extreme values in SIR epidemic models with two strains and cross-immunity. *Mathematical Biosciences and Engineering* **16:** 1992-2022.
61. J. Amador, A. Gómez-Corral (2020) A stochastic model with two quarantine states and a limited carrying capacity for quarantine. *Physica A* **544:** 121899.

Papers in proceedings and other publications

1. J.R. Artalejo, A. Gómez-Corral (1994) Analysis of the modes of the stationary distribution in single server retrial queues with quasi-random input. In: *Transactions of the Twelfth Prague Conference*, Eds. P. Lachout, J. A. Vísek. Academic of Sciences of the Czech Republic, Prague, pp. 24-27.
2. A. Gómez-Corral (1998) On single-server queues governed by a clearing mechanism and a secondary input of repeated attempts. In: *Proceedings of the International Conference on Stochastic Processes*, Ed. A. Krishnamoorthy, Cochin University of Science and Technology, Cochin, Kerala, pp. 169-180.
3. J.R. Artalejo, A. Gómez-Corral, M.F. Neuts (2000) Numerical analysis of multiserver retrial queues operating under a full access policy. In: *Advances in Algorithmic Methods for Stochastic Models,* Eds. G. Latouche, P.G. Taylor, Notable Publications, Inc., New Jersey, pp. 1-19.
4. A. Gómez-Corral (2004) Bulk-service finite-buffer retrial queues. In: *Proceedings of the Fifth International Workshop on Retrial Queues,* Ed. B.D. Choi, Telecommunication Mathematics Research Center, Korea University, Seoul, pp. 67-80.
5. A. Gómez-Corral, M.E. Martos (2007) Inter-departure times in a tandem G-queue with blocking. In: *International E-Conference on Computer Science 2006. Lecture Series on Computer and Computational Sciences, Vol. 8*, Eds. T. Simos, G. Psihoyios, Brill Academic Publishers , Leiden, pp. 522-526.
6. J.R. Artalejo, A. Gómez-Corral (2008) Advances in retrial queues – Preface. *European Journal of Operational Research* **189:** 1041.
7. J.R. Artalejo, A. Gómez-Corral (2010) Markov chains with block-structured state dependent events: Formulation and correlation analysis. In: *Proceedings of QTNA'10 - The 5th International Conference on Queueing Theory and Network Applications,* ACM Digital Library, pp. 23-28.
8. A. Gómez-Corral (2013) Jesús R. Artalejo 1963-2013, *TOP* **21**: 409-425.
9. A. Gómez-Corral, D. Ríos Insua, F. Ruggeri, M. Wiper (2015) Bayesian inference of Markov processes. In: *Wiley StatsRef: Statistics Reference Online.* John Wiley & Sons, Ltd. (15 pages). DOI: 10.1002/9781118445112.stat07837.
10. A. Gómez-Corral, T. Phung-Duc (2016) Retrial queues and related models – Preface. *Annals of Operations Research* **247:** 1-2.

Conferences and workshops

Attended various conferences, workshops and seminars; a short selection, with the presented talks, is as follows:

1. Invited talk: On single-server queues governed by a clearing mechanism and a secondary input of repeated attempts. *International Conference on Stochastic Processes*. Kochi, Kerala, India. December 1996.

2. Talk: Single-server retrial queues with negative arrivals: A regenerative approach. *First International Workshop on Retrial Queues*. Madrid, Spain. September 1998.
3. Talk: Numerical analysis of multiserver retrial queues operating under a full access rule from the theory of continuous-time Markov processes of *GI/M/1* type. *Third International Workshop on Retrial Queues*. Amsterdam, The Netherlands. March 2000.
4. Talk: Numerical analysis of multiserver retrial queues operating under a full access policy. *Third International Conference on Matrix Analytic Methods in Stochastic Models.* Leuven, Belgium. July 2000.
5. Talk: A tandem network with blocking and a Markovian arrival process of disasters. *First Madrid Conference on Queueing Theory*. Madrid, Spain. July 2002.
6. Invited talk: Analysis of a tandem queue with blocking and a MAP of disasters. *International Conference on Stochastic Modeling*. Kochi, Kerala, India. December 2002.
7. Invited talk: Bulk-service finite-buffer retrial queues. *Fifth International Workshop on Retrial Queues*. Seoul, Korea. September 2004.
8. Talk: The impact of self-generation of priorities on multi-server queues with finite capacity. *Fifth International Conference on Matrix-Analytic Methods in Stochastic Models*. Pisa, Italy. June 2005.
9. Talk: On a batch Markovian arrival process subject to renewal catastrophes. *14th Informs Applied Probability Conference*. Eindhoven, The Netherlands. July 2007.
10. Talk: On the applicability of the number of collisions in *p*-persistent CSMA/CD protocols. *7th International Workshop on Retrial Queues*. Athens, Greece. July 2008.
11. Talk: Maximum number of individuals alive during an extinction cycle in a two-species competition process. *BIOMATH 2011. International Conference on Mathematical Methods and Models in Biosciences*. Sofia, Bulgary. June 2011.
12. Talk: On the extinction times and the size of the surviving species in a two-species competition process. *16th INFORMS Applied Probability Conference*. Stockholm, Sweden. July 2011.
13. Talk: Maximum population sizes in host-parasitoid models. *DSABNS 2012. Third Workshop on Dynamical Systems Applied to Biology and Natural Sciences*. Lisbon, Portugal. February 2012.
14. Talk: Control strategies for host-macroparasite models. *Annual Meeting and Conference of the Society for Mathematical Biology*. Tempe, Arizona, USA. June 2013.
15. Talk: Stochastic models of host-parasite interaction in a seasonal environment. *MPDE'13*. *International Conference on Models in Population Dynamics and Ecology*. Osnabrück, Germany. August 2013.
16. Talk: On maximum population sizes in two-species competition processes. *The 2014 Joint Annual Meeting of the Japanese Society for Mathematical Biology and the Society for Mathematical Biology.* Osaka, Japan, July 2014.

17. Talk: Heterogeneous infectiousness and susceptibility in a stochastic SIS epidemic model. *II Workshop on Modelling and Simulation of Epidemics.* Madrid, Spain, May 2015.
18. Talk: Heterogeneous contacts in stochastic SIS epidemic models. *18th INFORMS Applied Probability Conference.* Istanbul, Turkey, July 2015.
19. Talk: Stochastic epidemics with heterogeneous contacts in small networks. *5th Portuguese-Polish Workshop in Biometry.* Tomar, Portugal, May 2016.
20. Talk: Coexistence of multiple infectious agents in epidemic models and perturbation analysis of related LD-QBD processes. *EUROCAST 2017, Fifteenth International Conference on Computer Aided Systems Theory.* Las Palmas de Gran Canaria, Spain, February 2017.
21. Invited talk: On perturbation analysis of quasi-birth-death processes with applications to multi-type epidemic models. *PiNE 2017, Probability in the North-East,* Leeds, UK, April 2017.
22. Talk: Dynamics of epidemic models with two strains and cross immunity. *11th European Conference on Mathematical and Theoretical Biology.* Lisbon, Portugal, July 2018.
23. Talk: Extreme values in SIS epidemic models with two strains and full cross-immunity. *Meeting of the British Society for Immunology.* Microsoft Research Cambridge, Cambirdge, UK, May 2019.
24. Invited talk: A comparative analysis between two time-discretized versions of the SIS epidemic model. *Mathematical and Statistical Explorations in Disease Modelling and Public Health, DMPH 2019.* ICTS, Tata Institute of Fundamental Research, Bangalore, India, July 2019.

Organization of conferences and workshops

1. Secretary of the Organizing Committee*. First International Workshop on Retrial Queues*. Madrid, Spain. November 1998.
2. Member of the Organizing Committee. *First Madrid Conference on Queueing Theory*. Madrid, Spain. July 2002.
3. Secretary of the Organizing Committee. *Second Madrid Conference on Queueing Theory*. Madrid, Spain. June 2006.
4. Chairman. *Sixth International Workshop on Retrial Queues*. Miraflores de la Sierra, Spain. July 2006.
5. Member of the Organizing Committee. *Third Madrid Conference on Queueing Theory*. Toledo, Spain. July 2010.
6. Co-Chairman. *10th International Workshop on Retrial Queues.* Tokyo, Japan, July 2014.
7. Chairman. *A Two-Day Meeting on Mathematical Biology.* ICMAT, Madrid, Spain, October 2014.
8. Co-Chairman at UCM. *Diderot Mathematical Forum 2016 on "Biomedical Applications of Mathematics.* Organized by the Raising Public Awareness Committee of the EMS, jointly with Paris-Descartes University, Politecnico di Milano and UCM, France-Italy-Spain, March 2016.

Program committee memberships

1. Member of the Program Committee. Fifth International Workshop on Retrial Queues. Seoul, Korea. September 2004.
2. Member of the Program Committee. *IASTED International Conference on Applied Simulation and Modelling - ASM 2005*. Benalmádena, Spain. June 2005.
3. Member of the Program Committee. *IASTED International Conference on Applied Simulation and Modelling - ASM 2006*. Rhodes, Greece. June 2006.
4. Member of the International Program Committee. *International Conference "Mathematical Methods for Increasing Efficiency of Info-Telecommunication Networks"*. Grodno, Belarus. January 2007.
5. Member of the Program Committee. *IASTED International Conference on Applied Simulation and Modelling - ASM 2007*. Palma de Mallorca, Spain. August 2007.
6. Member of the Program Committee. *International Conference on Simulation and Modeling*. Coimbatore, India. August 2007.
7. Member of the Program Committee. *Méthodes et Outils d'Aide á la Décision - MOAD'07*. Béjaïa, Algérie. November 2007.
8. Member of the Program Committee. *Seventh International Workshop on Retrial Queues*. Athens, Greece. July 2008.
9. Member of the International Program Committee. *International Conference "Mathematical Methods for Analysis and Optimization of Information and Telecommunication Networks" (The Twentieth Belarusian Winter Workshop in Queueing Theory, BWWQT-2009)*. Minks, Belarus. January 2009.
10. Member of the International Program Committee. *International Conference on Computers & Industrial Engineering, CIE39*. Troyes, France. July 2009.
11. Member of the Program Committee. *IEEM 2009 - IEEE International Conference on Industrial Engineering and Engineering Management*. Hong Kong, China. December 2009.
12. Member of the International Program Committee. *International Conference "Modern Probabilistic Methods for Analysis and Optimization of Information and Telecommunication Networks" (The Twenty First Belarusian Winter Workshop in Queueing Theory, BWWQT-2011)*. Minks, Belarus. January 2011.
13. Member of the Program Committee. *ICORES 2012. 1st International Conference on Operations Research and Enterprise Systems*. Vilamoura, Portugal. February 2012.
14. Member of the Program Committee. *9th International Workshop on Retrial Queues*. Seville, Spain. June 2012.
15. Member of the Technical Program Committee. *7th International Multi-Conference on Computing in the Global Information Technology*. Venice, Italy. July 2012.
16. Member of the International Program Committee. *Modern Probabilistic Methods for Analysis, Design and Optimization of Information Telecommunication Networks (Twentieth Second Belarusian Winter Workshop in Queueing Theory, BWWQT 2013)*. Minks, Belarus. January 2013.
17. Member of the Program Committee. *3rd International Scientific Conference of Students and Young Scientists*. Kyiv, Ukranie. November 2013.

18. Member of the Technical Program Committee. *8th International Conference on Matrix-Analytic Methods in Stochastic Models, MAM8*. Calicut, Kerala, India. January 2014.
19. Member of the Program Committee. *18th INFORMS Applied Probability Conference*. Istanbul, Turkey. July 2015.
20. Member of the Technical Program Committee. 9*th International Conference on Matrix-Analytic Methods in Stochastic Models, MAM9*. Budapest, Hungary. June 2016.

Editorial activities - Journals with impact factor

Area editor of *RAIRO – Operations Research,* since 2019
Subject editor of *Applied Mathematical* Modelling, since 2014
Associate editor of *Asia-Pacific Journal of Operational Research,* since 2005
Associate editor of *RAIRO – Operations Research,* from 2016 to 2018
Associate editor of *TOP*, from 2013 to 2019

Guest Editor of *European Journal of Operational Research*, jointly with Jesús R. Artalejo; special issue *Advances in Retrial Queues* (Vol. 189, issue 3, September 2008)

Guest Editor of *The Annals of Operations Research*, jointly with Tuan Phung-Duc; special volume on *Retrial Queues and Related Models* (Vol. 247*,* issue 1, December 2016)

Reviewer

Reviewer for *Mathematical Reviews*, since 2001

Reviewer for international journals, such as: *Advances in Applied Probability; Annals of Operations Research; Applied Mathematical Modelling; Asia-Pacific Journal of Operational Research; Computers & Operations Research; Journal of Applied Probability; Naval Research Logistics; Operations Research; Operations Research Letters; Performance Evaluation; Queueing Systems; Stochastic Models; TOP; etc.*

Teaching experience

A selection of courses taught since 1993:

1. Probability (Graduate)
2. Simulation (Graduate)
3. Stochastic Calculus (Graduate)
4. Stochastic Processes (Graduate)
5. Probability and Stochastic Processes (Master)
6. Matrix-analytic methods in Queuing Theory (Master & Doctorate)
7. Seminar on Queuing Theory (Master & Doctorate)
8. Stochastic Models and Applications (Master, Doctorate & JAE School)

Supervision of Graduate students

1. Álvaro Román Morollón, *"Cadenas de Markov en Tiempo Discreto Aplicadas a Modelos de Epidemias".* Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.
2. Jessica Viviana Calderón Vallejo, *"Modelos de Colas Analizados desde Cadenas de Markov".* Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.

Supervision of Master students

1. Manuel David Escribano Martos, *"Queuing Networks with Blocking Analyzed from Matrix-analytic Techniques"* (In Spanish). Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.
2. Martín López García, *"Extinction Times and The Size of the Surviving Species in a Two-species Competition Process"* (In Spanish). Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.
3. Diego Miguel Armesto García, *"New Descriptors in Stochastic Epidemics with Two Types of Infection".* Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.
4. Raquel Fernández Peralta, *"A New Pre-exposure Tuberculosis Vaccine Stochastic Model".* Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.

Supervision of Ph.D. students

1. Manuel David Escribano Martos, "*Queueing Networks with Blocking: Stationary Analysis and Sojourn Times"* (In Spanish). November 2007. Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.
2. Martín López García, "*Stochastic Models for Two Interacting Populations: Competition and Host-parasite Interactions"* (In English). July 2013. Department of Statistics and OR, Faculty of Mathematics; Complutense University of Madrid.

(February 2019, last modified date)