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ACADEMIC EMPLOYMENT

2015- *Senior Lecturer*. Imperial College London, Department of Computing, UK.
2013-15 *Lecturer*. Imperial College London, Department of Computing, UK.
2010-12 *Junior Research Fellow*. Imperial College London, Department of Computing, UK.
2007-08 *Postdoctoral Research Associate*. College of William & Mary, Virginia, US. Group: Prof. Evgenia Smirni.

OTHER EMPLOYMENT

2010- *Research Consultant*. Imperial Consultants, UK.
2009 *Research Staff Member*. SAP Research, UK.
2006 *Research Scientist*. Neptun, Milan, Italy. (Startup company, now part of BMC Software.)

EDUCATION

2003-06 *Ph.D., Computing*, Politecnico di Milano, Italy. Advisor: Prof. Giuseppe Serazzi.
1997-02 *MEng, Computing*, Politecnico di Milano, Italy. Grade: 100/100. 5-years curriculum.
2000-01 *Exchange Student*, University of Manchester, Department of Computing, UK.

AWARDS

2017 Best Paper Award, ACM SIGMETRICS.
2017 Best Student Paper Award, IFIP/IEEE IM.
2016 Best Paper Award, ACM/SPEC ICPE.
2015 Best Paper Award, IEEE ICCAC.
2015 Best Paper Award, IEEE CLOUD.
2012 Best Paper Award, ACM/SPEC ICPE.
2008 Best Paper Award, ACM/IFIP/USENIX MIDDLEWARE.
2008 Best Student Paper Award, QEST.
2004 Best Student Paper Award, IEEE MASCOTS.
2003 IBM Best European Graduates Recognition.

PROFESSIONAL SERVICE

2017 Special Issue Guest Editor, IEEE Trans. on Network and Service Management.
2017 Program Chair: VALUETOOLS 2017.
2015-19 Board of Directors (Elected), ACM SIGMETRICS.
2016 Special Issue Guest Editor, IEEE Trans. on Network and Service Management.
2015 Program Chair: IEEE MASCOTS 2015.
2014-16 Steering Committee, ICAC Conference.
2014 Program Chair: USENIX ICAC 2014.
2013- IFIP Working Group 7.3 (Elected), Computer System Modeling.
2013- Steering Committee, ACM/SPEC ICPE Conference.

2013 General Chair: ACM/SPEC ICPE 2013.
 2012 Special Issue Guest Editor, Elsevier Performance Evaluation.
 2012 Program Chair: QEST 2012.
 2012 Program Chair: ACM SIGMETRICS/Performance 2012.
 2011-15 Editor, ACM Performance Evaluation Review.
 2009 Special Issue Guest Editor, ACM Performance Evaluation Review.

OTHER SERVICE

2017 Organizer: 3rd QUDOS Workshop (at ICPE 2017).
 2017 Reviewer: BCS Distinguished Dissertation award.
 2017 Reviewer: ACM Future of Computing Academy programme.
 2016 Session Chair: ICPE.
 2016 Organizer: 2nd QUDOS Workshop (at ISSTA 2016).
 2015 Session Chair: VALUETOOLS.
 2015 Replication Packages Co-Chair: ESEC/FSE.
 2015 Organizer: 1st QUDOS Workshop (at ESEC/FSE 2015).
 2014 Publicity Chair: BDC.
 2014 Publicity Chair: QEST.
 2013 Session Chair: MASCOTS.
 2013 Book Reviewer: Morgan Kaufmann Publishers.
 2011 Student Activities Chair: SIGMETRICS.
 2011 Session Chair: SIGMETRICS.
 2011 Organizer: Joint HPDC/ SIGMETRICS Student Poster Event.
 2011 Organizer: SIGMETRICS Student Industry Workshop.
 2011 Track Chair: EURO-PAR.
 2010 Session Chair: HOTMETRICS.
 2010 Session Chair: HOTMETRICS.
 2010 Publicity Chair: QEST.
 2009 Session Chair: QEST.
 2009 Session Chair: HOTMETRICS.
 2009 Session Chair: MASCOTS.
 2007 Publicity Chair: MINENET.
 2006 Session Chair: SYS-ML.

RESEARCH VISITS

2016 Carleton University, Ottawa, Canada. Host: M. Woodside.
 2015 Tata Consulting Services Research, Mumbai, India. Host: M. Nambiar.
 2015 Gran Sasso Science Institute, Italy. Host: C. Trubiani.
 2014 College of William & Mary, VA, US. Host: E. Smirni.
 2013 College of William & Mary, VA, US. Host: E. Smirni.
 2012 BCAM, Bilbao, Spain. Host: J. Anselmi.
 2004 UCLA, Computer Science Dept., CA, US. Host: R.R. Muntz.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2012- Imperial College representative, SPEC Research Group.
 2011-12 Secretary/Treasurer, IEEE Special Technical Community on Sustainable Computing.
 2005- IEEE, IEEE Computer Society.
 2002- ACM, ACM SIGMETRICS.

MEMBERSHIP IN TECHNICAL PROGRAM COMMITTEES

I served 90+ times in TPCs (conferences and workshops). Brackets indicate the number of times I served at each venue: SIGMETRICS (7), QEST (6), MAMA (6), PERFORMANCE (4), IWQoS (4), GREENMETRICS (4), ASMTA (4), VALUETOOLS (4), DSN (3), CLOUD (3), ICAC (3), ICCCN (3), ICPE (3), DCPERF (3), EPEW (3), MICAS (3), MASCOTS (2), BIG DATA (2), BDC (2), ICDCS (2), INFQ (2), AIMC (1), APSYS (1), CCGRID (1), CLOUDMDE (1), DSSO (1), ECMS (1), EURO-PAR (1), HOTMETRICS (1), IC2E (1), ICCAC(1), MDHPCL (1), MOD (1), ROSSA (1), SC (1), SDDCS (1), MAM (1), CAC (1), SDDCS (1), WOSP-C (1).

JOURNAL REVIEWER

I served as journal reviewers 40+ times. Brackets indicate the number of papers reviewed (excluding revisions): Elsevier PEVA (17), Elsevier COMCOM (10), IEEE TSE (4), ACM PER (3), IEEE TPDPS (3), IEEE TCC (2), IEEE TC (2), IEE Computer Journal (2), ACM TOMPECS (1), Computing Informatics (1), Elsevier DKE (1), Elsevier EJOR (1), Elsevier JSS (1), Elsevier SIMPAT (2), IEEE Computer (1), IEEE TACON (1), IEEE TSMC A (1), IEEE TETC (1), IEEE/ACM TON (1), INFORMS JoC (1), ISI Bernoulli Journal (1), Naval Research Logistics (1), Operations Research (1), Springer QUESTA (1), Springer SOSYM (1), Springer TOP Journal (1), Stochastic Models (1).

GRANT REVIEWING ACTIVITIES

- 2017 Grant Reviewer, EPSRC, UK.
- 2017 Grant Reviewer, NSERC Council, Canada.
- 2016 Grant Reviewer, Romanian National Council for Scientific Research.
- 2016 Grant Reviewer, Flemish Research Foundation (FWO), Belgium.
- 2016 Review Panel Member for Italian PRIN projects.
- 2015 Grant Reviewer for Swiss National Science Foundation.
- 2014 Grant Reviewer for the Daphne Jackson Trust, UK.
- 2014 Grant Reviewer for NSERC Council, Canada.
- 2012 Review Panel Member for the Italian Research Assessment Exercise 2004-10 (VQR).
- 2012 Review Panel Member for the Romanian National Council for Scientific Research.
- 2012 Review Panel Member for the Italian Future in Research 2012 programme.

OUTREACH ACTIVITIES

- 2016 Presentation at OW2 event, CloudExpo, Excel London.
- 2015 Featured interview on Imperial College homepage about the DICE research project.
- 2015 Presentation at OW2 event, CloudExpo, Excel London.
- 2015 Presentation, RELATE ITN Doctoral School, Würzburg, Germany.
- 2014 Presentation, Future Internet Assembly, Athens.
- 2014 Presentation at OW2 event, CloudExpo, Excel London.
- 2013 Imperial Fringe Festival, Cloud Computing stand.
- 2013 Featured interview on Imperial College website to advertise JRF programme.
- 2013 MODAClouds presentation, ICT 2013, Vilnius, Lithuania.
- 2011-15 ACM SIGMETRICS LinkedIn group coordinator.

PATENTS

- 2012 *Simulation Techniques for Predicting In-Memory Database Systems Performance.* US Patent Application, No. 13/530,847, assignee SAP, co-inventors: S. Kraft, A. Jula.
- 2011 *Characterizing Web Workloads For Quality of Service Prediction.* US Patent Granted, No. 13/174,892, assignee SAP, co-inventor: S. Pacheco-Sanchez.
- 2011 *Predicting performance of a consolidated virtualized computing environment.* US Patent Application, No. 13/418,879, assignee SAP, co-inventors: S. Kraft, D. Krishnamurthy.

2011 *Estimating Service Resource Consumption From Response Time Measurements*. European Patent Application, EP20100013643, assignee SAP, co-inventors: S. Kraft, S. Dawson, S. Pacheco-Sanchez.

TALKS

INVITED TALKS AT SYMPOSIA

2016 2nd Int. Workshop on Performance Analysis of Big data Systems (PABS), Delft, NL.
2015 Keynote, TACTiCS Symp. on Performance Engineering, Mumbai, India.
2011 Keynote, 5th Int. Workshop on Practical Applic. of Stoch. Modelling (PASM), Karlsruhe, DE.

INVITED RESEARCH SEMINARS

2017 University of Delft, The Netherlands.
2016 University of Pavia, Italy.
2016 University of Leeds, UK, School of Computing Weekly Colloquium.
2016 Budapest University of Technology and Economics, Hungary.
2015 University of Vienna, Austria.
2015 Gran Sasso Science Institute, Italy.
2015 University of York, UK.
2015 Tata Consulting Services, Mumbai, India.
2014 INRIA Grenoble, France.
2013 University of Edinburgh, UK.
2012 BCAM, Spain.
2011 Politecnico di Milano, Italy.
2010 University of Florence, Italy.
2010 University Tor Vergata, Rome, Italy.
2010 BCAM - Basque Center for Applied Mathematics, Bilbao, Spain.
2010 IFIP Working Group 7.3 Workshop, Namur, Belgium.
2010 University of Munich (LMU), Germany.
2010 University of Venice (Cá Foscari), Italy.
2009 Northeastern University, Boston.
2009 INRIA-Grenoble Rhone Alpes, France.
2008 Mathworks, SIMULINK group, Boston, MA.
2008 SAP Research, Belfast, UK.
2007 Dagstuhl - Numerical Methods for Structured Markov Chains.
2007 College of William & Mary, Williamsburg, VA.
2006 IFIP Working Group 7.3 Workshop, St. Malo, France.

FUNDING SUPPORT

Legend: *PI*=Principal Investigator, *CoI*= Co-Investigator, *Coord*=Project Coordinator.

PROJECTS

2015-18 712k€ *Coord* DICE: “*Developing Data-Intensive Cloud Applications with Iterative Quality Enhancements*”. Horizon 2020 grant (4M€ project, 9 partners).
2015-16 98k£ *PI* OptiMAM: “*Optimising Model-Driven Service Design via Stochastic Analysis Methods*”. EPSRC First Grant.
2014-17 368k£ *CoI* iBids: “*Intelligent Management of Big Data Storage*”. *PI*: P. Harrison, *CoI*: W. Knottenbelt. EPSRC standard grant.
2014–16 189k£ *Host* SPANDO: “*Self-organising Performance Prediction and Optimisation for Large-scale Software Systems*”. Marie-Curie Fellowship for D. J. Dubois.
2012-15 604k€ *PI* MODAClouds: “*Model-Driven Approach for the Design and Execution of Applications on Multiple Clouds*”. *CoIs*: P. Harrison, W. Knottenbelt. FP7 grant (6M€ project, 10 partners).

2010-12 285k£ *PI* Imperial College Junior Research Fellowship: “*Service-Oriented Applications: Models, Burstiness, and Cost/Performance Trade-off*”. Internal Funding (100% *PI* time).

OTHER RESEARCH FUNDING

2017 20k\$ *PI* Microsoft Azure Sponsorship.
 2010-15 91k£ *PI* 5 industry-funded research consultancy contracts.
 2013–16 20k£ *Host* PhD scholarship funded by SAP UK.
 2013 3k£ *PI* Amazon AWS in Education Research Grant Award.
 2012 10k£ *PI* EPSRC Small Equipment Scheme.
 2012 9k£ *CoI* EPSRC Small Equipment Scheme. *PI*: P. Costa.
 2011 21k£ *CoI* EEES proposal, Internal funding. *PI*: P. Pietzuch.

FULL LIST OF PUBLICATIONS

REFEREED JOURNAL PUBLICATIONS

Conference papers published in journal proceedings are listed under conference publications.

J24. TREL J.F. Pérez, G. Casale. LINE : A Scalable Tool for Evaluating Software Applications in Unreliable Environments. *IEEE Trans. on Reliability*, 2017.
 J23. TOMPECS K. Molka, G. Casale. Contention-Aware Workload Placement for In-Memory Databases in Cloud Environments, *ACM Trans. on Modeling and Perform. Eval. Comp. Sys.*, 2(1):1–29, Oct 2016.
 J22. EJOR G. Casale, A. Sansottera, P. Cremonesi. Compact Markov-Modulated Models for Multiclass Trace Fitting, *European J. of Oper. Research*, 255(3):822–833, Nov 2016.
 J21. TOMACS W. Wang, G. Casale, C. Sutton. A Bayesian Approach to Parameter Inference in Queueing Networks, *ACM Trans. on Modeling and Comp. Simulation*, 27(1):1–26, Nov 2016.
 J20. CLUS D. J. Dubois, G. Casale. OptiSpot: Minimizing Application Deployment Cost using Spot Cloud Resources, *Cluster Computing*, 19(2):893–909, Springer, Mar 2016.
 J19. TOMACS G. Casale, V. de Nitto-Personé, E. Smirni. QRF: An Optimization-Based Framework for Evaluating Complex Stochastic Networks, *ACM Trans. on Modeling and Computer Simulation*, 26(3):15, Jan 2016.
 J18. PEVA S. Spinner, G. Casale, F. Brosig, S. Kounev. Evaluating Approaches to Resource Demand Estimation, *Performance Eval.*, Elsevier 92:51-71, Oct 2015.
 J17. TSE J.F. Pérez, G. Casale, S. Pacheco-Sanchez. Estimating Computational Requirements in Multi-Threaded Applications, *IEEE Trans. on Softw. Eng.*, 41(3):264–278, Mar 2015.
 J16. PEVA G. Casale, M. Tribastone, P.G. Harrison. Blending Randomness in Closed Queueing Network Models, *Perform. Eval.*, Elsevier, 82:15-38, Dec 2014.
 J15. JISA D. Ardagna, G. Casale, M. Ciavotta, J. F. Pérez, W. Wang. Quality-of-Service in Cloud Computing: Modelling Techniques and Their Applications, *J. of Internet Services and Applications*, 5(1), Springer, Sep 2014.
 J14. SOSYM S. Kraft, G. Casale, D. Krishnamurthy, D. Greer, P. Kilpatrick. Performance Models of Storage Contention in Cloud Environments, *J. of Software and Systems Modeling*, Springer, Oct 2013.
 J13. TSE G. Casale, N. Mi, L. Cherkasova, E. Smirni. Dealing With Burstiness in Multi-Tier Applications: Models and Their Parameterization, *IEEE Trans. on Softw. Eng.*, 38(5): 1040-1053, Sep/Oct 2012.
 J12. TSE G. Casale, A. Kalbasi, D. Krishnamurthy, J. Rolia. BURN: Enabling Workload Burstiness in Customized Service Benchmarks, *IEEE Trans. on Softw. Eng.*, 38(4):778–793, Jul/Aug 2012.
 J11. TNSM N. Mi, G. Casale, E. Smirni. ASIDE: Using Autocorrelation-Based Size Estimation for Scheduling Bursty Workloads, *IEEE Trans. on Network and Service Management*, 9(2):198–212, Jun 2012.
 J10. PEVA G. Casale. Exact Analysis of Performance Models by the Methods of Moments, *Perform. Eval.*, Elsevier, 68(6):873-896, Jun 2011.
 J9. PEVA G. Casale. A Generalized Method of Moments for Closed Queueing Networks, *Perform. Eval.*, Elsevier, 68(2):180-0, Feb 2011.

- J8. TC G. Casale, N. Mi, E. Smirni. Model-Driven System Capacity Planning Under Workload Burstiness, *IEEE Trans. on Computers*, 59(1):66-80, Jan 2010.
- J7. PEVA G. Casale, E. Z. Zhang, E. Smirni. KPC-Toolbox: Best Recipes for Automatic Trace Fitting Using Markovian Arrival Processes, *Perform. Eval.*, Elsevier, 67(9):873–896, Sep 2010.
- J6. JISA N. Mi, G. Casale, L. Cherkasova, E. Smirni. Sizing Multi-Tier Systems with Temporal Dependence: Benchmarks and Analytic Models, *Springer J. of Internet Services and Applications*, 1(2):117–134, Nov 2010.
- J5. PEVA G. Casale, E. Z. Zhang, E. Smirni. Trace Data Characterization and Fitting for Markov Modeling, *Perform. Eval.*, Elsevier, 67(2):61-79, Feb 2010.
- J4. TSE G. Casale. CoMoM: Efficient Class-Oriented Evaluation of Multiclass Performance Models, *IEEE Trans. on Softw. Eng.*, 35(2):162-177, Mar/Apr 2009.
- J3. TC G. Casale, R. R. Muntz, G. Serazzi. Geometric Bounds: a Non-Iterative Analysis Technique for Closed Queueing Networks, *IEEE Trans. on Computers*, 57(6):780–794, Jun 2008.
- J2. QUESTA G. Casale. A Note on Stable Flow-Equivalent Aggregation in Closed Networks, *Springer Queueing Systems*, 60(3):193–2, Dec 2008.
- J1. COR E. Amaldi, M. Bruglieri, G. Casale. A Two-Phase Relaxation-Based Heuristic for the Maximum Feasible Subsystem Problem, *Computers & Operations Research*, Elsevier, 35(5):1465–1482, May 2008.

REFEREED CONFERENCE PUBLICATIONS

Papers appearing in journal proceedings are marked by a “+”.

- C45⁺. SIGMETRICS G. Casale. Accelerating Performance Inference over Closed Systems by Asymptotic Methods. Regular paper at *ACM SIGMETRICS*, published in *ACM POMACS* 1(1):1–23, Jun 2017. **Best Paper Award**. [acc. rate: 13%]
- C44. CLOUD J. Wen, L. Ren, F. Yan, D. Dubois, G. Casale, E. Smirni. How to Supercharge the Amazon T2: Observations and Suggestions, in *Proc. of IEEE CLOUD*, Jun 2017.
- C43. IM K. Molka, G. Casale. Energy-Efficient Resource Allocation and Provisioning for In-Memory Database Clusters, in *Proc. of IFIP/IEEE IM*, 2017. **Best Student Paper Award**.
- C42. VALUETOOLS S. Dipietro, G. Casale, G. Serazzi. A Queueing Network Model for Performance Prediction of Apache Cassandra, in *Proc. of VALUETOOLS*, Nov 2016.
- C41. MASCOTS P. Jamshidi, G. Casale. An Uncertainty-Aware Approach to Optimal Configuration of Stream Processing Systems, in *Proc. of IEEE MASCOTS*, Sep 2016.
- C40. QRS R. Osman, J. F. Pérez, G. Casale. Quantifying the Impact of Replication on the Quality-of-Service in Cloud Databases, in *Proc. of IEEE QRS*, Aug 2016.
- C39. CLOUD D. J. Dubois, C. Trubiani, G. Casale. Model-driven Application Refactoring to Minimize Deployment Costs in Preemptible Cloud Resources, in *Proc. of IEEE CLOUD*, Jun 2016. [acc. rate: 15%].
- C38. ICPE W. Wang, G. Casale, A. Kattapur, M. Nambiar. Maximum Likelihood Estimation of Closed Queueing Network Demands from Queue Length Data, in *Proc. of ACM/SPEC ICPE*, Mar 2016. **Best Paper Award**.
- C37. CNSM K. Molka, G. Casale. Experiments or Simulation? A Characterization of Evaluation Methods for In-Memory Databases, in *Proc. of IFIP/IEEE CNSM*, Nov 2015.
- C36. ICCAC D. J. Dubois, G. Casale. Autonomic Provisioning and Application Mapping on Spot Cloud Resources, in *Proc. of IEEE ICCAC*, Sep 2015. **Best Paper Award**.
- C35⁺. PERFORMANCE G. Casale, J. F. Pérez, W. Wang. QD-AMVA: Evaluating Systems with Queue-Dependent Service Requirements, Regular paper at *IFIP PERFORMANCE*, published in *Perform. Eval.* journal, Elsevier, 91:80-98, Sep 2015.
- C34. CLOUD J. Wen, L. Lu, G. Casale, E. Smirni. Less can be More: micro-Managing VMs in Amazon EC2, in *Proc. of IEEE CLOUD*, Jun 2015. **Best paper award**. [acc. rate: 17%].
- C33. NOMS K. Molka, G. Casale, T. Molka, L. Moore. Memory-Aware Sizing for In-Memory Databases, in *Proc. of IEEE/IFIP NOMS*, May 2014. [acc. rate: 19%].
- C32⁺. PERFORMANCE J. Anselmi, G. Casale. Heavy-Traffic Revenue Maximization in Parallel Multiclass Queues, Regular paper at *IFIP PERFORMANCE*, published in *Perform. Eval.* journal, 70(1):806–821, Elsevier, Oct 2013.
- C31. MASCOTS W. Wang, G. Casale. Bayesian Service Demand Estimation with Gibbs Sampling, in *Proc. of IEEE MASCOTS*, Aug 2013 [acc. rate: 44/163 = 27%].

- C30. MASCOTS J.F. Pérez, S.Pacheco-Sanchez, G.Casale. An offline demand estimation method for multi-threaded applications, in *Proc. of IEEE MASCOTS*, Aug 2013 [acc. rate: $44/163 = 27\%$]. **Shortlisted for best paper award.**
- C29. DSN A. Sansottera, G. Casale, P. Cremonesi. Analysis of Second-Order Marked Markovian Arrival Processes, in *Proc. of IEEE/IFIP DSN*, Jun 2013 [acc. rate: $25/113 = 22\%$].
- C28. IM S. Musabbi, D. Krishnamurthy, G. Casale. RPO: Runtime Web Server Optimization Under Simultaneous Multithreading, in *Proc. of IFIP/IEEE IM*, May 2013 [acc. rate: $53/223 = 27\%$].
- C27. CLOUD S. Kraft, G. Casale, A. Jula, P. Kilpatrick, D. Greer. WIQ: Work-Intensive Query Scheduling for In-Memory Database Systems, in *Proc. of IEEE CLOUD*, Jun 2012 [acc. rate: $48/282 = 17\%$].
- C26. ICPE G. Casale, P. Harrison. A Class of Tractable Models for Run-Time Performance Evaluation, in *Proc. of ACM/SPEC ICPE*, 63-74, Apr 2012. **Best Paper Award.**
- C25. QEST G. Casale, M. Tribastone. Fluid Analysis of Queueing in Two-Stage Random Environments, in *Proc. of QEST*, Aachen, Germany, 21-30, Sep 2011.
- C24. CLOUD S. Pacheco-Sanchez, G. Casale, B. Scotney, S. McClean, G. Parr, S. Dawson. Markovian Workload Characterization for QoS Prediction in the Cloud, in *Proc. of IEEE CLOUD*, 147-154, Washington D.C., Jun 2011 [acc. rate: 18%].
- C23. DSN V. De Nitto, G. Casale, E. Smirni. Approximate Analysis of Blocking Queueing Networks with Temporal Dependence, in *Proc. of IEEE/IFIP DSN*, 574 - 585, Hong Kong, China, IEEE Press, in Jun 2011 [acc. rate: 27%].
- C22. VALUETOOLS M. Makaronidis, G. Casale. Efficient Parallelization of the Method of Moments for Queueing Networks Using Multi-Modular Algebra, in *Proc. of VALUETOOLS*, ACM, May 2011.
- C21. ICPE S. Kraft, G. Casale, D. Krishnamurthy, D. Greer, P. Kilpatrick. I/O Performance Prediction in Consolidated Virtualized Environments, in *Proc. of ACM/SPEC ICPE*, 295-306, ACM, Mar 2011.
- C20⁺. PERFORMANCE G. Casale. Approximating Passage Time Distributions in Queueing Models by Bayesian Expansion, Regular paper at *IFIP PERFORMANCE*, published in *Perform. Eval. journal*, Elsevier, 67(11):1076–1091, Nov 2010.
- C19. SIGMETRICS G. Casale, N. Mi, E. Smirni. CWS: A Model-Driven Scheduling Policy for Correlated Workloads, in *Proc. of ACM SIGMETRICS*, New York, NY, ACM, 251-262, Jun 2010 [acc. rate: 16%].
- C18. ICPE H. Li, G. Casale, T. Ellahi., SLA Driven Planning and Optimization of Enterprise Applications, in *Proc. of ACM/SPEC ICPE*, San Jose, CA, 117–128, Jan 2010 [acc. rate: 25%].
- C17. MIDDLEWARE G. Casale, A. Kalbasi, D. Krishnamurthy, J. Rolia. Automatic Stress Testing of Multi-Tier Systems by Dynamic Bottleneck Switch Generation, in *Proc. of ACM/IFIP/USENIX MIDDLEWARE*, Urbana-Champaign, Illinois, Springer LNCS 5896, 393–413, Dec 2009 [acc. rate: 19%].
- C16. ICAC N. Mi G. Casale, L. Cherkasova, E. Smirni. Injecting Realistic Burstiness Into a Traditional Client-Server Benchmark, in *Proc. of IEEE ICAC*, Barcelona, Spain, 149–158, IEEE Press, Jun 2009, [acc. rate: 16%].
- C15. DSN G. Casale, E. Smirni. MAP-AMVA: Approximate Mean Value Analysis of Bursty Systems, in *Proc. of IEEE/IFIP DSN*, Estoril, Portugal, 409–418, IEEE Press, Jun 2009 [acc. rate: 27%].
- C14. VALUETOOLS S. Kraft, S. Pacheco-Sanchez, G. Casale, S. Dawson. Estimating Service Resource Consumption From Response Time Measurements, in *Proc. of VALUETOOLS*, Pisa, Italy, ACM, Oct 2009.
- C13. MASCOTS N. Mi, G. Casale, Q. Zhang, A. Riska, E. Smirni. Autocorrelation-Driven Load Control in Distributed Systems, in *Proc. of IEEE MASCOTS*, London, UK, 269–278, IEEE Press, Sep 2009 [acc. rate: 20%].
- C12. QEST G. Casale. The Multi-branched Method of Moments for Queueing Networks, in *Proc. of QEST*, Budapest, Hungary, 227–236, IEEE Press, Sep 2009.
- C11. SIGMETRICS G. Casale, N. Mi, E. Smirni. Bound Analysis of Closed Queueing Networks with Workload Burstiness, in *Proc. of ACM SIGMETRICS*, 13-24, Annapolis, MD, ACM, Jun 2008 [acc. rate: 17%].

- C10. DSN N. Mi, G. Casale, E. Smirni. Scheduling for Performance and Availability in Systems with Temporal Dependent Workloads, in *Proc. of IEEE/IFIP DSN*, 336–345, Anchorage, AK, IEEE Press, Jun 2008 [25%].
- C9. MIDDLEWARE N. Mi, G. Casale, L. Cherkasova, E. Smirni. Burstiness in Multi-Tier Applications: Symptoms, Causes, and New Models, in *Proc. of ACM/IFIP/USENIX MIDDLEWARE*, 265–286, Leuven, Belgium, Springer LNCS 5346, Dec 2008. **Best Paper Award**, [acc. rate: 18%].
- C8. QEST G. Casale, E. Z. Zhang, E. Smirni. KPC-Toolbox: Simple Yet Effective Trace Fitting Using Markovian Arrival Processes, in *Proc. of QEST*, St.Malo, France, 83–92, IEEE Press, Sep 2008. **Best Student Paper Award**.
- C7. ANSS M. Bertoli, G. Casale, G. Serazzi. The JMT Simulator for Performance Evaluation of Non Product-Form Queueing Networks, in *Proc. of the 38th Annual Simulation Symposium*, 3 – 10, IEEE Press, 2007.
- C6. MASCOTS J. Anselmi, G. Casale, P. Cremonesi. Approximate Solution of Multiclass Queueing Networks with Region Constraints, in *Proc. of IEEE MASCOTS*, 1-5, Istanbul, Turkey, IEEE Press, 2007.
- C5. SIGMETRICS G. Casale. An Efficient Algorithm for the Exact Analysis of Multiclass Queueing Networks with Large Population Sizes, in *Proc. of joint ACM SIGMETRICS/IFIP PERFORMANCE 2006*, St. Malo, France, 169–180, 2006, ACM. [acc. rate: 14%].
- C4. MASCOTS G. Casale, R.R. Muntz, G. Serazzi. A New Class of Non-Iterative Bounds for Closed Queueing Networks, in *Proc. IEEE MASCOTS*, Monterey, US, 69 – 76, Sep 2006, IEEE Press.
- C3. QEST M. Bertoli, G. Casale, G. Serazzi. Java Modelling Tools: an Open Source Suite for Queueing Network Modelling and Workload Analysis, in *Proc. of QEST*, Riverside, US, Sep 2006, 119-120, IEEE Press, 2006.
- C2. QEST G. Casale. On Single Class Load-Dependent Normalizing Constant Equations, in *Proc. of QEST*, Riverside, US, Sep 2006, 333 – 342, IEEE Press, 2006.
- C1. MASCOTS G. Casale, G. Serazzi. Bottlenecks Identification in Multiclass Queueing Networks using Convex Polytopes, in *Proc. of MASCOTS*, 223-230, 2004, IEEE Press. **Best Student Paper Award**.

EDITORIAL WORK

- E8. TNSM G. Casale, Y. Diao, H. Lutfiyya, P. Owezarski, D. Raz. Guest Editors’ Introduction: Special Issue on Big Data Analytics for Management. *IEEE Trans. Network and Service Management* 13(3), 578-580, 2016.
- E7. ICAC X.Zhu, G. Casale, X. Gu. *Proceedings of the 11th International Conference on Autonomous Computing (ICAC)*. USENIX, Jun 2014.
- E6. QEST G. Casale, L. Cherkasova, H. Hermanns. *Special Issue on the 9th International Conference on Quantitative Evaluation of Systems (QEST)*. Elsevier Performance Evaluation Journal, Mar 2014.
- E5. ICPE P. Tuma, G. Casale, N. Amaral, T. Field, S. Seetharami. *Proceedings of ACM/SPEC ICPE – International Conference on Performance Engineering*, Prague, Czech Republic, Apr 2013, ACM.
- E4. SIGMETRICS P.G. Harrison, M.F. Arlitt, G. Casale. *Proceedings of ACM SIGMETRICS/PERFORMANCE - Joint International Conference on Measurement and Modeling of Computer Systems*, London, UK, Jun 11-15, 2012, ACM.
- E3. HPDC G. Casale, I.Raicu. *Special Issue on Joint HPDC/SIGMETRICS Student Research Posters*. ACM Perf. Eval. Rev., Dec 2011.
- E2. EUROPAR S. Moore, D. Kondo, B.J.N. Wylie, G. Casale. *Proceedings of Euro-Par 2011: Performance Track*, Springer LNCS 6853, 2011.
- E1. PER G. Casale, R.R. Muntz, G. Serazzi. *Special Issue on Tools for Computer Performance Modeling and Reliability Analysis*. ACM Performance Evaluation Review, Jan 2009.

WORK-IN-PROGRESS PAPERS

- W11. MASCOTS K. Molka, G. Casale. Efficient Memory Occupancy Models for In-Memory Databases, *Proc of IEEE MASCOTS*, Sep 2016, ACM.

W10. MAMA W. Wang, G. Casale. Maximum Likelihood Estimation of Closed Queueing Network Demands from Queue Length Data, *Special Issue on MAMA Workshop*, ACM Perf. Eval. Rev., Sep 2015, ACM.

W9. MICAS W. Wang, G. Casale. Evaluating Weighted Round Robin Load Balancing for Cloud Web Services, in *Proc. of Management of Resources and Services in Cloud and Sky Computing (MICAS) Workshop*, Sep 2014, IEEE Press.

W8. MICAS J. Moschetta, G. Casale. OFBench: an Enterprise Application Benchmark for Cloud Resource Management Studies, in *Proc. of Management of Resources and Services in Cloud and Sky Computing (MICAS) Workshop*, Sep 2012, IEEE Press.

W7. DCPERF G. Casale, S. Kraft, D. Krishnamurthy. A Model of Storage I/O Performance Interference in Virtualized Systems, in *Proc. of 1st Data Center Performance Workshop*, Jun 2011.

W6. NMSC G. Casale, P. G. Harrison, M. Vigliotti. Product-Form Approximation of Tandem Queues via Matrix Geometric Methods, in *Proc. of Numerical Solution of Markov Chains (NSMC) Workshop*, Sep 2010.

W5. HOTMETRICS G. Casale, A. Kalbasi, D. Krishnamurthy, J. Rolia. Automatically Generating Bursty Benchmarks for Multi-Tier Systems, *Special Issue on the 2nd ACM HOTMETRICS workshop*, ACM Perf. Eval. Rev. 37(3):32–37, Dec 2009, ACM.

W4. HOTMETRICS A. Riska, N. Mi, G. Casale, E. Smirni. Feasibility Regions: Exploiting Trade-offs between Power and Performance in Disk Drives, *Special Issue on the 2nd ACM HOTMETRICS workshop*, ACM Perf. Eval. Rev. 37(3):43–48, Dec 2009, ACM.

W3. HOTMETRICS G. Casale, N. Mi, L. Cherkasova, E. Smirni. How to Parameterize Models with Bursty Workloads, *Special Issue on the 1st ACM HOTMETRICS workshop*, ACM Perf. Eval. Rev. 36(2):38-44, Jun 2008, [27%].

W2. MAMA G. Casale. CoMoM: Class-Oriented Evaluation of Multiclass Models, *Special Issue on MAMA Workshop*, ACM Perf. Eval. Rev. 36(2):38-44, ACM, Sep 2008, ACM.

W1. MAMA G. Casale, E.Z. Zhang, E. Smirni. Characterization of Moments and Autocorrelation in MAPs, *Special Issue on MAMA Workshop* in ACM Perf. Eval. Rev., 35(2):27–29, Sep 2007, ACM.

DEMOS

D7. ICPE C. Li, T. Altamimi, M. H. Zargari, G. Casale, and D. Petriu. Tulsa: A Tool for Transforming UML to Layered Queueing Networks for Performance Analysis of Data Intensive Applications, in *Proc. of QEST*, 2017.

D6. ICPE G. Casale, M. Cazzoli, J. Shuai, V.S. Lopes, G. Serazzi, L. Zhu. Generalized Synchronizations and Capacity Constraints for Java Modelling Tools, in *Proc. of ACM/SPEC ICPE*, 2017.

D5. MASCOTS D. J. Dubois, G. Casale. Performance Prediction for Burstable Cloud Resources, in *Proc. of VALUETOOLS*, Nov 2016.

D4. QUDOS W. Wang, J. Pérez, G. Casale. Filling the Gap: a Tool to Automate Parameter Estimation for Software Performance Models, in *Proc. of QUDOS*, 2015, ACM.

D3. ICPE S. Spinner, G. Casale, X. Zhu, S. Kounev. LibReDE: A Library for Resource Demand Estimation, in *Proc. of ICPE*, 2014, ACM.

D2. MAM G. Casale, E. Smirni. KPC-Toolbox: Fitting Markovian Arrival Processes and Phase-Type Distributions with MATLAB, ACM Perf. Eval. Rev., 39(4):47, Mar 2012.

D1. SIGMETRICS E.Z. Zhang, G. Casale, E. Smirni. KPC-Toolbox: Best Recipes Toward Automatization of Workload Fitting, ACM Perf. Eval. Rev. 36(2):134-136, Sep 2008.

TUTORIALS

T5. ICPE G. Casale, S. Spinner, W. Wang. Automated Parameterization of Performance Models from Measurements, at *ACM/SPEC ICPE 2016*.

T4. UCC D. Ardagna, N. Ferry, G. Casale. Model-Driven Management of Multi-Cloud Applications, at *IEEE/ACM UCC 2014*.

T3. ASE D. Ardagna, N. Ferry, G. Casale, M. Almeida, J.F. Pérez. MDD-CLOUD - Model Driven Design of Cloud Applications with “a priori” Quality of Service Guarantees, at *IEEE/ACM ASE 2014*.

- T2. SIGMETRICS G. Casale. *Building Accurate Workload Models using Markovian Arrival Processes*, at *ACM SIGMETRICS 2011*, Jun 2011.
- T1. ICPE G. Casale, G. Serazzi. *Quantitative System Evaluation with Java Modelling Tools*, at *ACM/SPEC ICPE 2011*, Mar 2011.

OTHER PUBLICATIONS

- O11. IEEECC G. Kecskemeti, G. Casale, D. N. Jha, J. Lyon, R. Ranjan. Modelling and Simulation Challenges in Internet of Things. *IEEE Cloud Computing*, 4(1):62-69, 2017.
- O10. CF G. Casale, C. Chesta, P. Deussen, E. Di Nitto, P. Gouvas, S. Koussouris, V. Stankovski, A. Symeonidis, V. Vlassiou, A. Zafeiropoulos and Z. Zhao. Current and Future Challenges of Software Engineering for Services and Applications, in *Proc. of CloudForward*, Madrid, 2016.
- O9. CROSSCLOUD D. Petcu, E. Di Nitto, D. Ardagna, A. Solberg, G. Casale. Towards Multi-Clouds Engineering, in *Proc. of CrossCloud workshop*, Toronto, 2014.
- O8. PASTA S. Pacheco-Sanchez, G. Casale, B. Scotney, S. McClean, G. Parr. A Case Study of Demand Estimation for a Multi-Threaded ERP Application, in *Proc. of PASTA workshop*, Sep 2011.
- O7. CHAP G. Casale, M. Gribaudo, G. Serazzi. *Tools for Performance Evaluation of Computer Systems: Historical Evolution and Perspectives*, in *Proc. of IFIP PERFORM*, Springer LNCS 6821, 24–37, Vienna, Austria, Oct 2010.
- O6. PASTA G. Casale, M. Tribastone. Process-Algebraic Modeling of Priority Queueing Networks, in *Proc. of PASTA workshop*, Sep 2010.
- O5. ICPE J. Rolia, D. Khrishnamurthy, G. Casale, S. Dawson. APE: Automated Performance Evaluation of Customized Services, in *Proc. of ACM/SPEC ICPE*, San Jose, California, 3–14, Jan 2010.
- O4. NGS G. Casale, N. Mi, E. Smirni. Versatile Models of Systems Using MAP Queueing Networks, in *Proc. of NSF-NGS Workshop (at IPDPS 2008)*, IEEE Press, 2008.
- O3. NGS E. Smirni, Q. Zhang, N. Mi, A. Riska, G. Casale. New Results on the Performance Effects of Autocorrelated Flows in Systems, in *Proc. of NSF-NGS Workshop (at IPDPS 2007)*, IEEE Press, 2007.
- O2. CHAP G. Casale, G. Serazzi. Stabilisation Techniques for Load-Dependent Algorithms. Book chapter in *J.A.Barria Ed., Communication Networks and Computer Systems*, Imperial College Press, 2006.
- O1. CHAP G. Casale, G. Serazzi. Estimating Bottlenecks of Very Large Models. Book chapter in *G.Kotsis Ed., Performance Evaluation: Stories and Perspective*, Vienna, Austria, Dec 2003, Austrian Computing Group (OCG) Press.

TEACHING

COURSES

- 2016– C436H Performance Engineering, Imperial College London.
- 2015– C337 Simulation and Modelling, Imperial College London.
- 2014– C343 Operations Research, Imperial College London.
- 2011–15 C436/C436H Performance Analysis, Imperial College London.
- 2005–06 Capacity planning (Dimensionamento dei Sistemi Informatici), Politecnico di Milano.
- 2005 C++ Programming Lab, Politecnico di Milano, Italy.
- 2003 Enterprise Systems (Impianti Informatici), Politecnico di Milano, Italy.

PROJECT SUPERVISION

A UG final project is equivalent to a BSc thesis. A MSc final project is equivalent to a MSc thesis. Group projects are 3-month projects with a development focus. ISO and Topics are literature survey projects. MRes projects are 4-month research projects that award the same number of credits of a course.

- 2016 1 UG group project, 1 MRes project, 1 ISO project, 7 MSc final projects.

2010–15 17 UG final projects, 25 MSc final projects, 9 UG group projects, 1 MSc group project,
2 ISO projects, 1 Topics.
2003–06 15 final projects for UG and MSc students at Politecnico di Milano, Italy.

UNIVERSITY SERVICE

POSTDOCTORAL SUPERVISION

2016- Chen Li.
2015-16 Pooyan Jamshidi.
2015 Rasha Osman.
2014-16 Daniel J. Dubois.
2013-15 Juan F. Pérez.

PHD STUDENT SUPERVISION

2017- Ahmad S. Alnafessah.
2017- Lulai Zhu.
2015- Salvatore Dipietro.
2013-17 Karsten Molka.
2013-16 Weikun Wang.
2009-11 Stephan Kraft (Industrial mentor at SAP Research).
2009-11 Sergio Pacheco-Sanchez (Industrial mentor at SAP Research).

RESEARCH ASSISTANTS

2016 Vitor S. Lopez.
2015 Shuai Jiang.
2015-17 Tatiana Ustinova.

PHD EXAMINER

2017 External Examiner, University of Calgary, Canada.
2017 External Examiner, University of Delft, The Netherlands.
2017 Internal Examiner, Imperial College London, UK.
2017 Internal Examiner, Imperial College London, UK.
2016 External Examiner, Carleton University, Ottawa, Canada.
2016 External Examiner, Umeå University, Sweden (PhD licentiate).
2015 External Examiner, Newcastle University, UK.
2014 Internal Examiner, Imperial College London, UK.
2013 Internal Examiner, Imperial College London, UK.
2013 External Examiner, University of Turin, Italy.
2012 Internal Examiner, Imperial College London, UK.
2012 External Examiner, Politecnico di Milano, Italy.
2012 External Examiner, Politecnico di Milano, Italy.
2010 External Examiner, DTU Copenhagen, Denmark

DEPARTMENTAL SERVICE

2016- Deputy PhD admission tutor.
2016- PhD scholarship committee, HiPEDS centre for doctoral training.
2016- Departmental research strategy committee.
2015- Departmental PhD scholarship committee.
2015 Departmental committee for EPSRC doctoral prize nomination.
2013-16 Internal lunch seminars coordinators.

2012 Panel member, PhD Careers Event.
2012 Judge for Google PhD Poster Competition.