

Curriculum Vitae

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État civil

Date de naissance : 7 aout 1971
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Cursus

- Juin 2022-... : Responsable équipe Ermine
- Janv. 2022-Mai 2022 : Responsable équipe Dionysos
- Jan. 2023-... : DR1 INRIA à Rennes
- Oct. 2013-Dec. 2022 : DR2 INRIA à Rennes
- Jan. 2001-Sept. 2013 : CR1 INRIA à Rennes
- 2006 : HDR en Informatique, Université de Rennes 1
- Oct. 1998-Dec. 2000 : CR2 INRIA à Rennes
- Mai 1999- Déc. 1999 : Séjour scientifique de 8 mois à Duke University, USA.
- Sept. 1997-Aout 1998 : A.T.E.R. en mathématiques à l'Université de Rennes 1.
- 1997 :
Doctorat Mathématiques et applications, Université de Rennes 1
Simulation accélérée par les méthodes de Monte Carlo et Quasi-Monte Carlo : théorie et applications. Mention très honorable.
Directeur : G. Rubino.
- 1997 : CAPES de Mathématiques.
- Sept. 1994-Aout 1997 : Moniteur en mathématiques, Université de Rennes 1.
- 1994 :
DEA en Mathématiques, option probabilités, Univ. Bretagne Occidentale.
mention bien. major de l'option.
Mémoire de DEA : *Etude des suites à discrédance faible et des méthodes de quasi-Monte Carlo.*
Encadreur : G. Rubino.
- 1993 : Maîtrise de Mathématiques, Brest, mention très bien. major.
- 1992 : Licence de Mathématiques, Brest, mention très bien. major.
- 1991 : DEUG A, Brest, mention très bien. major.
- 1989 : Baccalauréat série C, Lycée Colbert, Lorient, mention assez-bien.

Thèmes de recherche

- Modèles de tarification de l'Internet.
- Métrologie
- Analyse des performances et de la sûreté de fonctionnement de réseaux.
- Méthodes de simulation de type Monte Carlo et quasi-Monte Carlo et leurs applications.

Liste des publications

A. Doctorat :

1. B. Tuffin, Simulation accélérée par les méthodes de Monte Carlo et Quasi-Monte Carlo : théorie et applications. Thèse de Doctorat, Université de Rennes 1. Octobre 1997.
2. B. Tuffin. Modélisation mathématique pour la conception, l'analyse quantitative et le contrôle de la qualité de service des systèmes. Habilitation à diriger les recherches, Université de Rennes 1. Avril 2006.

B. Livres :

1. B. Tuffin. *La simulation de Monte Carlo*. Editions Hermès, Février 2010.
2. P. Maillé and B. Tuffin. *Telecommunication Network Economics : From Theory to Applications*. Cambridge University Press, 2014.
3. P. Maillé and B. Tuffin. *From Network Neutrality to ICT Neutrality*. Springer, 2022.

C. Édition de livres ou de numéros spéciaux de revues :

1. B. Stiller, P. Reichl and B. Tuffin (eds). Performability has its price. Proceedings of the fifth International Workshop on Advanced Internet Charging and QoS technologies (ICQT'06), St Malo, France. Lecture Notes in Computer Science N.4033, Springer Verlag, 2006.
2. T. Chahed and B. Tuffin (eds). International Conference on Network Control and Optimization (NET-COOP'07), Avignon, France. Lecture Notes in Computer Science N.4465, Springer Verlag, 2007.
3. P.W. Glynn and B. Tuffin (eds). Performance Evaluation Methodologies and Tools : Selected papers from ValueTools 2007. *Performance Evaluation*, Volume 65, Issues 11+12, November 2008.
4. P. Reichl, B. Stiller and B. Tuffin (eds). Network Economics for Next Generation Networks. Proceedings of the sixth International Workshop on Advanced Internet Charging and QoS technologies (ICQT'09), Aachen, Germany. Lecture Notes in Computer Science N.5539, Springer Verlag, 2009.
5. G. Rubino and B. Tuffin (eds). *Rare Event Simulation using Monte Carlo Methods*. John Wiley & Sons, 2009.
6. G. Rubino and B. Tuffin (eds). Special issue of ACM Transactions on Modeling and Computer Simulation on Rare Event Simulation, 2009. Articles finalement inclus dans les numéros standards (en raison du nombre limité de sélectionnés).
7. T. Anh Trinh, P. Reichl, B. Stiller and B. Tuffin (eds). Special issue of Telecommunication Systems Journal on Socio-Economic Issues of Next Generation Networks, in press.

8. S. Distefano, A. Puliafito, M. Scarpa and B. Tuffin (eds). Performance Evaluation Methodologies and Tools : Selected papers from ValueTools 2016. *Performance Evaluation*, 2016, to appear.
9. B. Tuffin and P. L'Ecuyer (eds). Monte Carlo and Quasi-Monte Carlo Methods (MCQMC) 2018, 539 pages, Springer-Verlag, 2020.
10. K. Djemame, J. Altmann, J. Angel Banares, O. Agmon Ben-Yehuda, V. Stankovski, B. Tuffin (eds). *Economics of Grids, Clouds, Systems, and Services. Proceedings of the 17th International Conference, GECON 2020, Izola, Slovenia, September 15-17, 2020*. Lecture Notes in Computer Science, volume 12441, Springer-Verlag, 2020.
11. K. Tserpes, J. Altmann, J. Angel Banares, O. Agmon Ben-Yehuda, K. Djemame, V. Stankovski, B. Tuffin (eds). *Economics of Grids, Clouds, Systems, and Services. Proceedings of the 18th International Conference, GECON 2021, Virtual Event, September 21-23, 2021*. Lecture Notes in Computer Science, volume 13072, Springer-Verlag, 2021.
12. J. Angel Banares, J. Altmann, O. Agmon Ben-Yehuda, K. Djemame, V. Stankovski, B. Tuffin (eds). *Economics of Grids, Clouds, Systems, and Services. Proceedings of the 19th International Conference, GECON 2022, Izola, Slovenia, September 13-15, 2022*. Lecture Notes in Computer Science, volume 13430, Springer-Verlag, 2022.
13. Zdravko I, Botev, Alexander Keller, Christiane Lemieux, Bruno Tuffin (eds). *Advances in Modeling and Simulation : Festschrift for Pierre L'Ecuyer*. Springer Nature, 2022.

D. Revues internationales à comité de lecture

1. B. Tuffin, On the Use of Low Discrepancy Sequences in Monte Carlo Methods. *Monte Carlo Methods and Applications*, Vol.2, Num.4, pages 295-320, 1996.
Voir aussi la note "Comments on "On the use of low discrepancy sequences in Monte Carlo methods". *Monte Carlo Methods and Applications*. Vol.4, 1998.
2. B. Tuffin, Variance Reductions applied to Product-Form Multi-Class Queuing Networks. *ACM Transactions on Modeling and Computer Simulation*, Vol.7, Num.4, pages 478-500, 1997.
3. B. Tuffin, Variance Reduction Order Using Good Lattice Points in Monte Carlo Methods. *Computing*, Vol. 61, Num. 4, pages 371-378, 1998.
4. B. Sericola and B. Tuffin, A Fluid Queue Driven by a Markovian Queue. *Queuing Systems : Theory and Applications*, Vol.31, pages 253-264, 1999.
5. B. Tuffin, Bounded Normal Approximation in Highly Reliable Markovian Systems. *Journal of Applied Probability*, Vol. 36, Num.4, 1999.
6. B. Tuffin et L.M. Le Ny. Parallélisation d'une combinaison des méthodes de Monte Carlo et quasi-Monte Carlo et application aux réseaux de files d'attente. *RAIRO : Recherche opérationnelle*, Vol. 34, pages 85-98, 2000.
7. B. Tuffin, D.S. Chen and K.S. Trivedi, Comparison of Hybrid Systems and Fluid Stochastic Petri Nets. *Discrete Event Dynamic Systems*, Vol. 11, Num. 1, pages 77-96, 2001.
8. B. Tuffin. Revisited Progressive Second Price Auctions for Charging Telecommunication Networks. *Telecommunication Systems*, Vol. 20, Num. 3, pages 255-263, 2002.
9. H. Cancela, G. Rubino and B. Tuffin, MTTF estimation by Monte Carlo methods using Markov models. *Monte Carlo Methods and Applications*, Vol.8, Num.4, pages 312-341, 2002.
10. B. Tuffin. Charging the Internet without bandwidth reservation : an overview and bibliography of mathematical approaches. *Journal of Information Science and Engineering*, Vol. 19, pages 7-5-786, 2003.

11. P. Maillé and B. Tuffin. The Progressive Second Price Mechanism in a Stochastic Environment. *Netnomics*, Vol.5, pages 119-147, 2003.
12. D. Ros and B. Tuffin. Mathematical Model of Paris Metro Pricing Scheme for Charging Telecommunication Networks. *Computer Networks*, Vol. 46, pages 73-85, 2004.
13. C. Lécot and B. Tuffin. Comparison of Quasi-Monte Carlo-Based Methods for the Simulation of Markov Chains. *Monte Carlo Methods and Applications*, Vol.10, Num.3-4, pages 377-384, 2004.
14. B. Tuffin. Randomization of Quasi-Monte Carlo Methods for Error Estimation : Survey and Normal Approximation. *Monte Carlo Methods and Applications*, Vol.10, Num.3-4, pages 617-628, 2004.
15. Y. Hayel and B. Tuffin. A Mathematical Analysis of the Cumulus Pricing Scheme. *Computer Networks*, Vol.47, pages 907-921, 2005.
16. E. Altman, D. Barman, R. El Azouzi, D. Ros and B. Tuffin. Pricing Differentiated Services : A Game-Theoretic Approach. *Computer Networks*, Vol.50, Num. 7, pages 982-1002, 2006.
17. E. Altman, E. El-Azouzi, D. Ros and B. Tuffin. Loss Policies for Competing TCP/IP Connections. *Computer Networks*, Vol.50, Num. 11, pages 1799-1815, 2006.
18. Y. Hayel and B. Tuffin. An Optimal Congestion and Cost-Sharing Pricing Scheme for Multiclass Services. *Mathematical Methods of Operational Research*, Vol.63, Num.3, 2006.
19. G. Okten, B. Tuffin and V. Burago. A central limit theorem and improved error bounds for a hybrid-Monte Carlo sequence with applications in computational finance. *Journal of Complexity*, Vol. 22, pages 435-458, 2006.
20. P. Maillé and B. Tuffin. Pricing the Internet with Multi-Bid Auctions. *IEEE/ACM Transactions on Networking*, Vol. 14, Num. 5, pages 992-1104, 2006.
21. Y. Hayel, M. Ouarraou and B. Tuffin. Optimal Measurement-based Pricing for an M/M/1 Queue. *Networks and Spatial Economics*, Vol. 7, Num. 2, pages 177-195, 2007.
22. P. L'Ecuyer, V. Demers and B. Tuffin. Rare Events, Splitting, and Quasi-Monte Carlo. *ACM Transactions on Modeling and Computer Simulation*, Vol. 17, Num. 2, Article 9, 2007.
23. P. L'Ecuyer, C. Lécot and B. Tuffin. A Randomized Quasi-Monte Carlo Method for Markov Chains. *Operations Research*, Vol. 56, Num. 4, Pages 958-975, July-August 2008.
24. H. Cancela, P. Rodriguez and B. Tuffin. Availability Based Pricing and Topology Upgrade of Communication Networks. *Annals of Operations Research*, Vol. 157, Num. 1, Pages 61-71, 2008.
25. P. Maillé, B. Tuffin, Y. Xing and R. Chandramouli. User Strategy Learning when Pricing a RED Buffer. *Elsevier : Simulation Modelling, Practice and Theory*, Vol. 17, Num. 3, Pages 548-557, March 2009.
26. P. L'Ecuyer, J. Blanchet, B. Tuffin, P.W. Glynn. Asymptotic Robustness of Estimators in Rare-Event Simulation. *ACM Transactions on Modeling and Computer Simulation*, Vol 20, Num. 1 Article 6 (41 pages), 2010.
27. P. L'Ecuyer and B. Tuffin. Approximating Zero-Variance Importance Sampling in a Reliability Setting. *Annals of Operations Research*. Volume 189, Issue 1, pp 277-297, September 2011.
28. H. Le Cadre, M. Bouhtou and B. Tuffin. Modeling Consumers' Preference to Price Bundle Offers in Telecommunication industry Game when Competition among Operators. *Netnomics*, Vol. 10, Num. 9, pages 171-208, 2009.
29. B. Tuffin, H. Le Cadre, M. Bouthou. Optimal pricing strategy with compensation when QoS is not satisfied. *Annals of Telecommunication*. Vol. 65, No 3-4, March-April 2010.
30. P. Maillé and B. Tuffin. Price War in Heterogeneous Wireless Networks. *Computer Networks*. Vol. 54, Num. 13, Pages 2281-2292, September 2010.

31. Hai Tran Hoang and B. Tuffin. Inter-domain pricing : Challenges and possible approaches. *International Journal of Network Management*, Vol.21, Num. 3, pages 223-246, 2011.
32. P. Maille, B. Tuffin and J.M. Vigne. Technological Investment Games Among Wireless Telecommunications Service Providers. *International Journal of Network Management*, Vol. 21, pages 65-82, 2011.
33. P. L'Ecuyer, D. Munger and B. Tuffin. On the Distribution of Integration Error by Randomly-Shifted Lattice Rules. *Electronic Journal of Statistics*, Vol. 4, pages 950-993, 2010.
34. P. L'Ecuyer, G. Rubino, S. Saggadi and B. Tuffin. Approximation of Zero-Variance Importance Sampling for the Evaluation of Static Reliability Models. *IEEE Transactions on Reliability*, Vol. 60, Num. 3, pages 590-604, September 2011.
35. P. Reichl, R. Schatz and B. Tuffin. Logarithmic Laws in Service Quality Perception : Where Microeconomics Meets Psychophysics and Quality of Experience. *Telecommunication Systems*, to appear, 2011.
36. Hai Tran Hoang and B. Tuffin. Combinatorial double-sided auctions for network bandwidth allocation : A budget-balanced and decentralized approach. *Annals of Telecommunications*, Volume 67, Issue 5-6, pp 227-240, June 2012.
37. P. Maillé and B. Tuffin. Competition Among Providers in Loss Networks. *Annals of Operations Research*, Volume 199, Issue 1 (2012), Pages 3-22.
38. D. Munger, P. L'Ecuyer, F. Bastin, C. Cirillo and B. Tuffin. Estimation of the Mixed Logit Likelihood Function by Randomized Quasi-Monte Carlo. *Transportation Research Part B*. Vol. 46, Num. 2, pp. 305-320, 2012.
39. Z.I. Botev, P. L'Ecuyer, G. Rubino, R. Simard and B. Tuffin. Static Network Reliability Estimation Via Generalized Splitting. *INFORMS Journal on Computing*, Volume 25 Issue 1, Pages 56-71, 2013.
40. Z.I. Botev, P. L'Ecuyer and B. Tuffin. Markov chain importance sampling with applications to rare event probability analysis. *Statistics and Computing*. Volume 23, Issue 2, pp 271-285, March 2013.
41. P. Maillé, E. Markakis, M. Naldi, G. Stamoulis and B. Tuffin. An Overview of Research on Sponsored Search Auctions. *Electronic Commerce Research Journal*. Vol. 12, Num. 3, pages 265-300, 2012.
42. O. Marce, H.-H. Tran and B. Tuffin. Double-sided auctions applied to vertical handover for mobility management in wireless networks. *Journal of Network and Systems Management*, Pages 1-24, March 2013.
43. V. Caron, A. Guyader, M. Munoz Zuniga et B. Tuffin. Some Recent Results in Rare Event Estimation. *ESAIM Proc.*, Vol. 44, p. 239-259, January 2014.
44. P. Coucheney, P. Maille and B. Tuffin. Impact of Reputation-Sensitive Users and Competition Between ISPs on the Net Neutrality Debate. *IEEE Transactions on Network and Service Management*, Vol. 10, Num. 4, Dec. 2014.
45. B. Tuffin, S. Saggadi and P. L'Ecuyer. An Adaptive Zero-Variance Importance Sampling Approximation for Static Network Dependability Evaluation. *Computers and Operations Research*, Vol. 45, Pages 51-59, 2014.
46. H. Cancela, M. El Khadiri, G. Rubino and B. Tuffin. Balanced and Approximate Zero-Variance Recursive Estimators for the Network Reliability Problem. *ACM Transactions on Modeling and Computer Simulation*. Vol. 25. Issue 1, Article 5, Dec. 2014.
47. P. Coucheney, G. D'Acquisto, P. Maillé M. Naldi and B. Tuffin. Influence of search neutrality on the economics of advertisement-financed content. *ACM Transactions on Internet Technology*. Volume 14, Issue 2-3, Article 10, October 2014.

48. P. Coucheney, P. Maille and B. Tuffin. Network Neutrality Debate and ISP Inter-Relations : Traffic Exchange, Revenue Sharing, and Disconnection Threat. *NETNOMICS : Economic Research and Electronic Networking*. Volume 15, Issue 3, pp 155-182, November 2014.
49. Z. I. Botev, P. L'Ecuyer, R. Simard and B. Tuffin. Static Network Reliability Estimation under the Marshall-Olkin Copulas. *ACM Transactions on Modeling and Computer Simulation*, Volume 26 Issue 2, Article No. 14, January 2016.
50. P. Maillé, G. Simon and B. Tuffin. Toward a Net Neutrality Debate that Conforms to the 2010s. *IEEE Communications Magazine*. Vol. 54, Num.3, Pages 94-99, March 2016.
51. P. L'Ecuyer, D. Munger, C. Lecot and B. Tuffin. Sorting methods and convergence rates for Array-RQMC : some empirical comparisons. *Mathematics and Computers in Simulation*. 143C, Pages 191-201, 2018.
52. P. Maillé and B. Tuffin. Preventing Competition Using Side Payments : When Non-Neutrality Creates Barriers to Entry. *Netnomics*. Vol. 18, Issue 1, pp 3-22, 2017.
53. Pierre L'Ecuyer, Patrick Maille, Nicolas Stier-Moses, and Bruno Tuffin. Revenue-Maximizing Rankings for Online Platforms with Quality-Sensitive Consumers. *Operations Research*. To appear.
54. E. Gourdin, P. Maille, G. Simon and B. Tuffin. The Economics of CDNs and Their Impact on Service Fairness. *IEEE Transactions on Network and Service Management*. Vol. 14, Num. 1, Pages 22-33, 2017.
55. P. Maille and B. Tuffin. Auctions for online ad space among advertisers sensitive to both views and clicks. *Electronic Commerce Research*, Vol. 18, Num. 3, pages 485-506, 2018.
56. P. L'Ecuyer, P. Maille, N. Stier-Moses, and B. Tuffin. Non-Neutrality of Search Engines and its Impact on Innovation. *Internet Technology Letters*. Volume 1, Issue 1, January/February 2018.
57. P. Maille and B. Tuffin. Big Content Providers Weighing on Non-Neutrality? *NETNOMICS : Economic Research and Electronic Networking*, Volume 22, Issue 1, Pages 1-26, 2021.
58. Y. Peng, M. Fu, J. Hu, P. L'Ecuyer, B. Tuffin. Variance Reduction for Generalized Likelihood Ratio Method By Conditional Monte Carlo and Randomized Quasi-Monte Carlo. To appear in *Journal of Management Science and Engineering*, Volume 7, Issue 4, Pages 550-577, December 2022.
59. P. Maille, G. Maudet, M. Simon, B. Tuffin. Are Search Engines Biased? Detecting and Reducing Bias using Meta Search Engines. To appear in *Electronic Commerce Research and Applications*, 2022.
60. M.K. Nakayama, B. Tuffin. Sufficient Conditions for Central Limit Theorems and Confidence Intervals for Randomized Quasi-Monte Carlo Methods. *ACM Transactions on Modeling and Computer Simulation*, Volume 34, Issue 3, Article13, Pages 1-38, 2024.
61. Y. Hadjadj-Aoul, M. Le Treust, P. Maille and B. Tuffin. Network Slicing : Is It Worth Regulating in a Network Neutrality Context? *Performance Evaluation*, Vol. 165, August 2024.
62. Y. Peng, M. Fu, J. Hu, P. L'Ecuyer, B. Tuffin. Generalized Likelihood Ratio Method for Stochastic Models with Uniform Random Numbers As Inputs. To appear in the *European Journal of Operational Research*.

E. Chapitres de livres

1. G. Rubino, B. Tuffin. Simulations et méthodes de Monte Carlo. In : *Techniques de l'Ingénieur*, No. AF600, 2007.
2. G. Rubino and B. Tuffin. Introduction to Rare Event Simulation. In *Rare Event Analysis Using Monte Carlo Methods*, G. Rubino and B. Tuffin Eds, John Wiley& Sons, pages 1-14, 2009.

3. P. L'Ecuyer, M. Mandjes, and B. Tuffin. Importance Sampling and Rare Event Simulation. In *Rare Event Analysis Using Monte Carlo Methods*, G. Rubino and B. Tuffin Eds, John Wiley& Sons, pages 17-38, 2009.
4. P. L'Ecuyer, F. LeGland, P. Lezaud and B. Tuffin. Splitting Techniques in Rare Event Simulation. In *Rare Event Analysis Using Monte Carlo Methods*, G. Rubino and B. Tuffin Eds, John Wiley& Sons, pages 39-62, 2009.
5. P.W. Glynn, G. Rubino and B. Tuffin. Robustness properties and confidence interval accuracy issues. In *Rare Event Analysis Using Monte Carlo Methods*, G. Rubino and B. Tuffin Eds, John Wiley& Sons, pages 63-84, 2009.
6. G. Rubino and B. Tuffin. Markovian Models for Dependability Analysis. In *Rare Event Analysis Using Monte Carlo Methods*, G. Rubino and B. Tuffin Eds, John Wiley& Sons, pages 125-144, 2009.
7. H. Cancela, P. L'Ecuyer, M. Lee, G. Rubino and B. Tuffin. Analysis and Improvements of Path-Based Methods for Monte Carlo Reliability Evaluation of Static Models. Chapter 3 in *Simulation Methods for Reliability and Availability of Complex Systems*, J. Faulin, A. A. Juan, S. Martorell, and E. Ramirez-Marquez Eds., Springer-Verlag, 2010, pages 65-84.
8. P. Maille, P. Reichl and B. Tuffin. Of Threats and Costs : A Game-Theoretic Approach to Security Risk Management. In *Performance Models and Risk Management in Communication Systems*, N. Gulpinar, P. Harrison and B. Rustem (Eds.), Springer, 2011, Pages 33-54.
9. B. Tuffin. Economics and Governance of Future Networks ; Introduction. In *Telecommunications Economics - Selected Results of the COST Action IS605 Econtel*, A. Antoniadias and B. Stiller (Eds.), Lecture Notes in Computer Science, Springer-Verlag, pages 89-90, 2012.
10. P. Maille, P. Reichl and B. Tuffin. Internet Governance and Economics of Network Neutrality. In *Telecommunications Economics - Selected Results of the COST Action IS605 Econtel*, A. Antoniadias and B. Stiller (Eds.), Lecture Notes in Computer Science, Springer-Verlag, pages 108-116, 2012.
11. P. Maille, P. Reichl and B. Tuffin. Economics of Quality of Experience. In *Telecommunications Economics - Selected Results of the COST Action IS605 Econtel*, A. Antoniadias and B. Stiller (Eds.), Lecture Notes in Computer Science, Springer-Verlag, pages 158-166, 2012.
12. P. Maille, P. Reichl and B. Tuffin. Competition among Telecommunication Providers. In *Telecommunications Economics - Selected Results of the COST Action IS605 Econtel*, A. Antoniadias and B. Stiller (Eds.), Lecture Notes in Computer Science, Springer-Verlag, pages 179-187, 2012.
13. M. K Nakayama, B. Tuffin. Array-RQMC to Speed Up the Simulation for Estimating the Hitting-Time Distribution to a Rare Set of a Regenerative System. . In *Advances in Modeling and Simulation : Festschrift for Pierre L'Ecuyer*, , Zdravko Botev, Alexander Keller, Chirstiane Lemieux, Bruno Tuffin (eds) Springer International Publishing AG, 2022.
14. Z.Botev, A. Keller, C. Lemieux, B. Tuffin. Introduction to the Festschrift. In *Advances in Modeling and Simulation : Festschrift for Pierre L'Ecuyer*, , Zdravko Botev, Alexander Keller, Chirstiane Lemieux, Bruno Tuffin (eds) Springer International Publishing AG, 2022.

F. Colloques ou conférences internationales avec actes

1. B. Tuffin, Variance Reduction Technique for a Cellular System with Dynamic Resource Sharing. In *Proceedings of the 10th European Simulation Multiconference*, p 467-471, Budapest, Hongrie, Juin 1996.
2. B. Tuffin, A new Permutation Choice in Halton Sequences and an Application to the Analysis of Product-Form Multi-Class Queuing Networks. *Second International Conference on Monte*

- Carlo and quasi-Monte Carlo Methods in Scientific Computing, Salzburg, Austria, July 1996.*
 Cet exposé a aussi été sélectionné pour figurer dans un Lecture Notes in Statistics :
- B. Tuffin, A new Permutation Choice in Halton Sequences. Dans *Monte Carlo and Quasi-Monte Carlo 1996*, volume 127, Lecture Notes in Statistics, Springer Verlag, New-York, 1997.
3. B. Tuffin and K.S. Trivedi. Implementation of Importance Splitting techniques in Stochastic Petri Net Package. In *Haverkort, B.R., and Bohnenkamp, H.C. and Smith, C.U. (eds), Computer performance evaluation : Modelling tools and techniques ; 11th International Conference ; TOOLS 2000*, Lecture Notes in Computer Science, volume 1786, Springer Verlag, pages 216-229, 2000.
 4. C. Hirel, B. Tuffin and K.S. Trivedi. SPNP Version 6.0. In *Haverkort, B.R., and Bohnenkamp, H.C. and Smith, C.U. (eds), Computer performance evaluation : Modelling tools and techniques ; 11th International Conference ; TOOLS 2000*, Lecture Notes in Computer Science, volume 1786, Springer Verlag, pages 354-357, 2000.
 5. B. Tuffin. A randomized Quasi-Monte carlo method for the simulation of product-form loss networks. In *Proceedings of the 9th International Conference on Telecommunication Systems*, p 468-478, Dallas, TX, USA, Mars 2001.
 6. B. Tuffin and K.S. Trivedi. Importance Sampling for the Simulation of Stochastic Petri nets and Fluid Stochastic Petri nets. In *Proceedings of High Performance Computing (HPC)*, pages 228-235, Seattle, WA, USA, Avril 2001.
 7. H. Cancela, G. Rubino and B. Tuffin. MTTF estimation using importance sampling on Markov models. In *Proceedings of the 5th International Conference on Industrial Logistics*, Okinawa, Japan, 2001.
 8. B. Tuffin and L.M. Le Ny. Modeling and analysis of threshold queues with hysteresis using stochastic Petri nets : the monaclass case. In *Proceedings of Petri Nets and Performance Models, PNPM'01*, pages 175-184, IEEE CS Press, Aachen, Germany, 2001.
 9. L.M. Le Ny and B. Tuffin. A simple analysis of heterogeneous multi-server threshold queues with hysteresis. In *Proceedings of the Applied Telecommunication Symposium*, San Diego, USA, April 2002.
 10. L.M. Le Ny and B. Tuffin. Modeling and analysis of multi-class threshold-based queues with hysteresis using Stochastic Petri Nets. In *Proceedings the International Conference on Applications and Theory of Petri Nets*. Lecture Notes in Computer Science, Springer Verlag, 2002.
 11. C. Lécot and B. Tuffin. Quasi-Monte Carlo Methods for Estimating Transient Measures of Discrete Time Markov Chains. In *Fifth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Springer, pages 329-344, 2002.
 12. P. Maillé and B. Tuffin. A Progressive Second Price Mechanism with a Sanction Bid from Excluded Players. In *Third International Workshop on Internet Charging and QoS Technology, ICQT'03*, Lecture Notes in Computer Science, 2003.
 13. Y. Hayel, D. Ros and B. Tuffin. Less-than-Best-Effort Services : Pricing and Scheduling. In *Proceedings of IEEE Infocom 2004*, Hong-Kong, 2004.
 14. P. Maillé and B. Tuffin. Multi-Bid Auctions for Bandwidth Allocation in Communication Networks. In *Proceedings of IEEE Infocom 2004*, Hong-Kong, 2004.
 15. E. Altman, E. El-Azouzi, D. Ros and B. Tuffin. Loss Policies for Competing TCP/IP Connections. In *Proceedings of Networking 2004*, Lecture Notes in Computer Science, Springer, 2004.
 16. E. Altman, D. Barman, E. El-Azouzi, D. Ros and B. Tuffin. Pricing Differentiated Services : A Game-Theoretic Approach. In *Proceedings of Networking 2004*, Lecture Notes in Computer Science, Springer, 2004.

17. A. Delanda, P. Maillé and B. Tuffin. Reserve Price in Progressive Second Price Auctions. *Proceedings of the Ninth IEEE Symposium on Computers and Communications*, Alexandria, June 2004.
18. B. Tuffin, P. Rodriguez and H. Cancela. End-To-End Reliability-Dependent Pricing of Network Services. *In the Proceedings of the 12th Latin-Ibero-American Conference on Operations Research (CLAIO'04)*, La Havana, Cuba, 2004.
19. B. Tuffin. On Numerical Problems in Simulations of Highly Reliable Markovian Systems. *In the proceedings of the 1st International Conference on Quantitative Evaluation of SysTems (QEST)*, University of Twente, Enschede, the Netherlands, IEEE CS Press, September 2004.
20. P. Maillé and B. Tuffin. Multi-bid versus Progressive Second Price Auctions in a Stochastic Environment. *In Fourth International Workshop on Internet Charging and QoS Technology, ICQT'04*, Lecture Notes in Computer Science, 2004.
21. P. L'Ecuyer, C. Lécot, B. Tuffin. Quasi-Monte Carlo simulation of Markov chains with randomized copies of a two-dimensional highly-uniform point set. *Sixth International Conference on Monte Carlo and quasi-Monte Carlo Methods*, Juan-les-Pins, France June 2004, Springer-Verlag, 2005.
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55. P. Maille, M. Naldi and B. Tuffin. Price War with Migrating Customers. *17th Annual Meeting of the IEEE/ACM International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS 2009)*, IEEE Computer Society, London, UK, September 2009.
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59. P. Reichl, B. Tuffin and R. Schatz. Economics of Logarithmic Quality-of-Experience in Communication Networks. *In the Proceedings of the 9th Conference of Telecommunication, Media and Internet Techno-Economics (CTTE 2010)*, Ghent, Belgium, June 7-9, 2010. Best paper runner-up.
60. P. Maillé and B. Tuffin. On the interest of introducing randomness in ad-word auctions. *Proceedings of the 1st. IFIP International Conference Network of the Future*, Brisbane, Australia, 20-23 September 2010.
61. H. Tran Hoang and B. Tuffin. A Distributed Auction-Based Algorithm to Allocate Bandwidth over Paths. *Proceedings of the 4th Workshop on Network Control and Optimization (NETCOOP'10)*, Ghent, Belgium, 29 November-1 December 2010.
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63. H. Cancela, P. L'Ecuyer, G. Rubino and B. Tuffin. Combination of conditional Monte Carlo and approximate zero-variance importance sampling for network reliability estimation. *In the Proceedings of the 2010 Winter Simulation Conference*, Baltimore, December 2010.

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65. P. Maille and B. Tuffin. Sponsored Search Engines in Competition : Advertisers Behavior and Engines Optimal Ranking Strategies. *Proceedings of the 19th Annual Meeting of the IEEE/ACM International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS 2011)*, IEEE Computer Society, Singapore, July 25-27, 2011.
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67. P. Maille, P. Reichl and B. Tuffin. Interplay between security providers, consumers, and attackers : a weighted congestion game approach. *Proceedings of GameSec 2011*, College Park, Maryland, November 2011. IEEE Xplore.
68. L. Guijarro, V. Pla, B. Tuffin, P. Maille and J.R. Vidal. Competition and bargaining in wireless networks with spectrum leasing. In *Proceedings of IEEE Globecom 2011*, Houston, TX, USA, December 2011.
69. Z. Botev, P. L'Ecuyer and B. Tuffin. An importance sampling method based on a one-step look-ahead density from a Markov chain. In the *Proceedings of the 2011 Winter Simulation Conference*, Phoenix, AZ, December 2011.
70. P. L'Ecuyer, S. Saggadi and B. Tuffin. Graph Reductions to Speed Up Importance Sampling-Based Static Reliability Estimation. In the *Proceedings of the 2011 Winter Simulation Conference*, Phoenix, AZ, December 2011.
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72. P. Maillé, B. Tuffin and J.M. Vigne. Competition between wireless service providers sharing a radio resource. *Proceedings of the 11th IFIP Networking Conference*, Lecture Notes in Computer Science, Prague, Czech Republic, 21-25 May 2012.
73. G. D'Acquisto, P. Maille, M. Naldi and B. Tuffin. Impact of non-neutral wholesale prices for content providers on retail prices. *Proceedings of the 8th Euro-NF Conference on Next Generation Internet (NGI 2012)*, IEEE, Karlskrona, Sweden, June 25-27, 2012.
74. L. Guijarro, V. Pla, B. Tuffin, P. Maille and P. Coucheney. A game theory-based analysis of search engine non-neutral behavior. *Proceedings of the 8th Euro-NF Conference on Next Generation Internet (NGI 2012)*, IEEE, Karlskrona, Sweden, June 25-27, 2012.
75. P. Coucheney, P. Maille and B. Tuffin. Comparison of Search Engines Non-Neutral and Neutral Behaviors. *Proceedings of the first Workshop on Pricing and Incentives in Networks (W-PIN 2012)*, co-located with ACM Sigmetrics/Performance, London, UK, June 11, 2012.
76. P. Coucheney, P. Maille, B. Tuffin and L. Guijarro. Impact of the Backbone Network Market Structure on the ISP Competition. *Workshop on Telecom Economics, Engineering and Policy* (in conjunction with ITC 24), Krakow, Poland September 3, 2012. Also *SIGMETRICS Performance Evaluation Review*, Vol. 40, Num. 2, pages 14-17, 2012.
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78. Z. Botev, P. L'Ecuyer and B. Tuffin. Dependent Failures in Highly Reliable Static Networks. In the *Proceedings of the 2012 Winter Simulation Conference*, Berlin, Germany, December 2012.

79. Z. Botev, P. L'Ecuyer, and B. Tuffin, Modeling and Estimating Small Unreliabilities for Static Networks with Dependent Components, *Proceedings of SNA-MC 2013 : Supercomputing in Nuclear Applications and Monte Carlo*, Paris, October 2013.
80. P. L'Ecuyer, S. Saggadi, and B. Tuffin, An Adaptive Zero-Variance Importance Sampling Approximation for Static Network Dependability Evaluation, *Proceedings of SNA-MC 2013 : Supercomputing in Nuclear Applications and Monte Carlo*, Paris, October 2013.
81. L. Guijarro, V. Pla and B. Tuffin. Entry game under opportunistic access in cognitive radio networks : a priority queue model. *Proceeding of the IFIP Wireless days*, IEEE, Valencia, Spain, 13-15 Nov 2013.
82. P. Maillé and B. Tuffin. How Do Content Delivery Networks Affect the Economy of the Internet and the Network Neutrality Debate ?. In the *Proceedings of the 10th International Conference on Economics of Grids, Clouds, Systems, and Services (GECON'2014)*. Lecture Notes in Computer Sciences, Springer-Verlag, Cardiff, UK, September 16-18, 2014.
83. P. Maillé, K. Pires, G. Simon and B. Tuffin. How Neutral is a CDN? An Economic Approach. In the *Proceedings of the 10th International Conference on Network and Service Management (CNSM)*, IEEE, Rio de Janeiro, Brazil, Nov 17-21, 2014.
84. B. Tuffin. Highly Reliable Markovian Systems Interval Availability Estimation by Importance Sampling. In the *Proceedings of the 2014 Winter Simulation Conference*, Savannah, USA, December 2014.
85. P. Maillé and B. Tuffin. Impact of Content Delivery Networks on service and content innovation. *Proceedings of NetEcon 2015 : The 10th Workshop on the Economics of Networks, Systems and Computation*, Portland, OR, USA, June 15, 2015.
86. P. Maillé and B. Tuffin. Users facing volume-based and flat-rate-based charging schemes at the same time. In the *Proceedings of the 8th Latin American Network Operations and Management Symposium (LANOMS 2015)*, IEEE Explore, Joao Pessoa, Brazil, October 1-3, 2015. **Best short paper award.**
87. P. Maillé, G. Simon and B. Tuffin. Impact of Revenue-Driven CDN on the Competition among Network Operators. In the *Proceedings of the 11th International Conference on Network and Service Management (CNSM)*, IEEE, Barcelona, Spain, November 2015.
88. B. Tuffin. Side Payments as Barriers to Entry in Non-Neutral Networks. In the proceedings of the *12th Conference of Telecommunication, Media and Internet Techno-Economics (CTTE)*, Munich, Germany, November 2015.
89. H. Cancela, M. El Khadiri, G. Rubino and B. Tuffin. On the robustness of Fishman's bound-based method for the network reliability problem. In the *Proceedings of the 2015 Winter Simulation Conference*, Huntington Beach, CA, USA, December 2015.
90. P. L'Ecuyer, P. Maille, N. Stier-Moses, and B. Tuffin. Search (Non-)Neutrality and Impact on Innovation. *NetEcon 2016 : The 11th Workshop on the Economics of Networks, Systems and Computation*, Juan-les-Pins, France, June 14, 2016.
91. P. Maille, G. Simon and B. Tuffin. Vertical Integration of CDN and Network Operator : Model and Analysis. In the proceedings of the *IEEE/ACM International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS 2016)*, IEEE Computer Society, London, UK, September 2016.
92. A. Rai, R. Valenzuela, B. Tuffin, G. Rubino and P. Dersin. Approximate Zero-Variance Importance Sampling For Static Network Reliability Estimation With Node Failures And Application To Rail Systems. In the *Proceedings of the 2016 Winter Simulation Conference*, Arlington, VA, USA, December 2016.

93. P. Maille and B. Tuffin. Non-Neutrality Pushed by Big Content Providers. In the *Proceedings of the 14th International Conference on Economics of Grids, Clouds, Systems, and Services (GECON'2017)*. Lecture Notes in Computer Sciences, Springer-Verlag, Anglet, France, September 19-21, 2017.
94. P. Maille and B. Tuffin. How does imposing free roaming in EU impact users and ISPs' relations? In the *Proceedings of the 8th International Conference Network of the Future*, London, UK, November 22-24, 2017.
95. P. Maille and B. Tuffin. Enforcing free roaming among UE countries : an economic analysis. In the *Proceedings of the 13th International Conference on Network and Service Management (CNSM)*, IEEE, Tokyo, Japan, Nov 26-30, 2017.
96. P.W. Glynn, M.K. Nakayama, and B. Tuffin. On the estimation of the mean time to failure by simulation. In the *Proceedings of the 2017 Winter Simulation Conference*, Las Vegas, NV, USA, December 2017.
97. P. Maille and B. Tuffin. Analysis of Sponsored Data in the Case of Competing Wireless Service Providers. In the proceedings of the *9th International Conference on Network Games, Control and Optimization, NETGCOOP*, Lecture Notes in Computer Science (LNCS), New York City, NY, USA, November 2018.
98. P. Maille, B. Tuffin, Joshua Peignier and Estelle Varloot. Pricing of Coexisting Cellular and Community Networks. In the proceedings of the *9th International Conference on Network Games, Control and Optimization, NETGCOOP*, Lecture Notes in Computer Science (LNCS), New York City, NY, USA, November 2018.
99. P.W. Glynn, M.K. Nakayama, and B. Tuffin. Using Simulation to Calibrate Exponential Approximations to Tail-Distribution Measures of Hitting Times to Rarely Visited Sets. In the *Proceedings of the 2018 Winter Simulation Conference*, Gothenburg, Sweden, December 2018.
100. A. Kamoun, P. Maillé and B. Tuffin. Evaluating search engines and defining a consensus implementation. In the *proceedings of VALUETOOLS 2019 Conference*, ACM Digital Library, Palma de Majorque, Spain, March 2019.
101. P. Maille and B. Tuffin. Neutral and Non-Neutral Countries in a Global Internet : What Does it Imply? *16th International Conference on the Economics of Grids, Clouds, Systems, and Services (GECON)*, Lecture Notes in Computer Science (LNCS), Leeds, United Kingdom, Sept 2019.
102. P. Maille and B. Tuffin. Wireless Service Providers Pricing Game in Presence of Possible Sponsored Data. In the *Proceedings of the 15th International Conference on Network and Service Management (CNSM)*, IEEE, Halifax, Canada, October 21-25, 2019.
103. Z. Kaplan, Y. Li, M. Nakayama and B. Tuffin. Randomized Quasi-Monte Carlo for Quantile Estimation. In the *Proceedings of the 2019 Winter Simulation Conference*, National Harbor, USA, December 2019. **Finaliste comme "best contributed theoretical paper"**.
104. M. Nakayama and B. Tuffin. Efficient Estimation of the Mean Hitting Time to a Set of a Regenerative System. In the *Proceedings of the 2019 Winter Simulation Conference*, National Harbor, USA, December 2019.
105. P. Maille and B. Tuffin. A Network Reliability Game. *17th International Conference on the Economics of Grids, Clouds, Systems, and Services (GECON)*, Lecture Notes in Computer Science (LNCS), Online conference, Sept 2020.
106. X. Castoreo, P. Maille and B. Tuffin. Weaknesses and Challenges of Network Neutrality Measurement Tools. In the *Proceedings of the 16th International Conference on Network and Service Management (CNSM)*, IEEE, Virtual Conference, 2-6 November 2020.
107. A. Kieffer, P. Maille and B. Tuffin. Non Neutrality With Users Deciding Differentiation : A Satisfying Option?. In the proceedings of the *IEEE/ACM International Symposium on Mo-*

- delling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS) Workshop*. November 17-19, 2020, Nice, France.
108. M.K. Nakayama, Z. Kaplan, B. Tuffin, P. L'Ecuyer. Quantile Estimation Via a Combination of Conditional Monte Carlo and Randomized Quasi-Monte Carlo. In the *Proceedings of the 2020 Winter Simulation Conference*, Orlando, USA, December 2020.
 109. P. W. Glynn, M.K. Nakayama and B. Tuffin. Comparing Regenerative-Simulation-Based Estimators of the Distribution of the Hitting Time to a Rarely Visited Set. In the *Proceedings of the 2020 Winter Simulation Conference*, Orlando, USA, December 2020.
 110. K. Agarwal, P. Maille and B. Tuffin. Impact of Heterogeneous Neutrality Rules with Competitive Content Providers. In the *Proceedings of the IFIP/IEEE International Symposium on Integrated Network Management*, Bordeaux, France, 17-21 May 2021.
 111. X. Castoreo, P. Maille and B. Tuffin. Analyzing the Wehe Network Neutrality Monitoring Tool. *18th International Conference on the Economics of Grids, Clouds, Systems, and Services (GECON)*, Lecture Notes in Computer Science (LNCS), Online conference, Sept 2021.
 112. M.K. Nakayama, B. Tuffin. Sufficient Conditions for a Central Limit Theorem to Assess the Error of Randomized Quasi-Monte Carlo Methods. In the *Proceedings of the 2021 Winter Simulation Conference*, Phoenix, USA, December 2021.
 113. Y. Peng, M. Fu, J. Hu, P. L'Ecuyer, B. Tuffin. Variance Reduction for Generalized Likelihood Ratio Method in Quantile Sensitivity Estimation. In the *Proceedings of the 2021 Winter Simulation Conference*, Phoenix, USA, December 2021.
 114. M.K. Nakayama, B. Tuffin. Density Estimators of the Cumulative Reward up to a Hitting Time to a Rarely Visited Set of a Regenerative System. In the *Proceedings of the 2022 Winter Simulation Conference*, Singapore, December 2022. **Finaliste comme "best contributed theoretical paper"**.
 115. B. Kara, G. Simon, B. Tuffin, J. Vieron, A.C. Begen. Studying Green Video Distribution as a Whole. In *Workshop on Green Multimedia Systems Workshop (GMSys'23)*, June 7-10, 2023, Vancouver, BC, Canada. ACM, New York, NY, USA, 3 pages.
 116. Y. Hadjadj-Aoul, M. Le Treust, P. Maille and B. Tuffin. An Economic Analysis of 5G Network Slicing and the Impact of Regulation. *MASCOTS 2023 - 31st International Symposium on the Modeling, Analysis, and Simulation of Computer and Telecommunication Systems*, Stony Brook University, Oct 2023, Stony Brook, USA. **Best paper award**.
 117. V. Kumar, P. Maille and B. Tuffin. Analyzing Network (Non-)Neutrality for Monopolistic, Competing, or Vertically Integrated Content Providers with a Unified Model. Tools. In the *Proceedings of the 19th International Conference on Network and Service Management (CNSM)*, IEEE, Niagara Falls, Canada, October 30-November 2, 2023.
 118. P. L'Ecuyer, M. K Nakayama, A. B Owen, B. Tuffin. Confidence Intervals for Randomized Quasi-Monte Carlo Estimators. In the *Proceedings of the 2023 Winter Simulation Conference*, San Antonio, USA, December 2023.
 119. M.K. Nakayama, B. Tuffin. Efficiency of Estimating Functions of Means in Rare-Event Contexts. In the *Proceedings of the 2023 Winter Simulation Conference*, San Antonio, USA, December 2023.
 120. Y. Hadjadj-Aoul, P. Maille, B. Tuffin. How to Accommodate Network Slicing & Network Neutrality. *20th International Conference on the Economics of Grids, Clouds, Systems, and Services (GECON)*, Lecture Notes in Computer Science (LNCS), Rome, Italy, Sept 2024.
 121. P. Maille, B. Tuffin. Impact of Regulation and the Digital Markets Act on Competing Platforms. In the proceedings of the *11th International Conference on Network Games, Control*

and Optimization (NETGCOOP), Lecture Notes in Computer Science (LNCS), Lille, France, October 2024. **Best paper award.**

122. M.K. Nakayama and B. Tuffin. Some Asymptotic Regimes for Quantile Estimation. In the *Proceedings of the 2024 Winter Simulation Conference*, Orlando, USA, December 2024.
123. X. Shi, Y. Peng and B. Tuffin. Finite Budget Allocation Improvement in Ranking and Selection. In the *Proceedings of the 2024 Winter Simulation Conference*, Orlando, USA, December 2024.

G. Conférences internationales invitées (keynote) et tutoriels

1. B. Tuffin. Pricing schemes in Telecommunication networks. In *4th Latino-american days on theoretical economy (JOLATE)*, Mexico City, Mexico, 2002.
2. B. Tuffin. Introduction à la simulation d'événements rares. In *9ème Atepier de Performances (AEP9)*, Aussois, France, Juin 2008.
3. G. Rubino and B. Tuffin. An Introduction to Monte Carlo Methods and Rare Event Simulation. *Tutorial of the 5th International Conference on Quantitative Evaluation of SysTems (QEST)*. IEEE CS Press, Budapest, Hungary, September 2009.
4. B. Tuffin. Pricing in telecommunication networks : from congestion control and incentives design to competition among providers. *5th Lanti-Americ Networking Conference, LANC 2009*, Keynote talk, Pelotas, Brazil, September 2009.
5. B. Tuffin. Pricing in telecommunication networks : some issues and models. *3rd IFIP/IEEE International Workshop on Bandwidth on Demand and Federation Economics*, Keynote talk, Osaka, Japan, April 2010.
6. B. Tuffin. Some applications of importance sampling to dependability analysis. Plenary talk, International Conference on Monte Carlo techniques, Paris, France, July 2016.
7. B. Tuffin. Network Neutrality : Modeling and Challenges. *14th International Conference on Economics of Grids, Clouds, Systems & Services (GECON 2017)*, Keynote talk, Bayonne Anglet, France, September 19-21, 2017.
8. B. Tuffin. Recherche opérationnelle et théorie des jeux pour l'analyse de la neutralité du Net. Tutoriel. *19ème congrès de la Société Française de Recherche Opérationnelle et d'Aide à la Decision (ROADEF)*, Lorient, France, 21-23 Février 2018.
9. B. Tuffin. Rare-Event Simulation of Regenerative Systems : Estimation of the Mean and Distribution of Hitting Times. Keynote talk, The *12th International Conference on Monte Carlo Methods and Applications*, Sydney, Australia, July 8-12, 2019.
10. B. Tuffin. Rare event simulation : theory and practice. *2024 International Conference on Information and Communication Technologies for Disaster Management (ICT-DM 2024)*, Setif, Algeria, November 2024.

H. Autres conférences internationales

1. H. Cancela, G. Rubino et B. Tuffin, Fast Monte Carlo Methods for evaluating Highly Dependable Markovian Systems. *Second International Conference on Monte Carlo and quasi-Monte Carlo Methods in Scientific Computing, Salzburg, Autria, July 1996*.
2. D. Ros and B. Tuffin. Charging in Packet Networks Using the Paris Metro Pricing Scheme. In *Optimization Days'03*, Montréal, 2003.
3. B. Tuffin. Some new research directions about hybrid Monte Carlo methods. In *Vth IMACS Seminar on Monte Carlo Methods MCM-2003*, Berlin, September 2003.
4. C. Lécot and B. Tuffin. Simulating Markov Chains with Quasi-Monte Carlo Methods. In *Vth IMACS Seminar on Monte Carlo Methods MCM-2003*, Berlin, September 2003.

5. G. Ökten, B. Tuffin. A Central Limit Theorem for a Hybrid-Monte Carlo Method. *Fifth International Conference on Monte Carlo and quasi-Monte Carlo Methods*, Juan-les-Pins, France, June 2004.
6. B. Tuffin. Coverage Function of Randomized Quasi-Monte Carlo Methods. *INFORMS Applied Probability Conference*, Ottawa, Canada, July 2005.
7. P. L'Ecuyer, C. Lécot and B. Tuffin. A New Randomized Quasi-Monte Carlo Approach for Markov Chains. *INFORMS Applied Probability Conference*, Ottawa, Canada, July 2005.
8. V. Demers, P. L'Ecuyer and B. Tuffin. Combining Randomized Quasi-Monte Carlo with Splitting for Rare-Event Simulation. *Sixth International Conference on Monte Carlo and quasi-Monte Carlo Methods*, Ulm, Germany, August 2006.
9. H. Cancela, P. L'Ecuyer, M. Lee, G. Rubino and B. Tuffin. Refinements of a path-based efficient algorithm for network reliability estimation in the rare event case. In *Proc. of Probability and Statistics in Science and Technology 2007*, Porto, Portugal, 2007.
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Relations académiques formalisées

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- *Participation à l'ARC TCP* : Models and Algorithms for TCP/IP Networks . Action de recherche coopérative INRIA 2003-2004 avec les projets INRIA MISTRAL, PLANETE, TREC, RAP, l'EPFL (Lausanne) et France Telecom R&D.
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- Programme de coopération ECOS Sud (Uruguay) 2004-2006 : *L'internet comme réseau de convergence* avec le département d'Ingénierie de l'Université de la République à Montevideo (en collaboration avec l'ENST Bretagne et l'Université de Paris 11).

- Membre du réseau d'excellence européen (NoE) EuroNGI (Design and Engineering of the Next generation Internet), Déc. 2003-Déc. 2006. participation au travail des sous-groupes :
 JRA.2.2 : Traffic management in a multi-provider context
 JRA.5.4 : Networks : optimization and control
 JRA.5.5 : Numerical and analytic methodologies
 JRA.6.2 : Payment and cost models for next Generation Internet
- Coordinateur du projet AUCTIONS du NoE EUroNGI financé en 2005 sur les enchères inter-domaines ; projet en collaboration avec l'Université de Versailles-St Quentin, Athens Univeristy of Economics and Business, l'Université de Rome 2 et l'Université de Cantalabria.
- Action INRIA 2005 avec les Etats Unis : Hybrid Quasi-Monte Carlo methods and applications in finance and telecommunications, avec Ball State University et Florida State University.
- Programme FQNRT Québec/INRIA 2006 : sur la simulation d'événements rares avec l'Université de Montréal et HEC Montréal, en collaboration avec le projet ASPI.
- *Co-coordonateur de l'ARC RARE* : simulation d'événements rares.
 Action de recherche coopérative INRIA 2006-2007 avec les projets INRIA ASPI, MATHFI, le CWI en Hollande, l'Université de Bamberg en Allemagne, EDF et l'ENAC.
- *Membre de l'ARC IFANY* : Théorie de l'Information et réseaux de télécommunication.
 Action de recherche coopérative INRIA 2006-2007 avec les projets INRIA MAESTRO, HYPERCOM, TREC, l'école EURECOM, l'EPFL (Lausanne) et l'Université de Chypre.
- *Membre de l' ANR Télécommunications WINEM* : WIMAX Network Engineering and Multi-homing.
 Projet ANR 2006-2008, conjointement avec Motorola, le GET (INT et ENST Bretagne), le projet MAESTRO de l'INRIA Sophia-Antipolis, l'Université d'Avignon, l'Insitut Eurécom et France Telecom R&D.
- *Collaboration bilatérale ISAT avec l'Université d'Auckland (Nouvelle-Zélande) 2006-2007.*
 Travail sur les méthodes de tarification dans un cadre de fournisseurs en compétition.
- Team-leader pour l'INRIA du réseau d'excellence européen (NoE) EuroFGI (Design and Engineering of the Future generation Internet) qui poursuit EuroNGI, Déc. 2006- Juin. 2008.
- Participant au projet CAP (Competition Among Providers in the access network) du NoE EUroFGI financé un an entre 2007 et 2008 sur la compétition entre fournisseurs dans les réseaux d'accès ; projet en collaboration avec le GET/ENST Bretagne, l'Université de Rome 2 et l'Université de Cantalabria.
- GDR ROTJER 2007-2008 : Recherche Opérationnelle et Théorie des Jeux pour l'Etude des Réseaux de Communication.
- ECONTEL (Activité ; Européenne COST IS0605) : Membre Francais du management Committee.
- Responsable de l'équipe associée MOCQUASIN : équipe associée INRIA avec l'Université de Montréal. 2008-2010, prolongée sur 2011-2013.
 Sujet principal : méthodes de simulation Monte Carlo et quasi-Monte Carlo. Application à la simulation d'événements rares. Voir http://www.irisa.fr/dionysos/pages_perso/tuffin/MOCQUASIN/
- Team-leader pour l'INRIA du réseau d'excellence européen (NoE) Euro NF (Design and Engineering of the Network of the Future) qui poursuit EuroNGI et Euro-FGI, Janv. 2008- Déc. 2010.
- Participant au projet PRECO (Pricing and Regulation in Competitive Telecommunication Networks) du NoE EUro-NF financé un an entre 2008 et 2009 sur la tarification et la régulation

dans un cadre compétitif entre fournisseurs ; projet en collaboration avec TELECOM Bretagne et l'Université de Rome 2.

- Coordinateur de l'ANR CAPTURES (Competition entre fournisseurs de telecommunication : rivalités et enjeux de gains) (2009-2012) en collaboration avec France Telecom et TELECOM Bretagne.

Voir <http://captures.inria.fr/>.

- Participant au projet AMESA (Analysis of MEchanisms for Sponsored search Auctions) du NoE EUro-NF financé un an entre 2009 et 2010 sur les enchères sur les moteurs de recherche sponsorisés ; projet en collaboration avec Athens Univeristy of Economics and Business, l'Université de Rome 2 et le CWI.

- *Coordinateur de l'ARC MENEUR* : Modélisation en Economie des réseaux et NEUtRalité du Net.

Action de recherche coopérative INRIA 2011-2012 avec les équipes INRIAMAESTRO, MES-CAL, Orange Labs, ALU-Bell Labs France, Telecom Bretagne, FTW (Autriche), Columbia University et Penn State University.

- Coordinateur du projet INNIS (Impacts of Network Neutrality on the Internet Stakeholders) du NoE Euro-NF financé entre Novembre 2011 et Juin 2012 sur la neutralité du Net ; projet en collaboration avec TELECOM Bretagne, l'Université Ploytechnique de Valence (Espagne), l'Université de Rome 2, et l'autorité Italienne de protection des données (la CNIL Italienne).

- Co-pilote de l'ADR (Action de Recherche) du laboratoire commun Inria-ALU sur l'économie des réseaux. Action au lancement retardé en attendant la réorganisation d'ALU sur le sujet.

- Action incitative "activités internationales" 2013 de l'Université de Rennes 1 sur le classement des annonces dans le commerce électronique et sur les moteur de recherche et leur impact économique.

- Accueil de la Chaire Internationale Inria de Pierre L'Ecuyer. Nov. 2013- Octobre 2018.

- Inria leader of the Inria International Partnership with the Univerity of Montreal 2013-...

- Participation à l'IPL (Inria Project Lab) BetterNet : An Observatory to Measure and Improve Internet Service Access from User Experience, 2016-2020.

- Leader of the Inria Exploratory Action SNIDE (Search Non neutrality DEtection) 2019-..., involving Dionysos and MIMR.

- **Synamedia : Contrat Cifre** sur la distribution verte de vidéo : modélisation, évaluation et régulation. Financement d'une thèse co-encadrée. 2023-fin 2025.

- PEPR 5G, 2023-2027.

Invitations/visites (projets ci-dessus non-inclus)

- Mai- Déc. 1999 : 8 mois à *Duke University*.
Sujet : Méthodes de simulation pour l'analyse des réseaux de Petri stochastiques. Implémentation dans SPNP (*Stochastic Petri Net Package*).

- Aout 2000 : 3 semaines à *Duke University*.

Sujet : Poursuite des travaux de 1999.

- Octobre 2002 : 1 semaine à *l'UNAM, Mexico City*.

Sujet : Méthodes de tarification de l'Internet.

- Mai 2003 : 8 jours au département d'informatique et recherche opérationnelle de l'*Université de Montréal*.

Sujet : Méthodes de quasi-Monte Carlo et applications.

- Déc. 2003 : 1 semaine à *Ball State University, Muncie, Indiana*.
Sujet : Simulation mixte Monte Carlo/Quasi-Monte Carlo.
- Jan. 2004 : 1 semaine à *Duke University*.
Sujet : Méthodes d'analyse de la fiabilité et logiciel SPNP.
- Novembre 2004 : 1 semaine à *Athens University of Economics and Business (AUEB)*.
Sujet : Enchères au second prix pour le partage de bande passante et les échanges de trafic entre fournisseurs de services.
- Juillet 2005 : 8 jours au département d'informatique et recherche opérationnelle de l'*Université de Montréal*.
Sujet : Simulation efficace des chaînes de Markov par les méthodes de quasi-Monte Carlo randomisées.
- Novembre 2007 : 8 jours au département d'informatique et recherche opérationnelle de l'*Université de Montréal*.
Sujet : Simulation d'événements rares et approximation de l'estimateur à variance nulle.
- Avril 2009 : 1 semaine à FTW (Vienne, Autriche), pour travailler sur les modèles économiques pour la sécurité des réseaux.
- Novembre 2010 : 1 semaine à FTW (Vienne, Autriche), pour travailler sur les modèles économiques pour la sécurité des réseaux ainsi que la modélisation de la QoE.
- Septembre 2015 : 1 semaine à l'Université de Montréal.
Sujet : méthodes de Monte Carlo methods et applications.
- Octobre 2019 : 1 semaine à l'Université de Pékin (Chine), sur la simulation d'événements rares
- Octobre 2021 : 1 semaine à l'Université de Montréal.
- Janvier 2024 : 8 jours à l'Université de Pékin (Chine), sur la simulation

Autres invitations de chercheurs

- Christian Lécot, professeur à l'Université de Savoie, 1 semaine, juin 2001+ 1 semaine, juillet 2003.
Sujet : méthodes de quasi-Monte Carlo.
- Elvio Accinelli, professeur à Montevideo (Uruguay), 2 mois, 2002.
Sujet : tarification pour les réseaux de communication.
- Richard Marquez, Université de Los Andes (Vénézuéla), 1 semaine, septembre 2003.
Sujet : contrôle de TCP par tarification.
- Pierre L'Ecuyer, professeur à l'Université de Montréal, 15 jours, Mars-Avril 2004.
Sujet : méthodes de quasi-Monte Carlo pour la simulation de chaînes de Markov.
- Moshe Haviv, professeur à l'Université hébraïque de Jerusalem, 4 jours, Novembre 2004.
Sujet : tarification et contrôle dans les files d'attente.
- Fernando Beltran, de l'Université de Auckland (Nouvelle-Zélande), 20 jours, Juin 2006.
Sujet : enchères au second prix dans un cadre de fournisseurs en concurrence.
- Pierre L'Ecuyer, professeur à l'Université de Montréal, sur une année sabbatique (mi juillet 2006-juin 2007).
Sujet : méthodes quasi-Monte Carlo methods, et simulation d'événements rares.
- Pieter de Boer, from the University of Twente, 2 months starting in February of 2007.
Subject : rare event simulation.
- Peter Reichl (FTW, Vienne, Autriche), 1 mois et demi durent l'été 2008.
Sujet : tarification des réseaux de communication.

- Peter Reichl (FTW, Vienne, Autriche), 1 mois et demi durent l'été 2009.
Sujet : économie et sécurité des réseaux.
- Ad Ridder (Amsterdam), 1 semaine, Décembre 2009.
Sujet : simulation d'événements rares par échantillonnage préférentiel.
- Peter Reichl (FTW, Vienne, Autriche), 9 mois en 2011 sur la Chaire Internationale SISCO.
Sujet : écosystèmes des télécommunications du futur.
- P. L'Ecuyer (University of Montréal), deux semaines en Mars 2011.
- Z. Botev (University of Montréal), une semaine en Mars 2011.
- L. Guijarro (UP Valencia, Spain), Juin-Juillet 2013, pour travailler sur l'économie des réseaux.
- P. L'Ecuyer : Chaire internationale Inria, 2013-2018.
- M. Nakayama (New Jersey Institute of Technology, USA) : une semaine en juillet 2019.
- DanHua ShangGuan (Institute of Applied Physics and Computational Mathematics, Beijing, China), un mois en septembre 2019.
- P. L'Ecuyer (University of Montréal), 1 semaine, juin 2022.

Activités éditoriales/Organisation de conférences

- Area Editor (simulation) : INFORMS Journal on Computing, since Jan. 2015.
- Associate Editor : INFORMS Journal on Computing, 2007- Dec. 2014.
- Associate Editor : Mathematical Methods of Operations Research, November 2008 - January 2015.
- Associate Editor : ACM Transactions on Modeling and Computer Simulation, depuis Juillet 2009.
- Associate Editor : Queueing Systems, depuis janvier 2022.
- Chair du comité directeur de la série de conférences "International Conference on Monte Carlo Methods and Applications (MCM)" depuis août 2021.
- General Chair : Fifth International Workshop on Advanced Internet Charging and QoS technologies (ICQT'06), "Performance has its price", June 27, 2006, St Malo, France.
- Organization of the International Workshop on Rare Event Simulation, Nice, May 2007.
- TPC co-chair : 1st International Conference on Network Control and Optimization (NET-COOP'07), June 5-7, Avignon, France.
- Membre du comité directeur de NET-COOP, 2007-....
- Vice-General Chair and local arrangement chair of the Second International Conference on Performance Evaluation Methodologies and Tools (Valuetools'07), October, Nantes, France.
- Guest editor of a special issue of Performance Evaluation Journal for selected papers from valuetools'07.
- Co-organisation des secondes journées nationales des ARCs INRIA, Rennes, 1-2 Octobre, 2007.
- Local organization Chair, 5th International Conference on the Quantitative Evaluation of Systems (QUEST'08), Saint-Malo, September 2008.
- Scientific Committee Chair, 7th International Workshop on Rare Event Simulation (RESIM'08), Rennes, September 2008.
- Guest editor of a special issue of ACM Transactions on Modeling And Computer Simulation on Rare Event Simulation (in preparation).

- Co-Chair : Sixth International Workshop on Advanced Internet Charging and QoS technologies (ICQT'09), May 15, 2009, Aachen, Germany.
- Co-guest editor of a special issue of Telecommunication Systems Journal on Socio-Economic Issues of Next Generation Networks, to appear at the beginning of 2011.
- TPC co-chair, International Conference on NETwork Games, COntrol and OPTimization (NetG-Coop 2011), Oct. 12-14 2011, Paris.
- Co-chair : "Analysis" track, 44th Winter Simulation Conference (WSC'12), Berlin, Germany, December 9-12, 2012.
- Co-chair : 8th International Workshop on Advanced Internet Charging and QoS technologies (ICQT'13), Zurich, Switzerland, 2013.
- "Analysis" track co-coordinator. Winter Simulation Conference (WSC'15), Huntington Beach, California, December 6-9, 2015.
- TPC co-chair : 10th International Conference Performance Evaluation Methodologies and Tools (Valuetools'16), September 2016, Taormina, Italy.
- Co-chair : International Workshop on Advanced Internet Charging and QoS technologies (ICQT'17), Tokyo, Japan, 2017.
- General Chair, Thirteenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC 2018), Rennes, France, 2018.
- Area chair for the area "Performance Evaluation, Control and Optimization" of ITC, 11-14 Sep, 2018 in Vienna, Austria.
- Track-Coordinator for Network and Communications mini-track for WSC2018
- TPC co-chair : The 14th Workshop on the Economics of Networks, Systems and Computation (NetEcon 2019), June 2019, Phoenix, AZ, USA.
- TPC co-chair : 17th International Conference on Economics of Grids, Clouds, Systems & Services (GECON), 15-17 September 2020, Izola, Slovenia (eventually online).
- TPC co-chair : 18th International Conference on Economics of Grids, Clouds, Systems & Services (GECON), 21-23. September 2021, Online.
- TPC co-chair : The 11th International Conference on Network Games, Control and Optimization (NETGCOOP 2024), Lille, France, October 9-11, 2024.

Comités de programme

- Fourth International Workshop on Advanced Internet Charging and QoS technologies (ICQT'04), "QoS has its price", September 29-October 1, 2004, Barcelona, Catalunya, Spain.
- "European Simulation and Modelling Conference" (ESM2005), October 24-26, 2005, University of Porto, Portugal.
- 5th IEEE International Symposium on Signal Processing and Information Technology (ISS-PIT'05), December 2005, Athens, Greece.
- Organisateur de la session invitée "Rare Events Simulation" à la Winter Simulation Conference, Orlando, USA, 2005.
- i-Society 2006, International Conference of Information Society, August 7-10 2006, Miami, USA.
- "European Simulation and Modelling Conference" (ESM2006), October 23-25, 2006, LAAS-CNRS Toulouse, France.
- 6th IEEE International Symposium on Signal Processing and Information Technology (ISS-PIT'06), August 2006, Vancouver, Canada.

- First International Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS'06), October 11-13, 2006, Pisa, Italy.
- 4th Annual IEEE Consumer Communications and Networking Conference "Seamless Consumer Connectivity" (CCNC'07), January 11-13 2007, Las Vegas, Nevada.
- The 4th International Workshop on Grid Economics and Business Models (GECON 2007), August 28th, 2007, Rennes, France.
- 16th IASTED International Conference on Applied Simulation and Modelling (ASM 2007), August 29-31, 2007, Palma de Mallorca, Spain.
- "European Simulation and Modelling Conference" (ESM2007), October 22-24, 2007, St.Julians, Malta.
- 2nd International Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS'07), October 23-25, 2007, Nantes, France.
- Co-organisateur d'une session invitée "théorie des jeux en réseaux de communication" à la conférence Roadef, Clermont Ferrand, 25-27 Février 2008.
- 2nd IEEE International Workshop on Bandwidth on Demand (BoD 2008) April 11, 2008, Salvador da Bahia, Brazil.
- 4th EURO-NGI Conference on Next Generation Internet Networks Design and Engineering for Heterogeneity (NGI'08), April 28-30, Krakow, Poland.
- 9ème Atelier en Évaluation de Performances, 1-4 Juin 2008, Aussois, France.
- 8th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC'08), July 7-11, 2008, Montréal, Canada.
- 17th International Conference on Computer Communications and Networks (ICCCN'08), August 4 - 7, 2008 St. Thomas U.S. Virgin Islands.
- The 5th International Workshop on Grid Economics and Business Models (GECON 2008), August 25-26, 2008, Las Palmas, Gran Canaria, Spain.
- 3rd International Conference on Performance Evaluation Methodologies and Tools (VALUE-TOOLS'08), October 13-18, 2008, Athens, Greece.
- "European Simulation and Modelling Conference" (ESM2008), October 27-28, 2008, Le Havre, France.
- 2nd IFAC Workshop on Dependable Control of Discrete Systems (DCDS'09), June 10-12, 2009, Bari, Italy.
- 5th EURO-NGI Conference on Next Generation Internet (NGI 2009). Aveiro, Portugal, June 22-24, 2009.
- The 6th International Workshop on Grid Economics and Business Models (GECON 2009), August 24, 2009, Delft, The Netherlands.
- 6th International Conference on the Quantitative Evaluation of SysTems (QEST) 2009, September 2009, Budapest, Hungary.
- 21st International Teletraffic Congress (ITC 21), September 15,17, 2009, Paris, France.
- 3rd IFIP/IEEE International Workshop on Bandwidth on Demand and Federation Economics, April 23, 2010, Osaka, Japan.
- 6th Euro-NGI conference on Next Generation Internet Networks (NGI 2010), June 2010, Paris, France.
- 8th International Workshop on Rare Event Simulation (RESIM'10), June 21-22 2010, Cambridge, England.
- 22nd International Teletraffic Congress (ITC 22), September 2010, Amsterdam, The Netherlands.

- 3rd Workshop on Economic Traffic Management (ETM), September 2010, Amsterdam, The Netherlands.
- The 7th International Workshop on the Economics of Grids, Clouds, Systems, and Services (GECON 2010), August 30-31th, 2010, Ischia, Naples, Italy.
- 4th International Conference on Network Control and Optimization (NET-COOP'10), November 2010, Ghent, Belgium.
- Workshop on Performance Evaluation of Cognitive Radio Networks : from Theory to Reality (PE-CRN 2011), Valencia, Spain, May 13, 2011.
- IEEE International Conference on Communications (IEEE ICC 2011), June 5-9 2011, Kyoto, Japan.
- 7th Euro-NGI conference on Next Generation Internet Networks (NGI 2011), June 27-29 2011, Kaiserslautern, Germany.
- 1st International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Noordwijkerhout, The Netherlands, 29-31 July 2011.
- 20th IEEE International Conference on Computer Communication Networks (ICCCN 2011), Maui, Hawaii, August 1-4, 2011.
- 8th International Workshop on Economics of Grids, Clouds, Systems and Services (GECON'2011).
- 2nd International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Roma, Italy, 28-31 July 2012.
- 8th Euro-NF Conference on Next Generation Internet (NGI 2012), Blekinge Institute of Technology, Karlskrona, Sweden, June 25-27, 2012.
- First Workshop on Pricing and Incentive in Networks (W-PIN 2012), in conjunction with ACM SIGMETRICS/Performance 2012 , London, England, 11 June 2012.
- 9th International Workshop on Economics of Grids, Clouds, Systems and Services (GECON'2012), Berlin, Germany, 27-28 November 2012.
- Track on Simulation Methods and Tools, Winter Simulation Conference (WSC'12), Berlin, Germany, December 9-12, 2012.
- 9th International Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET/WNC3), Tsukuba Science City, Japan, May 13-17, 2013.
- 7th workshop on Simulation, Rimini, Italy, May 21-25, 2013.
- IFIP Networking 2013 Conference, Brooklyn, New York, USA, May 22-24, 2013.
- 27th ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation (SIGSIM/PADS).
- Joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN + NETECON 2013), in conjunction with ACM SIGMETRICS 2013 , Pittsburg, USA, June 21, 2013.
- 3rd International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Reikjavik, Iceland, 29-31 July 2013.
- 9th IMACS Seminar on Monte Carlo Methods, Annecy, France, July 15-19, 2013.
- 10th International Workshop on Economics of Grids, Clouds, Systems and Services (GECON'2013), Zaragoza, Spain September 18-20, 2013.
- 4th International Symposium on Information and Communication Technology (SoICT), Danang city, Vietnam, December 05-06, 2013.
- 3rd Workshop on Smart Data Pricing (SDP 2014), Workshop of IEEE INFOCOM 2014, Toronto, Canada, May 2, 2014.

- 2014 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (ACM SIGSIM PADS 2014) will take place in Denver, Colorado, USA on May 18-21, 2014.
- RAWNET/WNC3 2014 - 10th International Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks, Hammamet, Tunisia, June 2014.
- Workshop on QoE-centric Network and Application Management (QoENAM 2014), co-located with the IEEE ICC 2014 conference, Sydney, Australia, June 2014.
- 10eme Atelier de performance, Sophia Antipolis, France ; 11-13 Juin 2014.
- W-PIN+NetEcon 2014 : The joint Workshop on Pricing and Incentives in Networks and Systems, Austin, TX, USA, in conjunction with ACM SIGMETRICS.
- 10th International Workshop on Rare Event Simulation (RESIM 2014), August 27-29, 2014, Amsterdam, Netherlands.
- 4th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Vienna, Austria, 2-4 September 2014.
- IEEE ICC 2015 - Communications Software, Services and Multimedia Applications Symposium, London, UK, June 8-12, 2015.
- 4th Workshop on Smart Data Pricing (SDP 2015), Workshop of IEEE INFOCOM 2015, Hong Kong, May 1st, 2015.
- NetEcon 2015 : the 10th Workshop on the Economics of Networks, Systems and Computation, Portland, Oregon, USA, in conjunction with ACM SIGMETRICS, June 2015.
- 2015 ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (ACM SIGSIM PADS 2015) , the University of Westminster, London, UK, June 15-17, 2015.
- 10th IMACS Seminar on Monte Carlo Methods (MCM 2015), Linz, Austria, July 2015.
- 8th International Workshop on Simulation, Vienna, Austria, September 21-25, 2015.
- The International Conference on Wireless Networks and Mobile Communications (WINCOM'15). Marrakech, Morocco, October 20-23, 2015.
- 5th Workshop on Smart Data Pricing (SDP 2016), Workshop of IEEE INFOCOM 2016, San Francisco, USA, April 2016.
- IEEE ICC 2016 - Communications Software, Services and Multimedia Applications Symposium, 23-27 May 2016, Kuala Lumpur, Malaysia.
- 22nd Asia-Pacific Conference on Communications (APCC 2016), Yogyakarta, Indonesia on 25-27 August 2016.
- GECON2016 (13th International Conference on Economics of Grids, Clouds, Systems, and Services), 20-22 September 2016, Athens, Greece.
- The International Conference on Wireless Networks and Mobile Communications (WINCOM'16). Fez, Morocco, October 26-29, 2016.
- Globecom'16 - CSSMA (2016 IEEE Global Communications Conference : Communications Software, Services and Multimedia Apps), 4-8 December 2016, Washington VD, USA.
- 6th Workshop on Smart Data Pricing (SDP 2017), Workshop of IEEE INFOCOM 2017, Atlanta, GA, USA, May 2017.
- The Third International Symposium on Ubiquitous Networking (UNET 2017), Casablanca, Morocco, May 10-12, 2017.
- NetEcon 2017 : the 12th Workshop on the Economics of Networks, Systems and Computation, Cambridge, MA, USA, June 2017.
- 11th International Conference on Monte Carlo Methods and Application (MCM 2017), Montreal, Canada, July 3-7, 2017.

- 7th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH), Madrid, Spain, 29-31 July 2017.
- 14th International Conference on Economics of Grids, Clouds, Systems & Services (GECON'2017), Biarritz-Anglet-Bayonne, France, Sept. 19-21, 2017.
- The International Conference on Wireless Networks and Mobile Communications (WINCOM'17). Rabbat, Morocco, November 1-4, 2017.
- IEEE Globecom 2017, Singapore, Dec. 4-8, 2017
- 11th EAI International Conference on Performance Evaluation Methodologies and Tools (ValueTools 2017), Venice, Italy, December 5-7, 2017
- Ninth International Workshop on Simulation, Barcelona, Spain, June 18-22, 2018
- The 4th International Symposium on Ubiquitous Networking (UNET 2018), Hammamet, Tunisia, May 03-05, 2018.
- IEEE International Conference on Communications, 20-24 May 2018, Kansas City, MO, USA
- IEEE 1st 5G World Forum, Santa Clara, July 9-11, 2018
- GECON 2018 - International Conference on Economics of Grids, Clouds, Software, and Services, Pisa, 18-20.Sept.2018
- NETGCOOP 2018 - International Conference on NETWORK Games, CONTROL and OPTimisation New York, November 14-16, 2018
- IFIP WG 7.3 Performance 2018, 36th International Symposium on Computer Performance, Modelling, Measurement and Evaluation, Toulouse, France, December 5-7, 2018
- ValueTools 2019, Palma de Mallorca, Spain, March 12-15, 2019
- First IEEE Workshop on the ECONOMICS of Fog, Edge, and Cloud Computing (ECOFEC 2019), in conjunction with IEEE INFOCOM 2019, Paris, France
- IEEE International Conference on Communications (IEEE ICC 2019), May 20-24 2019, Shanghai, China.
- 12th International Conference on Monte Carlo Methods and Application (MCM 2019), Sydney, Australia, July 8-12, 2019.
- 31th International Teletraffic Congress (ITC 31), 27-29 August 2019, Budapest, Hungary.
- The International Symposium on Ubiquitous Networking (UNet'19), September 16-19, 2019, Limoges, France.
- GECON 2019 - 16th International Conference on Economics of Grids, Clouds, Software, and Services, Leeds, UK, 17-29 Sept. 2019
- The 2019 IEEE 2nd 5G World Forum (5GWF'19), Dresden, Germany, Sept 30-Oct 2, 2019.
- Financial Risk Track, Winter Simulation Conference (WSC'19), National Harbor, MD, USA, December 8-11, 2019.
- 14th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC'20), August 9-14, 2020, Oxford, UK.
- IEEE 5G World Forum, September 10-12 2020, Bangalore, India.
- ITC 32, International Teletraffic Congress, 22 - 24 September 2020, Osaka, Japan.
- IEEE GlobeCom 2020, Communication Software, Services & Multimedia Applications Symposium, Taipei, Taiwan, 7-11 December 2020
- 2021 Asia Pacific Conference on Wireless and Mobile (APWiMob), Bandung, Indonesia, April 8-10, 2021
- The 2021 International Symposium on Ubiquitous Networking (UNet'21), Marrakesh, Morocco, May 19-22, 2021.

- ITC 33 - Networked Systems and Services Aug. 31st - Sep. 3rd 2021, Avignon, France
- IEEE 5G World Forum, October 13-15 2021, Montreal, Canada.
- VALUETOOLS 2021 - 14th EAI International Conference on Performance Evaluation Methodologies and Tools, October 29-31, 2021, Guangzhou, People's Republic of China.
- Globecom2021 CSSMA (2021 IEEE Global Communications Conference : Communications Software, Services and Multimedia Apps), Madrid, Spain, 7 -11 December 2021.
- 15th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC'22), July 17-22, 2022, Linz, Austria.
- 34th International Teletraffic Congress (ITC 34), Shenzhen, China, September 14-16, 2022.
- 2nd workshop on the Economics of Fog, Edge and Cloud Computing (ECOFEC), Virtual conference, September 2022.
- Globecom 2022 CSM (2022 IEEE Global Communications Conference : Communications Software and Multimedia), Rio de Janeiro, Brazil, 4-8 December 2022.
- 35th International Teletraffic Congress (ITC 35), Turin, Italy, October 3-5, 2023.
- Globecom 2023 CSM (2023 IEEE Global Communications Conference : Communications Software and Multimedia), Kuala Lumpur, Malaysia, 4-8 December 2023.
- 16th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC'24), August 18-23, 2024, Waterloo, Canada.
- GECON 2024 - 20th International Conference on Economics of Grids, Clouds, Software, and Services, Rome, Italy, 26-27 Sept. 2024
- Globecom 2024 CSM (2024 IEEE Global Communications Conference : Communications Software and Multimedia), Cape Town, December 8-12, 2024.
- International Teletraffic Congress (ITC) 36, Trondheim (Norway), May 26-30, 2025.
- Monte Carlo Methods, MCM'25, Chicago, July 28- August 1, 2025.

Activités de Referee

- Revues : *ACM MONET*, *ACM SIGCOMM Computer Communication Review*, *ACM ToMaCS*, *ACM TOMPECS*, *ACM ToMS*, *Acta Arithmetica*, *Annals of the Institute of Statistical Mathematics*, *Annals of Telecommunications*, *Applied Mathematical Modelling*, *Applied Stochastic Models in Business and Industry*, *Automatica*, *Comptes-Rendus de l'Académie des Sciences*, *Computational Statistics and Data Analysis*, *Computer Communications*, *Computer Networks*, *Computers & Operations Research*, *Concurrency and Computation : Practice and Experience*, *Discrete Event Dynamic Systems ; Dynamic Games and Applications ; Electronic Commerce Research (ELEC) ; Electronics and Telecommunications Research Institute (ETRI) Journal ; Elsevier : Simulation Modelling, Practice and Theory ; European Journal of Operational Research ; Future Generation Computer Systems ; IEEE JSAC*, *IEEE Network Magazine*, *IEEE/ACM Transactions on Networking*, *IEEE Transactions on Automatic Control*, *IEEE Transactions on Computers*, *IEEE Transactions on Network and Service Management*, *IEEE Transactions on Software Engineering*, *IEEE Transactions on Reliability*, *IIE Transactions*, *Inform Journal on Computing*, *International Journal of Information Technology & Decision Making*, *International Journal of Network Management*, *International Journal of Systems Science*, *International Transactions in Operational Research*, *Internet Technology Letters*, *Journal of Applied Probability*, *Journal of Communications and Networks*, *Journal of Complexity*, *Journal of Network and Systems Management*, *Journal of Parallel and Distributed Computing*, *Journal of Simulation*,

Management Science, Mathematical and Computer Modelling, Mathematics of Computation, Netnomics, Operations Research, Operations Research Letters, Operations Research Perspectives, Performance Evaluation, Queueing Systems : Theory and Applications (QUESTA), SIAM Journal on Control and Optimisation, Simulation : Transactions of the Society for Modeling and Simulation International, Stochastic Models, Technique et Science Informatique, Telecommunications Policy, Telecommunication Systems.

- Conférences : *ACM Sigmetrics; Colloque Africain sur la Recherche en Informatique; IFIP Performance; International Computer Performance & Dependability Symposium; International Conference on Concurrency Theory; International Symposium on Algorithmic Game Theory; International Teletraffic Congress; Numerical Solution of Markov Chains; Workshop on Multiaccess, Mobility and Teletraffic for Wireless Communications; IEEE Conference on Decision and Control; IEEE INFOCOM; IEEE Symposium on Computers and Communications; Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks; Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing; Performance Tools; Valuetools; Winter Simulation Conference.*

Logiciels

- Bibliothèque en C générant les suites à discrétion faible des méthodes de quasi-Monte Carlo.
- SPNP (*Stochastic Petri Net Package*) : logiciel de modélisation et évaluation par réseaux de Petri stochastiques. Ce logiciel est géré à Duke University et implanté sur plus de 200 sites (universités et entreprises).

Relations avec l'industrie et contrats

- *Sofreten* : étude des systèmes hautement fiables non-Markoviens par simulation.
- *Cril Telecom Software* : étude des algorithmes de couverture CDMA dans UMTS.
- *DGA* : Plan d'Étude Amont sur la sécurisation des réseaux haut débit (en collaboration avec AQL, ENST Bretagne, SAGEM).
- *France Telecom* : Contrat Cifre sur la tarification et la gestion du revenu et des ressources d'un opérateur intégré de télécommunication dans un contexte de concurrence et de convergence des services.
- Participation à l'ADR (Action De Recherche) *SELF OPTIMIZING WIRELESS NETWORKS*, dans le cadre du laboratoire commun INRIA- Alcatel Lucent, pour une thèse intitulée « Evolution vers l'auto-configuration de la tarification et de la planification des ressources » (2008-...).
- *région Bretagne* : projet ARED SIMERTEL (*Simulation d'événements rares et applications en télécommunications*) (2008-2011).
- Projet commun Inria-ALSTOM : Availability Prediction with Logistics, 2014 - ...
- Co-directeur du laboratoire commun ALSTOM-Inria, 2014- ...

Activités annexes

- Membre du comité des actions incitatives pour le conseil d'orientation scientifique et technologique (COST) de l'INRIA : 2005- fin 2009.

- Membre de la commission formation permanente de l'IRISA de 2000 à 2006.
- Organisateur du séminaire au vert de l'équipe ARMOR en 2001, et du séminaire interne.
- Co-responsable du séminaire réseaux et systèmes de l'IRISA, de septembre 2002 à 2005.
- Correspondant relations scientifiques internationales de l'équipe ARMOR puis Dionysos.
- Membre de la commission post-doc de l'IRISA, 2007.
- Rapporteur pour l'Institut Telecom, le *Natural Sciences and Engineering Research Council of Canada* (NSERC), la Netherlands Organisation for Scientific Research (NWO) et la Swiss National Science Foundation (SNSF), le Austrian Science Fund (FWF) et pour le National Fund for Scientific & Technological Development (FONDECYT) au Chili, la Israel Science Foundation (ISF), de conventions CIFRE de l'ANRT.
- Revue de livres pour Wiley.
- Suppléant au comité scientifique et de validation du « Pôle Images et Réseaux » de la région Bretagne, Nov. 2009 - ...
- Membre de comité de sélection pour une poste d'e Maître de Conférences à l'ENIB (Ecole Nationale d'Ingénieur de Brest), 2010.
- Membre de la commission post-doc de l'INRIA Rennes, 2010.
- Relecteur pour la revue de vulgarisation scientifique "Pour la Science".
- Membre de la commission de sélection des thèses CORDIS pour Inria Rennes, 2013.
- Membre de la commission de délégation pour Inria Rennes, 2014, 2016, 2017.
- Membre de la commission de sélection du programme d'échanges Inria-MITACS, 2015-2016-2017-2018.
- Membre de la commission post-doc pour Inria Rennes, 2017.
- Membre élu du conseil I-sim pour la simulation à la société savante Informs, 2018-2020.
- Membre du jury de sélection CR Inria Rennes, 2022, 2023.

Encadrement de thèse

- Patrick Maillé. *Application de la théorie des jeux à la tarification de l'Internet*. 10/2002-06/2005, soutenue le 11/07/2005. Maintenant Maître de Conférences à Telecom Bretagne.
- Yezekael Hayel. *Étude de la tarification de l'Internet sans réservation de ressources*. Thèse débutée le 1/10/2002, soutenue le 30/11/2005. Maintenant Maître de Conférences à l'Université d'Avignon.
- Arnaud Delenda. *Mécanismes d'enchères pour le partage de ressources réseaux*. Soutenue le 06/06/2008. Travaillant pour HitValue (<http://www.hitvalue.net/>)
- Hélène Le Cadre. *Tarification et gestion du revenu et des ressources d'un opérateur intégré de télécommunication dans un contexte de concurrence et de convergence des services*. Thèse débutée le 1/12/2006, soutenue le 24/11/2009. Post-doc.
- Sagga Samira. *Simulation d'événements rares et application en télécommunications*. Début le 01/11/2008, soutenue le 12 Juillet 2013.
- Hai Tran Hoang. *Evolution vers l'auto-configuration de la tarification et de la planification des ressources*. Soutenue le 02/04/2012.
- Jean-Marc Vigne. *Analyse de la compétition entre fournisseurs dans les réseaux de communication*. Début le 01/10/2009, soutenance en Avril 2013 (mais ne s'est pas présenté à la soutenance). Co-supervisé avec Patrick Maillé (Telecom Bretagne).

- Ajit Rai. *Availability prediction with logistics*. Thèse Cifre avec ALSTOM. Début 05/2015, soutenue en 07/2018.
- Ximun Castoreo. *Measurements to check network neutrality*. Début 10/2018. Arrêté en 2020.
- Burak Kara. *Vers une distribution verte de vidéo : modélisation, évaluation et régulation*. Début mars 2023, 50%. Thèse Cifre avec Synamedia.
- Orland-Medy Saizonou. *Towards an efficient economic orchestration of 5G and beyond networks*. Début Novembre 2023. 50%. Thèse financée par le PEPR 5G.

Membre d'autres jury de thèse

- V. Ramos. *Transmission robuste et fiable du multimédia sur internet*. Université de Nice-Sophia-Antipolis, Décembre 2004, examinateur.
- F. Robledo. *GRASP heuristics for Wide Area Network design*. Université de Rennes 1, février 2005, examinateur.
- J. Nasreddine. *Allocation de ressources radios dans les systèmes UMTS à duplexage temporel*. Université de Rennes 1, mars 2005, examinateur.
- Hamza Dahmouni. *Reconnaissance des services, caractérisation du trafic et évaluation de performances dans les réseaux mobiles multiservices*. ENST Bretagne, Mars 2007, examinateur.
- Jérôme Lelong. *Algorithmes stochastiques et options Parisiennes*. Cermics, École Nationale des Ponts et Chaussées, septembre 2007, examinateur.
- Nicolas Bonneau. *Mécanismes multi-utilisateurs centralisés et décentralisés pour les communications sans fil*. Université de Nice-Sophia-Antipolis, septembre 2007, rapporteur.
- Kamal Gakhar. *Ingénierie de la QoS sur une plaque radio mixte IEEE 802.16/IEEE 802.11*. ENST Bretagne, Septembre 2007, examinateur.
- Gary Hardy. *Graphes stochastiques et Diagramme de Décision Binaire : Applications en fiabilité des réseaux*. Université de Picardie, Décembre 2007, rapporteur.
- Hélia Pouyllau. *Algorithmes distribués pour la négociation de contrats de Qualité de Service dans les réseaux multi-domaines*. Université de Rennes 1, Décembre 2007, examinateur.
- Matthias Roggendorf. *Dynamic pricing of wireless network resources in a competitive provider setting*. University of Auckland Business School, Janvier 2008, rapporteur (external examiner).
- Dinesh Kumar. *Analyse Stochastique de Réseaux sans Fil et Modélisation des Performances en temps réel dans les Réseaux Cablés*. Université de Nice-Sophia-Antipolis, Novembre 2008, rapporteur.
- Chahinez Hamlaoui. *Modèles et algorithmes pour la gestion économique des ressources dans les réseaux interdomaines avec garanties de QoS*. Université de Versailles-St Quentin, Février 2009, rapporteur.
- Gaoning He. *A Game-Theoretical Approach to resource Allocation in Wireless Networks*. Eurcom, Janvier 2010, rapporteur.
- Octave Boussaton. *Application de la théorie des jeux à l'optimisation du routage réseau - solutions algorithmique*. LORIA, Février 2010, rapporteur.
- Fakhouri Hanane. *Estimation du régime stationnaire de modèles markoviens complexes par l'algorithme de couplage depuis le passé*. Université Cadi Ayyad, Marrakech, Maroc, 2010, rapporteur.
- Moazzam Islam Tiwana. *Automated RRM Optimization of LTE networks using Statistical Learning*. Institut National des Télécommunications et Université Pierre et Marie Curie - Paris 6, Novembre 2010, rapporteur.

- Elena Veronica Belmega. Problèmes d'allocation de ressources dans les réseaux MIMO sans fil distribués. Université de Paris-Sud 11, Décembre 2010, rapporteur.
- Pierre Coucheney. Optimisation et évaluation de performances dans les réseaux de communication sans fil : une approche par la théorie des jeux. Imag, Grenoble, Aout 2011, rapporteur.
- Cécile Mattrand. Approche probabiliste de la tolérance aux dommages appliquée au domaine aéronautique, Institut Français de Mécanique Avancée , Clermont-Ferrand, Novembre 2011, rapporteur.
- Bahar Kaynar. Rare Event Simulation Techniques for Stochastic Design Problems in Markovian Setting. Vrije University, The Netherlands, January 2012.
- Lorenzo Maggi. Cooperative games for Markov decision processes with applications to telecommunications. Eurecom, October 2012.
- Pablo Gabriel Romero Rodriguez. Mathematical Analysis of Scheduling Policies in Peer-to-Peer Video Streaming Networks. Universidad de la Republica, Montevideo, Uruguay, November 2012, rapporteur.
- Isabel Amigo. Métrologie et Ingénierie du Trafic pour la QoS de bout-en-bout dans un réseau multi-domaine. Telecom Bretagne, Brest, Juillet 2013, président.
- Pablo Sartor del Giudice. Propriétés et méthodes de calcul de la fiabilité diamètre-bornée. Université de la République Montevideo et Université de Rennes 1, Montevideo, Uruguay, Décembre 2013.
- Mariem Krichen, Modèle technico-économique pour le déploiement d'un réseau femto avec partage de ressources. Université de Versailles Saint Quentin, 2014, rapporteur.
- Luca Rose. Decisional Process for Ad Hoc Networks, SUPELEC, Gif-sur-Yvette, January 2014, rapporteur.
- TIm Bereton, Monte Carlo Methods for Complex Stochastic Models, The University of Queensland, Australia, 2014, rapporteur.
- Mohamed Lamine Lamali, Qualité de Service et calcul de chemins dans les réseaux inter-domaine et multicouches. Université de Versailles Saint Quentin, Septembre 2014, président.
- Vladimir Fux. Game-theory approaches to study and influence interactions among self-interested agents in wireless networks. TELECOM Bretagne, November 2014, président.
- Josu Doncel. Efficiency of Distributed Queuing Games and of Path Discovery Algorithms. LAAS-CNRS, March 2015.
- Christelle Vergé. Modèle d'îlots de particules et application en fiabilité. École Polytechnique, Juillet 2015, rapporteur.
- Jeanne Demgne. Modélisation d'actifs industriels pour l'optimisation robuste des stratégies de maintenance. Université de Pau et de l'Adour, Octobre 2015, rapporteur.
- Vincent Moutoussamy. Contributions à l'analyse de fiabilité structurale : prise en compte de contraintes de monotonie pour les modèles numériques. Université de Toulouse, Novembre 2015, rapporteur.
- Yangyang Chen. Performance Analysis of Mobile Relays for LTE. Telecom Bretagne, décembre 2015, président.
- Juan Eduardo Piccini. Static Reliability and Resilience in Dynamic Systems. Université de la République, Montevideo, Uruguay, Mars 2016, rapporteur.
- Maider Estécahandy. Méthodes accélérées de Monte-Carlo pour la simulation d'événements rares. Applications aux Réseaux de Petri. Université de Pau et de l'Amour, Mars 2016, rapporteur.

- Wenjing Shuai. Management of electric vehicle systems with self-interested actors. Telecom Bretagne, Sept. 2016, président.
- Simon Theissing. Supervision en Transport Multimodal. Université de Paris-Saclay, Dec. 2016, président.
- Graciela FERREIRA LEITES MUNDELL. Analysis and Optimization of Highly Reliable Systems. University of the Republic, Montevideo, Uruguay, 2018, rapporteur.
- Robert Salomone, Advances in Monte Carlo Methodology, The University of Queensland, Australia, 2018, rapporteur.
- Jean-Bernard Eytard, Une approche par la géométrie tropicale et la convexité discrète de la programmation bi-niveau : application à la tarification des données dans les réseaux mobiles de télécommunications , Ecole Polytechnique, Novembre 2018, président.
- Wael Labidi. Smart grid-aware radio engineering in 5G mobile networks. Université de Paris-Saclay, Télécom SudParis, Mars 2019, rapporteur.
- Gabriel Sarazin. Analyse de sensibilité fiabiliste en présence d'incertitudes épistémiques introduites par les données d'apprentissage. Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), Université de Toulouse, Mai 2021, rapporteur.
- Maxim El Masri. Échantillonnage préférentiel en grande dimension via des projections dans un sous-espace de petite dimension. Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), Université de Toulouse, Mars 2022, rapporteur.
- Thomas Tournaire. Model-Based Reinforcement Learning for Dynamic Resource Allocation in Cloud Environments. Institut Polytechnique de Paris, Mai 2022.
- Mandar Datar. Resource Allocation and Pricing in 5G Network Slicing. Université d'Avignon, mai 2022, rapporteur.
- Yuanlu Bai. Topics in Stochastic Simulation : Rare-Event Estimation and Model Calibration, Columbia University, USA, Mars 2023.
- Karim Tit. Reliability of Deep Learning with Rare Event Simulation : Theory and Practice. University of Rennes, April 2024. President.

Membre de jury d'habilitation

- Sandrine Vaton. Mesure et analyse du trafic de réseaux : théorie et pratiques. Telecom Bretagne, Brest, Juillet 2012.
- Pascal Redou. Modèles formels pour l'analyse et la simulation *in virtuo* de systèmes complexes d'inspiration biologique. Université de Bretagne Occidentale, Brest, 2015, rapporteur.
- P. Maillé. Insights from economic studies of telecommunication networks. Telecom Bretagne Rennes, Octobre 2015.
- M. Le Treust. Coordination et communication stratégique. ENSEA, Cergy, Novembre 2022.
- Isabel Amigo. Controlling and Managing Data Networks for Improved Quality and Flexibility. IMT Atlantique, Brest, Juin 2024, rapporteur.

Encadrement de post-doc

- Abhijit Datta Banik. Importance Splitting Simulation for Rare Event Analysis. Du 15/12/2006 au 31/07/2007.

- Pierre Coucheney. Game-Theoretical Analysis of Interactions Between Internet Services Providers, Content Providers, and Customers. Impact on the Network Neutrality Debate. Du 01/09/2011 au 31/08/2012.
- Antoine Lesieur. Conception d'un démonstrateur des outils de détection de neutralité du Net. Ingénieur. De 11/2022 à 10/2024.

Encadrement de stages

- M. Logue, Master de l'Université de Belfast. Simulation de systèmes hautement fiables par la méthode de Monte Carlo avec échantillonnage préférentiel, 1995.
- M. Ouarraou, DESS de mathématiques appliquées, Université de Rennes 1. Mesure de la qualité de service dans l'Internet, 2001, 50%.
- Y. Hayel. Modèles de tarification de l'Internet. DEA Informatique, Université de Rennes 1, 2002.
- M. Delignon. Files d'attente avec perte pour la sécurité des réseaux, DESS de mathématiques appliquées, Université de Rennes 1, 2002, 50%.
- P. Rodriguez, Fiabilité et tarification, Master de l'université de Montevideo, 2003.
- M. Andriamady. Tarification des réseaux ad hoc. DEA Informatique, Université de Rennes 1, 2004.
- N. El Khatib. Méthodes de quasi-Monte Carlo perturbées. Mastère de Mathématiques appliquées, Université de Savoie, 2004.
- J. Hakyung. Pricing Wimax. PhD student, School of Computer Science and Engineering, Seoul National University, 2007.
- D. Lee Matias, Monte Carlo and quasi-Monte Carlo methods for estimating the reliability of static models. Master , Universidad Nacional de Cordoba, Argentina, 2007.
- K. Zhen. Pricing networks in a concurrential environment. Application to WIFI and WIMAX. PhD student in Computer Science, The University of Hong Kong, 2007.
- D. Ferre. Simulation d'événement rares. Mastère Recherche en Mathématiques, Université de Rennes 1, 2008.
- P. Pilotti. Competition on price and capacity among telecommunication service providers. Master, University of Rosario (Argentina), 2008.
- J.M. Vigne. Multihoming dans un environnement de télécommunication compétitif. Ingénieur à Telecom Bretagne, 2009.
- F. Bousson. Economie et fournisseurs de contenu. Mastère Recherche Informatique, Université de Rennes 1 et ENS Cachan, 2011.
- Thuy Dung Mai, Economics of CDNs. M2RI, Université de Rennes 1, 2014.
- Joshua Peignier, Estelle Varloot. Game-theoretic tools to analyze classical vs collaborative economies, Project Master R& I, 2016-2017, 50%.
- Anne Kieffer. Game theory applied to network neutrality analysis, Project 4th year INSA engineering school, 2019.
- Gwen Maudet, Analyse des biais des moteurs de recherche en ligne, Mines-Telecom Engineering School (last year), 2020.
- Khushboo Agarwal, Impact of Heterogeneous Neutrality Rules with Competitive Content Providers, Charpak Lab Program, Indian Institute of Technology Bombay, May-June 2019.

- Tom Houée, Analyse de l'erreur pour les méthodes de quasi-Monte Carlo randomisées, L3 MIASHS, 2020.
- Yuxuan Zhao. Amélioration de l'outil SNIDE, IMT engineering school (co-encadrement avec Patrick Maillé), 2 mois, été 2022.
- Florent Dufay. Théorie des jeux et slicing. ENS Rennes, 2 mois, été 2022.
- Mini-projet (5 étudiants) sur le développement de SNIDE, Master 2 Miage, Univ. Rennes, Mai-Juin 2024.

Activités d'enseignement

- Co-responsable de la mise en place du parcours Réseaux et Systèmes en Mastère Recherche en Informatique (M2RI), 2007-2008.
- Premier cycle universitaire :
 - * TD sur l'arithmétique et les polynômes en DEUG MIAS (1×24 heures)
 - * TD d'analyse en DEUG MIAS (1×40 heures + 1×36 heures)
 - * TD d'analyse pour la physique en DEUG SM (1×33 heures)
 - * TD de probabilités en DEUG MIAS (3×30 heures)
 - * TD de probabilités en DEUG SV (3×12 heures)
 - * TD d'analyse en IUT GEII (5×34 heures).
 - * Cours réseaux L3 informatique (1×8 heures).
 - * TP d'algorithmique des graphes à l'école d'ingénieur ESIR (1×12 heures).
 - * Cours et TD en probabilités et statistiques, Université des Sciences et Technologie d'Hanoi, Vietnam (1×40 heures)
- Second cycle universitaire :
 - * TD de statistiques et analyse des données en licence de mathématiques (1×15 heures)
 - * TP de statistiques, logiciel SAS, en licence de mathématiques (1×15 heures)
 - * TD Files d'attente, en DIIC (diplôme d'ingénieur informatique et communication) (1×16 heures)
 - * TD Gestion des stocks en MIAGE-IUP2 (2×16 heures)
 - * Cours Modélisation par files d'attente en Maîtrise d'informatique (8×18 heures)
 - * TD Modélisation Markovienne par files d'attente en Maîtrise d'informatique (1×18 heures)
 - * Cours/TD/TP sur la simulation et rappels de probabilités en Master 1 Informatique (16×(6 heures cours + 12 heures TP))
 - * Cours de simulation de Monte Carlo (ENS Rennes) (4×20 heures)
 - * TD probabilités et statistiques (Magistère informatique) (2×12 heures)
 - * Cours évaluation de performance (Mastère 2 Recherche Informatique) (10×6 heures)
 - * Cours Théorie des jeux et applications (Master 2 Recherche Informatique) 7×10 heures)
- Cours du CNAM, mathématiques pour l'informatique (3×21 heures)
- Cours du CNAM, mathématiques pour l'informatique, en enseignement à distance (4 ans).
- Cours école doctorale Matisse IRISA-INRIA-1 "La simulation de Monte-Carlo" (1×12 heures)
- Cours école doctorale Matisse IRISA-INRIA-1 "L'économie des réseaux" (1×6 heures ; 3 heures par moi-même).

- Cours intensif Master and PhD à NTNU (Trondheim, Norvège) : 25 heures sur la théorie des jeux et l'économie des réseaux (2015)

Autres informations

- Ancien joueur de Hand Ball (10 ans), arbitre (6 ans), entraîneur (4 ans).
- Cyclisme : cycloportif depuis 2001 puis en compétition FFC depuis 2012 (1 podium en 2012, 14 top-10 et 2 podiums en 2013, 3 podiums et 12 top-10 en 2014, 2 top-10 en 2015, 1 victoire+ 2 podiums, au total 7 top-10 en 2016, et pour le moment 1 victoire + 2 podiums et au total 5 top-10 en 2017).
- Trésorier du cyclo club Gévezé depuis 2006, membre du bureau de l'Olympique Club Cyliste Cesson nais en 2014, membre du bureau de l'AS Romillé Cyclisme de 2016 à 2020.