Marc Lelarge

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EDUCATION

HDR in Computer Science
Ecole Normale Supérieure
Title: Topics in random graphs, combinatorial optimization and statistical inference.   2015
Reviewers: Francis Comets (Paris 7), Bruce Hajek (UIUC), Remco van der Hofstad (Eindhoven University of Technology).

Ph.D. in Applied Mathematics
Ecole Polytechnique
Title: Rare events in networks. Advisor: Prof. F. Baccelli   2005
Reviewers: Venkat Anantharam (UC Berkeley), Sem Borst (CWI), Neil O'Connell (University of Warwick).

M.S. in Probability (with highest honors)
Université Paris VI Pierre et Marie Curie   2001

Diplôme d'Ingénieur
Ecole Nationale Supérieure des Télécommunications, Paris, France   2001
Majors: communication networks and statistics.

Diplôme d'Ingénieur
Ecole Polytechnique, Palaiseau, France   1999
Majors: computer science and applied mathematics.

PROFESSIONAL EXPERIENCE

Part-time Professor, **Ecole Polytechnique**   2018-2023
Deep learning lecturer

Research scientist, **INRIA - Ecole Normale Supérieure**   Paris, France
Member of DYOGENE project-team   2020-
Head of DYOGENE project-team   2013-2019
Lecturer at ENS   since 2006
Member of TREC project-team   2006-2013

Research scientist, **SAFRAN**   January-December 2017
Industrial data analytics

Acting Assistant Professor, **Stanford University**   September-December 2011
Department of Electrical Engineering

Post-Doctoral Fellow, **University College Cork**   2005-2006
Department of Mathematics, Boole Centre for Research in Informatics, Cork, Ireland.

Research Staff Member, **IBM Watson Research Center**   2004-2005
System Analysis and Optimization group, New York, USA

TEACHING

Machine Learning   2023-
Master ICFP, Ecole Normale Supérieure

Cours d'IA pour l'agrégation d'informatique   2022-
PSL - CNAM - SU

Deep Learning: Do-It-Yourself   2018-
graduate course, Ecole Normale Supérieure, Ecole Polytechnique, `http://www.dataflowr.com`

Deep Learning: Do-It-Yourself, with Florent Krzakala and Andrei Bursuc   2017
graduate course, Ecole Normale Supérieure.

Aléatoire, (tutorial classes)   2016
math undergraduate course given by Sylvie Méléard, Ecole Polytechnique.

Networks: distributed control and emerging phenomena, (tutorial classes)   2015
math/cs graduate course given by Laurent Massoulié, Ecole Polytechnique.

Models and algorithms for networks, with Ana Busic   2015
math/cs graduate course, Ecole Normale Supérieure.

Algorithms for Networked Information   2016, 2015, 2014
Master Advanced Communication Networks, Telecom ParisTech and Ecole Polytechnique.

Algorithms for social networks   2013
math/cs graduate course, Ecole Normale Supérieure.

Information theory and coding   2014,2013,2012,2011,2010,2009
math/cs undergraduate course, Ecole Normale Supérieure.

Random structures and algorithms, with Pierre Brémaud   2009
math/cs undergraduate course, Ecole Normale Supérieure.

Communication networks, with François Baccelli and Augustin Chaintreau   2007
math/cs undergraduate course, Ecole Normale Supérieure.

SUPERVISED STUDENTS

PhD students
- David Robin (co-supervised with Kevin Scaman)   2021-
- Matthieu Blanke   2021-
- Amaury Triboulin (co-supervised with Kevin Scaman)   2021-
- Eric Daoud (co-supervised with Fabien Reyal)   2019-2022
  Geographic and socio-demographic disparities in oncology care pathways.
- Luca Ganassali (co-supervised with Laurent Massoulié)   2019-2022
  The graph alignment problem: fundamental limits and efficient algorithms
- Alexis Galland   2017-2020
  Deep learning techniques for graph embedding at different scales
- Léo Miolane **Prix de thèse Jacques Neveu**   2016-2019
  Fundamental limits of inference: A statistical physics approach.
- Alexandre Hollocou (co-supervised with Thomas Bonald)   2015-2018
  Novel Approaches to the Clustering of Large Graphs

- Lennart Gulikers (co-supervised with Laurent Massoulié)   2014-2017
  Sur deux problèmes d'apprentissage automatique: détection de communautés et appariement adaptatif
- Mathieu Leconte (co-supervised with Laurent Massoulié)
  Load-balancing and resource-provisioning in large distributed systems   2011-2013
- Emilie Coupechoux
  Analysis of Large Random Graphs   2009-2012
- Justin Salez
  Some implications of local weak convergence for sparse random graphs   2008-2012
- Hamed Amini
  Epidemics and percolation in random networks   2007-2011

Postdoctoral fellows
- Antoine Baker   2022-
- Arpan Mukhopadhyay (co-supervised with Nidhi Hegde (Nokia))   2016-2017
- Emilie Kaufmann   2014-2015
- Mustafa Khandwawala   2014-2015
- Se-Young Yun   2014-2015

HONORS AND AWARDS

Best Publication Award, INFORMS Applied Probability Society	2015
with Mohsen Bayati and Andrea Montanari	
ACM Sigmetrics Rising Star Researcher Award	2012
NetGCooP Best Paper award co-authored with Emilie Coupechoux	2011
Visiting Fellow at the Isaac Newton Institute of Mathematical Sciences	2010
"Prime d'excellence scientifique" INRIA	2009-2016
Postdoctoral fellowship (Institut Mittag-Leffler) from the Royal Swedish Academy of Science	2004

PROFESSIONAL SERVICE

Editorial Duties

Associate editor, IEEE's Transactions on Network Science and Engineering	2014-2019
Associate editor, Bernoulli Journal	2013-2017
Associate editor Queueing Systems	2012-2017

Program Chair and Committee

Technical Program Committee co-chair ACM Sigmetrics	2014
ACM MOBIHOC	2016
ICALP	2016
INFOCOM	2016,2017
WAW	2015
ACM SIGMETRICS	2016,2013,2009
ESA	2014
WiOpt	2015,2014,2013
WEIS	2015,2014
GameSec	2012
NetCoop	2009,2008
Inter-Perf	2007

Invited Referee for Journals and Conferences

- **Probability and Statistics:** Annals of Probability, Annals of Applied Probability, Stochastic Processes and their Applications, Journal of Applied Probability, Random Structures & Algorithms, Journal of Combinatorial Theory Series A, Electronic Journal of Statistics.

- **Mathematical Physics:** Journal of Statistical Physics, Journal of Mathematical Physics, Physica A: Statistical Mechanics and its Applications.

- **Optimization, Operations Research:** Mathematics of Operations Research, Operations Research, SIAM Journal on Discrete Mathematics, Discrete Applied Mathematics, SIAM Journal on Applied Mathematics, Mathematical Methods of Operations Research, Surveys in Operations Research and Management Science, Information Processing Letters

- **Networks:** Queueing Systems: Theory and Applications, Performance Evaluation, IEEE/ACM Transactions on Networking, IEEE/ACM Transactions on Information Theory, IEEE Journal on Selected Areas in Communications, ACM Transactions on Information and Systems Security, ACM Transactions on Internet Technology, IEEE Transactions on Mobile Computing, IEEE Transactions on Systems, Man and Cybernetics, Computer Networks, Journal of Economic Dynamics and Control, IEEE Transactions on Emerging Topics in Computing.

- **Conferences:** ICML, NeurIPS, ICLR, AISTATS, COLT, INFOCOM, NetCoop, ISIT, SODA, ITW, SEA, ICALP, FOCS

Grant proposal review

European Research Council
The Engineering and Physical Sciences Research Council (EPSRC, UK)
Swiss National Science Foundation
Netherlands Organisation for Scientific Research (NWO)

Dissertation Committees

Reviewer for PhD: Hicham Lesfari	10/2022
External Examiner for PhD: Maximilien Dreveton	04/2022
Reviewer for PhD: George Dasoulas	03/2022
Reviewer for PhD: Balthazar Donon	03/2022
External Examiner for PhD: Gaelle Candel	03/2022
External Examiner for PhD: Stéphane D'Ascoli	09/2022
Reviewer for PhD: Guillaume Braun	12/2022
External Examiner for PhD: Clément Mantoux	08/2022
External Examiner for PhD: Vivien Cabannes	07/2022
External Examiner for PhD: Louis Martin	10/2021
External Examiner for PhD: Arnaud Cadas	11/2021
Reviewer for PhD: Amine Echraibi	12/2021
External Examiner for PhD: Tomas Angles	10/2020
Reviewer for PhD: Pierre Perrault	2020
External Examiner for PhD: Xiaoyi Mai	2019
Reviewer for PhD: Arun Kadavankandy (INRIA)	2017
Reviewer for PhD: Kevin Scaman (ENS Cachan)	2016
Reviewer for PhD: Van Hao Can (université Aix-Marseille)	2016
External Examiner for PhD: Lucas Mercier (Université de Lorraine)	2016
External Examiner for PhD: Jean Barbier (ENS)	2015
External Examiner for PhD: Hang Zhou (ENS)	2015
External Examiner for PhD: Jiaming Xu (UIUC)	2014

External Examiner for PhD: Feng Yan (Telecom Paristech)   2013
External Examiner for PhD: Dan-Cristian Tomozei (UPMC)   2011

Hiring Committees

Member of the hiring committee for "maître de conférence Probabilités (Université Lyon 1)"   2015
CR2 INRIA Paris-Rocquencourt hiring committee   2014
Member of the hiring committee for "maître de conférence à l'Ecole Normale Supérieure"   2013
Member of the hiring committee for "chaire INRIA-ENS Lyon"   2013
Member of the hiring committee for "maître de conférence à l'Ecole Normale Supérieure"   2010
Member of the hiring committee for chaire CNRS-UJF 1254   2009

Other Professional Duties

APS Informs session   2023
Co-organizer, Workshop on graph learning, with Thomas Bonald and Laurent Massoulié   2018
Co-organizer, Highlights of Algorithms, with Pierre Fraigniaud, Varun Kanade and Claire Mathieu   2016
Co-organizer, Workshop on Networks: learning, information and complexity, with Emmanuel Abbe, Sébastien Bubeck and Laurent Massoulié   2016
Co-organizer, Cargèse fall school on random graphs, with Dieter Mitsche and Pawel Pralat   2015
Co-organizer, Workshop on Community Detection, with Laurent Massoulié   2015
Co-organizer, Stochastic networks and stochastic geometry A conference dedicated to François Baccelli on his 60th birthday, with Bartek Blaszczyszyn, Charles Bordenave, Bruno Gaujal and Jean Mairesse   2015
INFORMS Nicholson prize committee   2014-2015
Member of the steering committe for the "Math-STIC" (math-cs) program in the labex LMH   2014-pres
Member of the scientific committee for "10eme Atelier en Évaluation de Performances"   2014
Publicity chair ACM Sigmetrics 2013   2013
Co-organizer, Stochastic Processes in Communication Networks for Young Researchers, Edinburgh, with Denis Denisov and Bert Zwart   2010
Co-organizer, Young European Queueing Theorists, EURANDOM, with Matthieu Jonckheere and Seva Shneer   2009

PUBLICATIONS

Refereed Journal Publications

[J1] Eric Daoud, Anne-Sophie Hamy, Elise Dumas, Lidia Delrieu, Beatriz Grandal, Christine Le Bihan-Benjamin, Sophie Houzard, Philippe-Jean Bousquet, Judical Hotton, Aude-Marie Savoye, Christelle Jouannaud, Chlo-Agathe Azencott, Marc Lelarge, Reyal Fabien, Disparities in accessibility to oncology care centers in France. *Cancer Research*, 82:1022-1022 , 2022.

[J2] Luca Ganassali, Marc Lelarge, Laurent Massoulié, Spectral alignment of correlated Gaussian matrices. *Advances in Applied Probability*, 54(1):279-310, 2022.

[J3] Xiaoyi Chen, Nicolas Garcelon, Antoine Neuraz, Katy Billot, Marc Lelarge, Thomas Bonald, Hugo Garcia, Yoann Martin, Vincent Benoit, Marc Vincent, Hassan Faour, Maxime Douillet, Stanislas Lyonnet, Sophie Saunier, Anita Burgun, Phenotypic similarity for rare disease: ciliopathy diagnoses and subtyping. *Journal of Biomedical Informatics* 100:103308, 2019.

[J4] Arpan Mukhopadhyay, Nidhi Hegde, Marc Lelarge, Asymptotics of replication and matching in large caching systems. *IEEE/ACM Transactions on Networking* 27(4):1657-1668, 2019.

[J5] Marc Lelarge, Léo Miolane, Fundamental limits of symmetric low-rank matrix estimation, *Probability Theory and Related Fields*, 173:859929 2019.

[J6] Charles Bordenave, Marc Lelarge, Laurent Massoulié. Non-backtracking spectrum of random graphs: community detection and non-regular Ramanujan graphs, *Annals of Probability*, 46(1):1-71 , 2018.

[J7] Alaa Saade, Florent Krzakala, Marc Lelarge, Lenka Zdeborová, Fast randomized semi-supervised clustering, *Journal of Physics: Conference Series* 1036 (1), 012015, 2018.

[J8] Emilie Kaufmann, Thomas Bonald, Marc Lelarge, A spectral algorithm with additive clustering for the recovery of overlapping communities in networks, *Theor. Comput. Sci.* 742: 3-26, 2018

[J9] Marc Lelarge, Mendes Oulamara, Replica bounds by combinatorial interpolation for diluted spin systems, *Journal of Statistical Physics*, 1-24, 2018

[J10] Lennart Gulikers, Marc Lelarge, Laurent Massoulié, An impossibility result for reconstruction in the degree-corrected stochastic block model, *Annals of Applied Probability* 28(5): 3002-3027, 2018

[J11] Julien Barré, Marc Lelarge, Dieter Mitsche, On rigidity, orientability, and cores of random graphs with sliders, *Random Struct. Algorithms* 52(3):419-453, 2018.

[J12] Francesco Caltagirone, Marc Lelarge, Léo Milane, Recovering asymmetric communities in the stochastic block model, *IEEE Transactions on Network Science and Engineering*, 2017.

[J13] Lennart Gulikers, Marc Lelarge, Laurent Massoulié, A spectral method for community detection in moderately sparse degree-corrected stochastic block models, *Advances in Applied Probability*, 49(3):686-721, 2017.

[J14] Marc Lelarge, Laurent Massoulié, Jiaming Xu, Reconstruction in the Labeled Stochastic Block Model, *IEEE Trans. on Network Science and Engineering*, 2(4):152-163, 2015.

[J15] Emilie Coupechoux, Marc Lelarge, Contagions in Random Networks with Overlapping Communities, *Advances in Applied Probability*, 47(4):973-988, 2015.

[J16] Hamed Amini, Marc Lelarge, The Diameter of Weighted Random Graphs, *Annals of Applied Probability*, 25(3):1686-1727, 2015.

[J17] Mohsen Bayati, Marc Lelarge, Andrea Montanari, Universality in Polytope Phase Transitions and Message Passing Algorithms, *Annals of Applied Probability*, 25(2):753-822, 2015.

[J18] Emilie Coupechoux, Marc Lelarge, How Clustering Affects Epidemics in Random Networks, *Advances in Applied Probability*, 46(4), 2014.

[J19] Marc Lelarge, Hang Zhou, Sublinear-time algorithms for monomer-dimer systems on bounded degree graphs, *Theoretical Computer Science*, 548:68-78, 2014.

[J20] Marc Lelarge, Antonella Villani. Exact tail asymptotics of a queue with LRD input traffic, *Journal of Mathematical Sciences*, 196(1):57-69, 2014.

[J21] Charles Bordenave, Marc Lelarge, Justin Salez, Matchings on infinite graphs, *Probability Theory and Related Fields*, 157(1-2):183-208, 2013.

[J22] Hamed Amini, Moez Draief, Marc Lelarge, Flooding in Weighted Sparse Random Graphs, *SIAM Journal on Discrete Mathematics*, 27(1):1-26, 2013.

[J23] Hamed Amini, Marc Lelarge, Upper deviations for split times of branching processes, *Journal of Applied Probability*, 49(4):1134-1143, 2012.

[J24] Marc Lelarge, Coordination in Network Security Games: a Monotone Comparative Static Approach, *IEEE Journal on Selected Areas in Communications*, 30(11):2210-2219, 2012.

[J25] Marc Lelarge, Diffusion and Cascading Behavior in Random Networks, *Games and Economic Behavior*, 75(2):752-775, 2012.

[J26] Charles Bordenave, Marc Lelarge, Justin Salez, The rank of diluted random graphs, *Annals of Probability*, 39(3):1097-1121, 2011.

[J27] Charles Bordenave, Marc Lelarge, Resolvent of Large Random Graphs, *Random Structures and Algorithms*, 37(3):322-352, 2010.

[J28] David J. Aldous, Charles Bordenave, Marc Lelarge, Dynamic Programming Optimization over Random Data: the Scaling Exponent for Near-optimal Solutions, *SIAM Journal on Computing*, 38(6):2382-2410, 2009.

[J29] Marc Lelarge, Asymptotic behavior of Generalized Processor Sharing queues under subexponential assumptions, *Queueing Systems. Theory and Applications* 62(1):51-73, 2009.

[J30] David J. Aldous, Charles Bordenave, Marc Lelarge, Near-Minimal Spanning Trees: a Scaling Exponent in Probability Models, *Annales de l'Institut Henri Poincaré (B)* 44(5):962-976, 2008.

[J31] Marc Lelarge, Tail asymptotics for Discrete Event Systems, *Discrete Event Dynamic Systems* 18(4): 563-584, 2008.

[J32] Marc Lelarge, Packet Reordering in Networks with Heavy-Tailed Delays, *Mathematical Methods of Operations Research* 67(2):341-371, 2008.

[J33] Marc Lelarge, Tail asymptotics for monotone-separable networks, *Journal of Applied Probability* 44(2):306-320, 2007.

[J34] Ton Dieker, Marc Lelarge, Tails for (max,plus) recursions under subexponentiality, *Queueing Systems. Theory and Applications* 53(4):213-230, 2006.

[J35] François Baccelli, Serguei Foss, Marc Lelarge, Tails in Generalized Jackson Networks with Subexponential Service Time Distributions, *Journal of Applied Probability* 42(2):513-530, 2005.

[J36] Marc Lelarge, Fluid limit of generalized Jackson queueing networks with stationary and ergodic arrivals and service times, *Journal of Applied Probability* 42(2):491-512, 2005.

[J37] François Baccelli, Marc Lelarge, Serguei Foss, Asymptotics of Subexponential Max Plus Networks the Stochastic Event Graph Case, *Queueing Systems. Theory and Applications* 46(1-2):75-96, 2004

Refereed Conference and Workshop Publications

[C1] Matthieu Blanke, Marc Lelarge, FLEX: an Adaptive Exploration Algorithm for Nonlinear Systems, *ICML*, 2023

[C2] David AR Robin, Kevin Scaman, Marc Lelarge, Convergence beyond the over-parameterized regime using Rayleigh quotients, *NeurIPS*, 2022

[C3] Matthieu Blanke, Marc Lelarge, Online greedy identification of linear dynamical systems, *IEEE 61st Conference on Decision and Control (CDC)*, 2022

[C4] Luca Ganassali, Marc Lelarge, Laurent Massoulié, Correlation detection in trees for partial graph alignment, *Innovations in Theoretical Computer Science (ITCS)*, 2022

[C5] Waiss Azizian, Marc Lelarge, Expressive power of invariant and equivariant graph neural networks, *ICLR* 2021

[C6] Luca Ganassali, Marc Lelarge, Laurent Massoulié, Impossibility of Partial Recovery in the Graph Alignment Problem, *COLT* 2021

[C7] Stéphane dAscoli, Alice Coucke, Francesco Caltagirone, Alexandre Caulier, Marc Lelarge, Conditioned text generation with transfer for closed-domain dialogue systems. *Statistical Language and Speech Processing: 8th International Conference, SLSP* 2020

[C8] Marc Lelarge, Léo Miolane, Asymptotic bayes risk for gaussian mixture in a semi-supervised setting. *IEEE 8th International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)*, 2019

[C9] Alexandre Hollocou, Thomas Bonald, Marc Lelarge. Modularity-based Sparse Soft Graph Clustering. *AISTATS* 2019

[C10] Thomas Bonald, Alexandre Hollocou, Marc Lelarge. Weighted Spectral Embedding of Graphs. *Allerton* 2018

[C11] Alexis Galland, Marc Lelarge. Community detection with the triplet loss. *Graph Signal Processing Workshop (GSP)* 2018

[C12] Arpan Mukhopadhyay, Nidhi Hegde, Marc Lelarge. Optimal Content Replication and Request Matching in Large Caching Systems. *IEEE INFOCOM* 2018.

[C13] Alexandre Hollocou, Thomas Bonald, Marc Lelarge. Multiple Local Community Detection. *SIGMETRICS Perform. Eval. Rev* 2017.

[C14] Marc Lelarge, Léo Miolane. Fundamental limits of symmetric low-rank matrix estimation. *COLT* 2017.

[C15] Thibault Lesieur, Léo Miolane, Marc Lelarge, Florent Krzakala, Lenka Zdeborová. Statistical and computational phase transitions in spiked tensor estimation. *ISIT* 2017.

[C16] Marc Lelarge. Counting matchings in irregular bipartite graphs and random lifts. *SODA* 2017.

[C17] Lennart Gulikers, Marc Lelarge, Laurent Massoulié. Non-Backtracking Spectrum of Degree-Corrected Stochastic Block Models. *ITCS* 2017

[C18] Mehrdad Moharrami, Vijay Subramanian, Mingyan Liu, Marc Lelarge. Impact of Community Structure on Cascades. *EC* 2016.

[C19] Alaa Saade, Florent Krzakala, Marc Lelarge, Lenka Zdeborová. Clustering from Sparse Pairwise Measurements. *ISIT* 2016.

[C20] Se-Young Yun, Marc Lelarge, Alexandre Proutière. Fast and Memory Optimal Low-Rank Matrix Approximation. *NIPS* 2015

[C21] Richard Combes, Sadegh Talebi, Alexandre Proutière, Marc Lelarge. Combinatorial Bandits Revisited. *NIPS* 2015.

[C22] Charles Bordenave, Marc Lelarge, Laurent Massoulié. Non-backtracking spectrum of random graphs: community detection and non-regular Ramanujan graphs. *FOCS* 2015: 1347-1357.

[C23] Mathieu Leconte, Marc Lelarge, Laurent Massoulié. Designing Adaptive Replication Schemes in Distributed Content Delivery Networks. *ITC* 2015: 28-36.

[C24] Alaa Saade, Florent Krzakala, Marc Lelarge, Lenka Zdeborová. Spectral Detection in the Censored Block Model, *ISIT* 2015: 1184-1188.

[C25] Se-Young Yun, Marc Lelarge, Alexandre Proutière, Streaming, Memory Limited Algorithms for Community Detection, *NIPS* 2014.

[C26] Florian Bourse, Marc Lelarge, Milan Vojnovic, Balanced Graph Edge Partition, *KDD* 2014: 1456-1465.

[C27] Jiaming Xu, Marc Lelarge, Laurent Massoulié, Edge Label Inference in Generalized Stochastic Block Models: from Spectral Theory to Impossibility Results, *COLT* 2014: 903-920.

[C28] Marc Lelarge, Hang Zhou, Sublinear-Time Algorithms for Monomer-Dimer Systems on Bounded Degree Graphs, *ISAAC* 2013: 141-151.

[C29] Marc Lelarge, Alexandre Proutière, Sadegh Talebi, Spectrum Bandit Optimization, *ITW* 2013.

[C30] Marc Lelarge, Laurent Massoulié, Jiaming Xu, Reconstruction in the Labeled Stochastic Block Model, *ITW* 2013.

[C31] Marc Lelarge, Bypassing Correlation Decay for Matchings with an Application to XORSAT, *ITW* 2013.

[C32] Mathieu Leconte, Marc Lelarge, Laurent Massoulié, Convergence of multivariate belief propagation, with applications to cuckoo hashing and load balancing, *ACM-SIAM SODA*, 2013: 35-46.

[C33] Simon Heimlicher, Marc Lelarge, Laurent Massoulié, Community Detection in the Labelled Stochastic Block Model, *NIPS 2012 Workshop: Algorithmic and Statistical Approaches for Large Social Networks*.

[C34] Stéphane Caron, Branislav Kveton, Marc Lelarge, Smriti Bhagat, Leveraging Side Observations in Stochastic Bandits, *UAI*, 2012: 142-151.

[C35] Mohsen Bayati, Marc Lelarge, Andrea Montanari, Universality in Polytope Phase Transitions and Iterative Algorithms, *ISIT*, 2012: 1643-1647.

[C36] Mathieu Leconte, Marc Lelarge, Laurent Massoulié, Bipartite graph structures for efficient balancing of heterogeneous loads, *ACM SIGMETRICS*, 2012: 41-52.

[C37] Marc Lelarge, Coordination in Network Security Games, *IEEE INFOCOM*, 2012: 2856-2860.

[C38] Marc Lelarge, A New Approach to the Orientation of Random Hypergraphs, *ACM-SIAM SODA*, 2012: 251-264.

[C39] Emilie Coupechoux, Marc Lelarge, Impact of Clustering on Diffusions and Contagions in Random Networks, *NetGCooP*, 2011: 1-7.

[C40] Marc Lelarge, Diffusion and Cascading Behavior in Random Networks, *MAMA workshop at Sigmetrics 2011* and *Interdisciplinary Workshop on Information and Decision in Social Networks*, MIT, 2011.

[C41] Hamed Amini, Moez Draief, Marc Lelarge, Flooding in Weighted Random Graphs. *SIAM ANALCO*, 2011: 1-15.

[C42] Charles Bordenave, Marc Lelarge, The Rank of Diluted Graphs, *ACM-SIAM SODA*, 2010: 1389-1402.

[C43] Marc Lelarge, Efficient Control of Epidemics over Random Networks, *ACM SIGMETRICS*, 2009: 1-12.

[C44] Marc Lelarge, Economics of Malware: Epidemic Risks Model, Network Externalities and Incentives, *Allerton Conference* 1353-1360, and *WEIS*, 2009.

[C45] Marc Lelarge, Jean Bolot, Economic Incentives to Increase Security in the Internet: The Case for Insurance, *IEEE INFOCOM*, 2009: 1494-1502.

[C46] Hamed Amini, Moez Draief, Marc Lelarge, Marketing in Random Networks, *NetCoop08*, LNCS 5425, 2009: 17-25.

[C47] Marc Lelarge, Diffusion of Innovations on Random Networks: Understanding the Chasm, *WINE*, LNCS 5385, 2008: 178-185.

[C48] Marc Lelarge, Jean Bolot, A Local Mean Field Analysis of Security Investments in Networks, ACM SIGCOMM *NetEcon*, 2008: 25-30.

[C49] Marc Lelarge, Jean Bolot, Cyber Insurance as an Incentive for Internet Security, *WEIS*, 2008.

[C50] Marc Lelarge, Jean Bolot, Network Externalities and the Deployment of Security Features and Protocols in the Internet, *ACM SIGMETRICS*, 2008: 37-48.

[C51] Jean Bolot, Marc Lelarge, A New Perspective on Internet Security using Insurance, *IEEE INFOCOM*, 2008: 1948-1956.

[C52] Marc Lelarge, Online Bandwidth packing with symmetric distributions, *Conference on Analysis of Algorithms*, DMTCS 2007: 471-482.

[C53] Cathy H. Xia, Zhen Liu, Don Towsley, Marc Lelarge, Scalability of Fork/Join queueing networks with blocking, *ACM SIGMETRICS*, 2007: 133-144.

[C54] Marc Lelarge, Tail asymptotics for Discrete Event Systems, *ValueTools*, 2006.

[C55] Marc Lelarge, Zhen Liu, Anton Riabov, Automatic Composition of Secure Workflow, *Automatic and Trusted Computing*, LNCS 4158, 2006: 322-331.

[C56] François Baccelli, Marc Lelarge, David McDonald, Metastable Regimes for multiplexed TCP flows, *Allerton conference*, 2004.

[C57] Marc Lelarge, Zhen Liu and Cathy H. Xia, Asymptotic Tail Distribution of End-to-End Delay in Networks of Queues with Self-Similar Cross Traffic, *IEEE INFOCOM*, 2004: 2352-2363.

Patents

[P1] Stéphane Caron, Branislav Kveton, Marc Lelarge, Smriti Bhagat et al., US20150199715 A1: A system and method for recommending items in a socila network, (filed Jun. 2013)   2015

[P2] Z. Liu, G. Grabarnik, A. Riabov, M. Lelarge et al., USPTO 2008/0016547: System and method for security planning with hard security constraints (filed Jul. 2006)   2008