

Patrick Loiseau

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Research Interests

My research lies in the areas of game theory and statistical learning and their application to security, personal data and networks economics (designing better online systems and applications through good incentives). I like to do interdisciplinary research and to work on problems that have both fundamental theoretical aspects and important practical applications. My main current research interests include adversarial and game-theoretic statistical learning (i.e., statistical learning with strategic agents), competitive online learning, ethics of learning (fairness and transparency aspects), game theory for security, cyber insurance, economics of personal data, statistical inference in online social systems, resource allocation and pricing in clouds and smart grids, and causal analysis.

Education

Qualification aux fonctions de Professeur des Universités, Sections 26 et 27 2017

Université Pierre et Marie Curie (Paris 6), Paris, France Dec. 2016

Habilitation à diriger des recherches (HDR)

Thesis: *Combining game theory and statistical learning for security, privacy and network systems*

Committee: Eitan Altman (reviewer), Tamer Başar (reviewer), Gérard Biau, Rainer Böhme (reviewer), Bruno Gaujal, Refik Molva, Vianney Perchet

Université Pierre et Marie Curie (Paris 6) / École Polytechnique, Paris, France July 2010

M.Sc. Degree in Mathematics – *Probability and random models*

First class honors: “mention très bien”

Thesis: *Large deviations for mixing processes*

École Normale Supérieure de Lyon, Lyon, France Dec. 2009

Ph.D. in Computer Science, prepared at LIP lab., within the Inria RESO team

Thesis: *Contributions to the Analysis of Scaling Laws and Quality of Service in Networks: Experimental and Theoretical Aspects*

Advisors: Paulo Gonçalves, Pascale Vicat-Blanc Primet

Committee: Christophe Diot, Daniel Kofman, Jean-Yves Le Boudec (reviewer), Rudolf Riedi (reviewer), Philippe Robert (reviewer)

École Normale Supérieure de Lyon, Lyon, France 2002 – 2006

“Elève normalien”: undergraduate and graduate studies at the physics department

M.Sc. Degree in Physics – *Non linear and statistical physics* (July 2006)

Thesis: *Complex wavelets for the analysis of scaling phenomena*

Degree of Professeur-Agrégé in physics (July 2005)

B.Sc. Degree in physics (July 2003)

Lycée Marcelin Berthelot, Saint-Maur des Fossés, France 2000 – 2002

French preparatory classes with physics and chemistry majors (classes préparatoires PCSI and PC*)

Admission to École Normale Supérieure de Lyon

Employment

- EURECOM**, Sophia-Antipolis, France Nov. 2011 – present
Assistant Professor in the Data Science department (*first class* since July 2015)
(Previously in the former Networking and Security department until Jan. 2016)
- University of California**, Santa Cruz, CA, USA Dec. 2010 – Oct. 2011
Post-doctoral scholar in Basking Engineering school, working with Prof. John Musacchio
Research topic: *Game theory and application to network economics*
- Inria Paris-Rocquencourt**, Le Chesnay, France Jan. 2010 – Nov. 2010
Post-doctoral fellow in Sisyphe team, working with Julien Barral and Michel Sorine
Research topic: *Multi-scale analysis of heart-rate variability: estimation and control-theoretic modeling*
- École Normale Supérieure de Lyon**, Lyon, France Sept. 2006 – Dec. 2009
Doctoral fellow at LIP lab. in Inria RESO team, supervised by Paulo Gonçalves and Pascale Vicat-Blanc
Research topic: *Analysis and modeling of network traffic and performance: from theory to practice*
- École Normale Supérieure de Lyon**, Lyon, France Sept. 2002 – Aug. 2006
“Elève fonctionnaire stagiaire”

Visiting positions

- Max Planck Institute for Software Systems**, Saarbrücken, Germany April 2016 – present
Visiting researcher, hosted by Prof. Krishna Gummadi
Funded by a Humboldt Research Fellowship for experienced researchers
- Max Planck Institute for Software Systems**, Saarbrücken, Germany July 2014 – Sept. 2014
Visiting researcher, hosted by Prof. Krishna Gummadi
- University of California**, Berkeley, CA, USA July 2012 – Aug. 2012
Visiting researcher in the EECS department, hosted by Prof. Jean Walrand
- University of California**, Berkeley, CA, USA Dec. 2010 – Oct. 2011
Visiting member of the Network Economics Group, hosted by Prof. Jean Walrand
- University of Waterloo**, Waterloo, ON, Canada Oct. 2010
Visiting researcher in the ECE department, hosted by Prof. Ravi Mazumdar

Internships

- École Normale Supérieure de Lyon**, Lyon, France Apr. 2006 – July 2006
Research Intern in the Physics lab., supervised by Patrice Abry, Pierre Borgnat and Paulo Gonçalves
Research topic: *Complex wavelets for the analysis of scaling phenomena*
- École Normale Supérieure de Lyon**, Lyon, France May 2004 – July 2004
Research Intern in the Physics lab., supervised by P. Abry, P. Flandrin and E. Pereira de Souza Neto
Research topic: *Application of the Empirical Mode Decomposition to the study of the heart beat rate*
- École Normale Supérieure de Lyon**, Lyon, France June 2003 – July 2003
Research Intern in the Chemistry lab., supervised by Vincent Krakoviac
Research topic: *Numerical study of the pressure in a random porous matrix via Monte-Carlo simulations*

Teaching experience

EURECOM, Sophia-Antipolis, France

<i>Statistical data analysis</i>	every Fall since 2013
Instructor, graduate course (short: 21 hours/year)	
<i>Game Theory</i>	every Fall since 2013
Instructor, graduate course (short: 21 hours/year)	
<i>Network Economics</i>	every Fall since 2012
Instructor, graduate course (short: 21 hours/year)	
<i>Performance Evaluation of Computer Systems</i>	Spring 2012 and 2013
Instructor, graduate course (long: 42 hours/year)	

University of California, Santa Cruz, CA, USA

ISM207: <i>Random Process Models in Engineering</i>	Spring 2011
Guest lecturer (3 hours), graduate course (instructor: Prof. Musacchio), TIM program	

École Normale Supérieure de Lyon, Lyon, France

<i>Network traffic models</i>	Spring 2010
Guest lecturer (4 hours), M2 graduate course (instructors: C. Touati and P. Gonçalves), CS department	

Université de Versailles Saint-Quentin-en-Yvelines, Versailles, France

<i>Introduction to probability</i>	Fall 2010
Tutorials (36 hours), L2 undergraduate level (instructor: A. Rouault), Mathematics department	

École Normale Supérieure de Lyon, Lyon, France

Teaching assistant (“moniteur”) in the physics and CS departments (64 hours/year) 2006 – 2009

<i>Electromagnetic waves and telecommunications</i>	
Tutorials, graduate level (preparatory class to “agrégation” in physics)	
<i>Introduction to signal processing</i>	
Lab. sessions, bachelor level (L3), physics program	
<i>Principles of hydrodynamics, linear acoustics and shock waves</i>	
Tutorials, graduate level (preparatory class to “agrégation” in physics)	
<i>Computer architecture, systems and networks</i>	
Tutorials, bachelor level (L3), fundamental CS program	

MediPlus Lyon, Lyon, France

Part-time teaching for first year medicine and pharmacy students (total 196 hours) 2006 – 2009

<i>Basics of physics and biophysics</i>	
Lectures and tutorials, medicine program	
<i>Basics of general mathematics and statistics</i>	
Lectures and tutorials, pharmacy program	

Professional service

Teaching and internal responsibilities

Responsible for the networking track of the engineering studies at EURECOM (since 2014)

Member of the restricted committee for strategic reflection at EURECOM (2014-16)

Steering committees

Chair of the steering committee of NetEcon (since 2013)

Creator and chair of the steering committee of Sophia-networking (sophia-networking.org) (since 2013)

Member of the scientific council of the Labex UCN@Sophia (since 2015)

Member of the steering committee of the “réseau thématique 2 (architecture et gestion)” of Institut Mines-Telecom (since 2014)

Conference organization

Creator and lead organizer of the UCN@Sophia Labex seminar (a bimonthly seminar since 2013)

Member of the scientific programme committee of the BMW summer school 2017

Registration chair of ACM SIGMETRICS 2016

Co-organizer, seminar on modeling, optimization and control in wireless networks, Paris 2015

PC co-chair of NetEcon 2015 (with Aaron Roth and Adam Wierman)

PC co-chair of W-PIN+NetEcon 2014 (with John Chuang)

PC co-chair of W-PIN+NetEcon 2013 (with David Parkes and Jean Walrand)

Registration chair of ACM SIGMETRICS 2013

PC co-chair of W-PIN 2012 (with Jean Walrand)

Editorial activities

Associate editor, ACM TOIT (since 2015)

Guest editor, ACM TOIT special issue on economics of security and privacy (2016)

Guest editor, ACM TOIT special issue on pricing and incentives in networks and systems (2013)

TPCs

NIPS 2017

ICPP 2017

ICQT 2017

NetEcon 2017

WiOpt 2017 (member of the Advisory TPC)

NetGCooP 2016

WWW 2016 (demo track)

SDP 2016

FC 2016

ITC 2016

WWW 2015 (demo track)

SDP 2015
 NetGCooP 2014
 ACM SIGMETRICS 2014
 SDP 2014
 ICQT 2013
 W-PIN+NetEcon 2013
 SDP 2013
 GameSec 2012
 W-PIN 2012
 CFIP 2009 (shadow)

Invited referee for journals and conferences (each listed only once)

IEEE Transactions on Signal Processing, ACM Transactions on Privacy and Security, IEEE Transactions on Information Forensics and Security, ACM Transactions on the Web, IEEE Networks, IEEE Transactions on Dependable and Secure Computing, ACM Transactions on Information and System Security, Operation Research, IEEE/ACM Transactions on Networking, International Journal of Information Security, ISAAC 2015, IEEE INFOCOM 2013, Computer Communications journal, IEEE Transactions on Communications, Computer Networks Journal, IEEE Communication Letters, Stochastic Models, ACM SigComm CCR, 20th ITC Specialist Seminar on Network Virtualization - Concepts and Performance, CFIP 2009

Evaluation of PhD dissertations

Committee member for the PhD of Antoine Rault (Inria Rennes, 2016)
 Reviewer and committee member for the PhD of Áron Lászka (Budapest University of Technology and Economics, 2014)
 Member of the mid-term evaluation committee for 7 PhD students (since 2013)

Panel member for grant proposal selection

Expert for the F.R.S.-FNRS, Belgium (2016)
 Member of the selection committee for the “Future & Ruptures” program from IMT (2014)
 External reviewer for the Informatics and Mathematics Panel of the Academic Research Council, Ministry of Education, Singapore (2014)

Professional membership

ACM, Data Transparency lab, GDR Multifractal, GDR Jeux

Honors and awards

ANR Tremplin-ERC grant (Award for researchers who were well evaluated at the second stage of ERC but did not obtain funding)	2016
Humboldt Research Fellowship for experienced researchers (Alexander von Humboldt Foundation) (Maximum 18 months award)	2016
Data Transparency lab research grant (top 11% of the projects)	2016

Symantec research faculty gift	2015
Data Transparency lab travel grant (top 30% of the projects)	2015
Best Paper Award Runner-up at IFIP Performance (6 papers selected)	2010
ERCIM Alain Bensoussan European Post-doctoral fellowship (declined)	2010
Best Student Demonstration Award at ACM SIGMETRICS/Performance	2009
PhD fellowship and teaching assistanship from École Normale Supérieure de Lyon	2006

Advising experience

Postdocs

Michela Chessa (Sept. 2013–Aug. 2015, now assist. Prof at University of Nice Sophia-Antipolis)
 Topic: Game theory and economics of personal data
 Output: [11, 13, 14, 32, 33, 44, 52, 54].

PhD students

Quan Dong Vu (Since Jan. 2017, Cifre PhD co-advised with Alonso Silva from Nokia Bell Labs)
 Topic: Learning in Blotto games and applications to modeling attention in social networks

Amine Lahouel (Since Sept. 2016, Cifre PhD co-advised with Michele Bezzi from SAP)
 Topic: Data anonymity / utility tradeoff in big data applications

Athanasios Andreou (Since Oct. 2015, co-advised with Oana Goga from MPI-SWS)
 Topic: Bringing transparency to personalized services through statistical inference
 Output: [27] (+ 2 papers submitted to conferences with anonymous submissions)

Xiaohu Wu (Nov. 2012–Feb. 2016, Ph.D. Telecom ParisTech, now postdoc at Aalto University)
 Topic: Techniques for Scheduling and Pricing in Cloud Computing
 Ph.D. Telecom ParisTech successfully defended on Feb. 16, 2016
 Output: [8, 10, 12, 29]

Hadrien Hours (Nov. 2011–Sep. 2015, Ph.D. Telecom ParisTech, co-advised with Ernst Biersack, postdoc at ENS Lyon, now data scientist at Booking.com)
 Topic: A causal approach to the study of telecommunication networks
 Ph.D. Telecom ParisTech successfully defended on Sept 16, 2016
 Output: [17, 18, 31, 45, 46]

Alberto Benegiamo (Nov. 2013–Aug. 2015, co-advised with Giovanni Neglia from Inria, now Software and System Developer - Derivatives Markets at London Stock Exchange Group)
 Topic: Mathematical tools for smart grids
 Output: [28]

Interns

George Arvanitakis (PhD student at EURECOM, intern at MPI-SWS in June-Sept. 2017)

Stéphane Pouget (L3 student at ENS Lyon, intern at MPI-SWS in June-July 2017)

Yannick Terme (Eng. EURECOM/Telecom ParisTech, intern at MPI-SWS in July-August 2016, now student at ENSAE)

Nina Grgić-Hlača (M.A. University of Zagreb, intern at EURECOM in Feb.-July 2016 with an ERASMUS+ grant, now PhD student at MPI-SWS)

Vijay Kamble (Ph.D. UC Berleley, intern at EURECOM in April-May 2015, now postdoc at Stanford)
Output: [9, 53]

Athanasios Andreou (M.Sc. EURECOM, intern at MPI-SWS in Feb.-Sept. 2015, co-advised with Oana Goga and Krishna Gummadi, now Ph.D. student at EURECOM)
Output: initial work on [27], won a grant “thèse d’excellence” from institut Mines-Telecom to do a PhD at EURECOM

Yifan Pi (B.Sc. Tsinghua University, intern at EURECOM during summer 2013, now software engineer at Google)

Student projects

Supervision of 15+ semester projects and master projects since 2012 (2-3 per semester)

Research funding

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| ANR Tremplin-ERC | 2017 – 2018 |
| <i>CONNECTED: Towards secure and private personal-data-based online services in the networked world</i> (€ 150k) | |
| Patrick Loiseau (PI) | |
| Cifre contract with Nokia Bell Labs | 2016 – 2019 |
| <i>Learning in Blotto Games and Applications to Modeling Attention in Social Networks</i> (€ 45k) | |
| Patrick Loiseau (co-PI), Alonso Silva (co-PI at Nokia Bell Labs) | |
| Cifre contract with SAP Research | 2016 – 2019 |
| <i>Approche de l’anonymisation des données en fonction du niveau de risque associé</i> (€ 45k) | |
| Patrick Loiseau (co-PI), Michele Bezzi (co-PI at SAP Research) | |
| Data Transparency lab research grant | 2016 – 2017 |
| <i>TranspAd: A Collaborative Tool to Bring Transparency to Targeted Advertising</i> (€ 50k) | |
| Patrick Loiseau (co-PI), Oana Goga (co-PI) | |
| Institut Mines-Telecom Futur&Ruptures program, doctoral support grant | 2015 – 2018 |
| <i>TRANSPA: Bringing transparency to personalized services through statistical inference</i> (€ 108k) | |
| Patrick Loiseau (PI) | |
| France-Berkeley fund | 2014 – 2016 |
| <i>Multi-armed bandit games and applications</i> (\$ 10k) | |
| Patrick Loiseau (PI), Jean Walrand (PI) | |
| Symantec research faculty gift | 2015 |
| <i>Cyber insurance</i> (\$ 30k) | |
| Patrick Loiseau (PI) | |
| Institut Mines-Telecom Futur&Ruptures program, post-doctoral support grant | 2015 |
| <i>MONET: MONETization of personal data in social networks: A game-theoretic approach</i> (€ 30k) | |
| Patrick Loiseau (PI) | |
| Labex UCN@Sophia, post-doctoral support grant | 2013 – 2015 |
| <i>PRIMO: PRivate data MOnetization: a public good approach using cooperative game theory</i> (€ 90k) | |
| Patrick Loiseau (PI) | |

Labex UCN@Sophia , doctoral support grant <i>Mathematical tools for the smart grid</i> (€ 105k) Patrick Loiseau (co-PI), Giovanni Neglia (co-PI)	2013 – 2016
Institut Mines-Telecom Futur&Ruptures program , doctoral support grant <i>Robust pricing of cloud resources through mean-field games</i> (€ 121k) Patrick Loiseau (PI)	2012 – 2015

Publications

Dissertations

- [1] **Patrick Loiseau**. *Combining game theory and statistical learning for security, privacy and network systems*. HDR thesis, UPMC, December 2016.
- [2] **Patrick Loiseau**. *Contributions to the Analysis of Scaling Laws and Quality of Service in Networks: Experimental and Theoretical Aspects*. PhD thesis, ENS Lyon, December 2009.

Edited volumes

- [3] **Patrick Loiseau**, Aaron Roth, and Adam Wierman. The 10th Workshop on the Economics of Networks, Systems and Computation (NetEcon 2015). *ACM Performance Evaluation Review*, December 2015. (Guest editorial).
- [4] John Chuang and **Patrick Loiseau**. The joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN+NetEcon 2014). *ACM Performance Evaluation Review*, 42(3):2–3, December 2014. (Guest editorial).
- [5] Costas Courcoubetis, Roch Guérin, **Patrick Loiseau**, David Parkes, Jean Walrand, and Adam Wierman. Special Issue on Pricing and Incentives in Networks and Systems: Guest Editors' Introduction. *ACM Transactions on Internet Technology*, 14(2–3):8:1–8:3, October 2014. (Guest editorial).
- [6] **Patrick Loiseau**, David Parkes, and Jean Walrand. The joint Workshop on Pricing and Incentives in Networks and Systems (W-PIN+NetEcon 2013). *ACM Performance Evaluation Review*, 41(4):2–3, March 2014. (Guest editorial).
- [7] **Patrick Loiseau** and Jean Walrand. The first Workshop on Pricing and Incentives in Networks (W-PIN 2012). *ACM Performance Evaluation Review*, 40(2):12–13, September 2012. (Guest editorial).

Preprints

(Excluding papers submitted to conferences with anonymous submissions.)

- [8] Xiaohu Wu and **Patrick Loiseau**. Algorithms for scheduling malleable tasks, 2017. (Preprint. Under Review. Available as arXiv:1501.04343.).
- [9] Vijay Kamble, **Patrick Loiseau**, and Jean Walrand. Regret-optimal strategies for playing repeated games with discounted losses, 2016. (Preprint. Under Review. Available as arXiv:1603.04981.).
- [10] Xiaohu Wu, **Patrick Loiseau**, and Esa Hyytia. Simple algorithms for scheduling moldable tasks, 2017. (Preprint. Under Review. Available as arXiv:1609.08588.).
- [11] Michela Chessa and **Patrick Loiseau**. A cooperative game-theoretic approach to quantify the value of personal data in networks, 2016. (Preprint. Available at <http://www.eurecom.fr/~loiseau/articles/ChessaLoiseau-quantif.pdf>).
- [12] Xiaohu Wu, **Patrick Loiseau**, and Esa Hyytia. An analytical and extended cost-effective resource provisioning framework in iaas clouds under online learning, 2017. (Preprint. Under Review. Available as arXiv:1607.05178.).

- [13] Michela Chessa, Stratis Ioannidis, and **Patrick Loiseau**. Linear regression and incentive compatibility, 2017. (Preprint.).
- [14] Michela Chessa, Jens Grossklags, and **Patrick Loiseau**. On non-monetary incentives for the provision of public goods, 2017. (Preprint.).

Articles in journals

- [15] Lemonnia Dritsoula, **Patrick Loiseau**, and John Musacchio. A game-theoretic analysis of adversarial classification. *IEEE Transactions on Information Forensics and Security*, 2017. To appear.
- [16] Raimo Kantola, Hammad Kabir, and **Patrick Loiseau**. Cooperation and End-to-End in the Internet. *International Journal of Communication Systems*, 2017. To appear.
- [17] Hadrien Hours, Ernst Biersack, **Patrick Loiseau**, Alessandro Finamore, and Marco Mellia. A Study of the Impact of DNS Resolvers on CDN Performance Using a Causal Approach. *Computer Networks, Special issue on "Traffic and Performance in the Big Data Era"*, 109, Part 2:200 – 210, 2016.
- [18] Hadrien Hours, Ernst Biersack, and **Patrick Loiseau**. A causal approach to the study of TCP performance. *ACM Transactions on Intelligent Systems and Technology, Special Issue on "Causal Discovery and Inference" (K. Zhang, J. Li, E. Bareinboim, B. Schölkopf, and J. Pearl, editors)*, 7(2):25:1–25:25, January 2016.
- [19] **Patrick Loiseau**, Galina Schwartz, John Musacchio, Saurabh Amin, and S. Shankar Sastry. Incentive mechanisms for internet congestion management: Fixed-budget rebate *versus* time-of-day pricing. *IEEE/ACM Transactions on Networking*, 22(2):647–661, 2014.
- [20] **Patrick Loiseau**, Claire Médigue, Paulo Gonçalves, Najmeddine Attia, Stéphane Seuret, François Cottin, Denis Chemla, Michel Sorine, and Julien Barral. Large deviations estimates for the multiscale analysis of heart rate variability. *Physica A*, 391(22):5658–5671, November 2012.
- [21] Paulo Gonçalves, Shubhabrata Roy, Thomas Begin, and **Patrick Loiseau**. Dynamic resource management in clouds: A probabilistic approach. *IEICE Transactions on Communications, special section on Networking Technologies for Cloud Services*, E95-B(8):2522–2529, 2012. (Invited paper).
- [22] Julien Barral and **Patrick Loiseau**. Large deviations for the local fluctuations of random walks. *Stochastic Processes and their Applications*, 121(10):2272–2302, 2011.
- [23] **Patrick Loiseau**, Paulo Gonçalves, and Pascale Vicat-Blanc Primet. A long-range dependent model for network traffic with flow-scale correlations. *Stochastic Models*, 27:333–361, 2011.
- [24] Edmundo Pereira de Souza Neto, Elmer Andrés Fernández, Patrice Abry, Béatrice Cuzine, **Patrick Loiseau**, Christian Baude, Jean Frutoso, Claude Gharib, and Xavier Martin. Application of cardiac autonomous indices in the study of neurogenic erectile dysfunction. *Urologia Internationalis*, 86(3):290–297, 2011.
- [25] **Patrick Loiseau**, Paulo Gonçalves, Guillaume Dewaele, Pierre Borgnat, Patrice Abry, and Pascale Vicat-Blanc Primet. Investigating self-similarity and heavy-tailed distributions on a large scale experimental facility. *IEEE/ACM Transactions on Networking*, 18(4):1261–1274, August 2010.
- [26] Edmundo Pereira de Souza Neto, Patrice Abry, **Patrick Loiseau**, Jean-Christophe Cejka, Marc-Antoine Custaud, Jean Frutoso, Claude Gharib, and Patrick Flandrin. Empirical mode decomposition to assess cardiovascular autonomic control in rats. *Fundamental & Clinical Pharmacology*, 21(5):481–496, October 2007.

Articles in refereed conferences

- [27] Athanasios Andreou, Oana Goga, and **Patrick Loiseau**. Identity vs. attribute disclosure risks for users with multiple social profiles. In *Proceedings of the 2017 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, August 2017.
- [28] Alberto Benegiamo, **Patrick Loiseau**, and Giovanni Neglia. Dissecting demand response mechanisms: the role of consumption forecasts and personalized offers. In *Proceedings of the American Control Conference (ACC)*, July 2016.
- [29] Xiaohu Wu and **Patrick Loiseau**. Algorithms for scheduling deadline-sensitive malleable tasks. In *Proceedings of the 53rd Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, September 2015.
- [30] Oana Goga, **Patrick Loiseau**, Robin Sommer, Renata Teixeira, and Krishna Gummadi. On the reliability of profile matching across large online social networks. In *Proceedings of the 21st ACM SIGKDD conference on Knowledge Discovery and Data Mining (KDD)*, August 2015.
- [31] Hadrien Hours, Ernst Biersack, **Patrick Loiseau**, Alessandro Finamore, and Marco Mellia. A study of the impact of DNS resolvers on performance using a causal approach. In *Proceedings of the 27th International Teletraffic Congress (ITC)*, September 2015. (**Selected for submission of an extended version to Computer Networks special issue on “Traffic and Performance in the Big Data Era”**).
- [32] Michela Chessa, Jens Grossklags, and **Patrick Loiseau**. A game-theoretic study on non-monetary incentives in data analytics projects with privacy implications. In *Proceedings of the 28th IEEE Computer Security Foundations Symposium (CSF)*, July 2015.
- [33] Michela Chessa, Jens Grossklags, and **Patrick Loiseau**. A short paper on the incentives to share private information for population estimates. In *Proceedings of the 19th International Conference Financial Cryptography and Data Security (FC)*, January 2015. (Short paper).
- [34] Galina Schwartz, **Patrick Loiseau**, and S. Shankar Sastry. The heterogeneous colonel blotto game. In *Proceedings of the International conference on network games, control and optimization (NETG-COOP)*, October 2014.
- [35] Stratis Ioannidis and **Patrick Loiseau**. Linear regression as a non-cooperative game. In *Proceedings of the 9th conference on Web and Internet Economics (WINE)*, December 2013.
- [36] Lemonia Dritsoula, **Patrick Loiseau**, and John Musacchio. A game-theoretical approach for finding optimal strategies in an intruder classification game. In *Proceedings of the 51st IEEE Conference on Decision and Control (CDC)*, December 2012.
- [37] Lemonia Dritsoula, **Patrick Loiseau**, and John Musacchio. Computing the nash equilibria of intruder classification games. In *Proceedings of the third Conference on Decision and Game Theory for Security (GameSec)*, November 2012. (Full paper).
- [38] **Patrick Loiseau**, Galina Schwartz, John Musacchio, Saurabh Amin, and S. Shankar Sastry. Congestion pricing using a raffle-based scheme. In *Proceedings of the International conference on network games, control and optimization (NETGCOOP)*, October 2011.
- [39] Oana Goga, **Patrick Loiseau**, and Paulo Gonçalves. On the impact of the flow-size distribution’s tail index on network performance with TCP connections. In *Proceedings of the 29th International Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP Performance)*, October 2011.
- [40] **Patrick Loiseau**, Galina Schwartz, John Musacchio, and Saurabh Amin. Incentive schemes for internet congestion management: Raffles versus time-of-day pricing. In *49th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, September 2011.
- [41] **Patrick Loiseau**, Paulo Gonçalves, Julien Barral, and Pascale Vicat-Blanc Primet. Modeling TCP throughput: an elaborated large-deviations-based model and its empirical validation. In *Proceedings of the 28th International Symposium on Computer Performance, Modeling, Measurements and Evaluation (IFIP Performance)*, November 2010. **Best Paper Award Runner-up**.

- [42] **Patrick Loiseau**, Paulo Gonçalves, Stéphane Girard, Florence Forbes, and Pascale Vicat-Blanc Primet. Maximum likelihood estimation of the flow size distribution tail index from sampled packet data. In *Proceedings of the eleventh international joint conference on Measurement and modeling of computer systems (ACM SIGMETRICS / Performance)*, June 2009.
- [43] **Patrick Loiseau**, Paulo Gonçalves, Romaric Guillier, Matthieu Imbert, Yuetsu Kodama, and Pascale Vicat-Blanc Primet. Metroflux: A high performance system for analyzing flow at very fine-grain. In *Proceedings of the 5th International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom)*, April 2009.

Articles in refereed workshops

- [44] Michela Chessa and **Patrick Loiseau**. A cooperative game-theoretic approach to quantify the value of personal data in networks. In *Proceedings of the 12th Workshop on the Economics of Networks, Systems and Computation (NetEcon)*, June 2017.
- [45] Hadrien Hours, Ernst Biersack, and **Patrick Loiseau**. Causal study of network performance. In *Proceedings of the 17ème Rencontres Francophones sur les Aspects Algorithmiques de Télécommunications (AlgoTel)*, June 2014.
- [46] Hadrien Hours, Ernst Biersack, and **Patrick Loiseau**. A causal study of an emulated network. In *10ème Atelier en Evaluation de Performances (AEP10)*, June 2014.
- [47] **Patrick Loiseau**, Paulo Gonçalves, Romaric Guillier, Matthieu Imbert, Oana Goga, Yuetsu Kodama, and Pascale Vicat-Blanc Primet. *Metroflux*: a high performance system for very fine-grain flow analysis. In *Grid'5000 Spring School*, April 2009.
- [48] **Patrick Loiseau**, Paulo Gonçalves, and Pascale Vicat-Blanc Primet. How TCP can kill self-similarity. In *Euro-NF workshop: Traffic Engineering and Dependability in the Network of the Future*, September 2008.
- [49] **Patrick Loiseau**, Paulo Gonçalves, Yuetsu Kodama, and Pascale Vicat-Blanc Primet. Metroflux: A fully operational high speed metrology platform. In *Euro-NF workshop: New trends in modeling, quantitative methods and measurements, in cooperation with NET-COOP*, September 2008.
- [50] **Patrick Loiseau**, Paulo Gonçalves, Guillaume Dewaele, Pierre Borgnat, Patrice Abry, and Pascale Vicat-Blanc Primet. Vérification du lien entre auto-similarité et distributions à queues lourdes sur un dispositif grande échelle. In *9ème Atelier en Evaluation de Performances (AEP9)*, June 2008.
- [51] **Patrick Loiseau**, Paulo Gonçalves, and Pascale Vicat-Blanc Primet. A comparative study of different heavy tail index estimators of the flow size from sampled data. In *Proceedings of the MetroGrid Workshop, within the framework of GridNets International Conference*, October 2007.

Communications in conferences without proceedings

- [52] Michela Chessa, Jens Grossklags, and **Patrick Loiseau**. On non-monetary incentives for the provision of public goods. In *the 13th European meeting on game theory (SING13)*, July 2017. (1-page abstract).
- [53] Vijay Kamble, **Patrick Loiseau**, and Jean Walrand. Regret-optimal strategies for playing discounted repeated games. In *27th International Conference on Game Theory in Stony Brook*, July 2016. (1-page abstract).
- [54] Michela Chessa and **Patrick Loiseau**. The impact of the graph structure on a public good provision game: a cooperative approach with applications to personal data release on social networks. In *the 11th European meeting on game theory (SING11-GTM2015)*, July 2015. (1-page abstract).

Software Demonstrations

- [55] **Patrick Loiseau**, Romaric Guillier, Oana Goga, Matthieu Imbert, Paulo Gonçalves, and Pascale Vicat-Blanc Primet. Automated traffic measurements and analysis in Grid5000, June 2009. ACM SIGMETRICS / Performance demonstration contest (**Best Student Demonstration Award**).

Invited talks

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|---|---------------|
| ENS Lyon (SIESTE seminar), Lyon, France
<i>Learning from strategic data: a game-theoretic perspective</i> | October 2016 |
| MPI-SWS, Saarbrücken, Germany
<i>Classification from strategic data: a game-theoretic perspective</i> | April 2016 |
| 11ème Atelier en Evaluation de Performances (keynote), Toulouse, France
<i>Strategic resource allocation in adversarial environments</i> | March 2016 |
| Harvard University (EconCS seminar), Cambridge, MA, USA
<i>Classification from strategic data: a game-theoretic perspective</i> | November 2015 |
| MIT (Special Henry L. Pierce laboratory seminar), Cambridge, MA, USA
<i>Classification from strategic data: a game-theoretic perspective</i> | November 2015 |
| Northeastern University (ECE department seminar), Boston, MA, USA
<i>Classification from strategic data: a game-theoretic perspective</i> | November 2015 |
| MIT Media Lab (Data Transparency Lab conference), Cambridge, MA, USA
<i>Bringing Transparency to Targeted Advertising</i> | November 2015 |
| LRI, Université Paris-Sud (Séminaire d'algorithmique et de complexité du plateau de Saclay), Saclay, France
<i>Learning to classify from strategic data</i> | October 2015 |
| UCLA, IPAM Graduate Summer School: Games and Contracts for Cyber-Physical Security (invited lecture), Los Angeles, CA, USA
<i>Learning with Strategic Agents: From Adversarial Learning to Game-Theoretic Statistics</i> | July 2015 |
| Inria Grenoble (In'tech seminar), Grenoble, France
<i>On the impact of game theory in security</i> | June 2015 |
| ACM SIGMETRICS (invited tutorial), Portland, OR, USA
<i>Learning with Strategic Agents: From Adversarial Learning to Game-Theoretic Statistics</i> | June 2015 |
| LINCS (LINCS seminar), Paris, France
<i>Game-theoretic statistics: Learning from data generated by strategic agents</i> | March 2015 |
| Institut Henri Poincaré (Paris game theory seminar), Paris, France
<i>Game-theoretic statistics: Learning from data generated by strategic agents</i> | March 2015 |
| Data transparency lab (DTL) kickoff workshop, Telefonica, Barcelona, Spain
<i>Game theory and statistics for data transparency: 3 directions</i> | November 2014 |
| AlgoGT, Saint Nizier du Moucherotte, France
<i>Classification games</i> | July 2013 |
| Campus SophiaTech (SophiaTech networks seminar), Sophia-Antipolis, France
<i>A Robust Incentive Mechanism for Congestion Management</i> | April 2013 |

Mines ParisTech (Séminaire du CMA), Sophia-Antipolis, France <i>Incentive Mechanisms for Decongestion: Fixed-Budget Rebate versus Time-of-Day Pricing</i>	March 2013
UC Berkeley (TRUST seminar), Berkeley, USA <i>Incentive mechanisms for congestion management</i>	August 2012
RESCOM summer school (invited lecture), Vittel, France <i>Game theory for network security and privacy</i>	June 2012
Supélec, Gif-sur-Yvette, France <i>Large games for Internet congestion management</i>	February 2012
INRIA Paris-Rocquencourt (RAP seminar), Le Chesnay, France <i>Large games for Internet congestion management</i>	February 2012
UCLA (EE department), Los Angeles, CA, USA <i>Raffle-based Incentive Schemes for Congestion Management</i>	October 2011
Caltech (RSRG Seminars), Pasadena, CA, USA <i>Raffle-based Incentive Schemes for Congestion Management</i>	October 2011
Orange Labs (France Telecom), Sophia-Antipolis, France <i>TCP traffic modeling using an almost-sure large-deviations result</i>	March 2011
University of Nice, Laboratoire J.A. Dieudonné (Séminaire de Probabilités et Statistiques), Nice, France <i>Principe de grandes déviations presque-sur et applications</i>	March 2011
Alcatel-Lucent Bell Laboratories (Mathematics of Networks and Communications Research Department), Murray Hill, NJ, USA <i>Almost-sure large deviations and application to TCP traffic</i>	March 2011
University of Waterloo (Department of Electrical and Computer Engineering invited seminar), Waterloo, Canada <i>Large deviations and application to fine TCP modeling</i>	October 2010
UC Berkeley (Networking, Communications and DSP seminars), Berkeley, CA, USA <i>Large deviations and application to fine TCP modeling</i>	September 2010
Caltech (RSRG Seminars), Pasadena, CA, USA <i>Large deviations and application to fine TCP modeling</i>	September 2010
Politecnico di Torino (Telecommunication Network Group), Torino, Italy <i>Heavy-tails and correlations in network traffic</i>	May 2010
INRIA Paris-Rocquencourt (RAP seminar), Le Chesnay, France <i>Large deviations and application to TCP performance</i>	November 2009