



PERSONAL INFORMATION

Name / Surname Panayotis Mertikopoulos
Place of Birth Athens, Greece
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RESEARCH INTERESTS

Game theory; learning; optimization; machine learning; data networks; operations research

EDUCATION

2019 **Université Grenoble Alpes** Grenoble, FR
Habilitation à Diriger des Recherches (HDR) in Computer Science and Applied Mathematics
Thesis: [Online Optimization and Learning in Games: Theory and Applications](#)

2007–2010 **University of Athens, Department of Physics** Athens, GR
Doctorate of Philosophy (PhD)
Thesis: [Stochastic Perturbations in Game Theory and Applications to Networks](#)

2003–2006 **Brown University, Department of Mathematics** Providence, RI, USA
Master of Science in Mathematics (May 2005) with a GPA of 4.0/4.0 (*summa cum laude*)
Adm. Cand. for the Ph.D. degree in Mathematics (M.Phil. equivalent; Sept. 2005)
Dissertation: “*Reduction Theorems in Generalized Complex Geometry*”

1998–2003 **University of Athens, Department of Physics** Athens, GR
Ptychion degree in Physics (July 2003) with a GPA of 9.1/10 (*summa cum laude*)
Dissertation: [Gauss's law and Residue Calculus in the Framework of de Rham Cohomology](#)

PROFESSIONAL EXPERIENCE

2011–present **CNRS – French National Center for Scientific Research** Grenoble, FR
Tenured researcher (*chargé de recherche*) in the Laboratoire d'Informatique de Grenoble

2019, fall **École Polytechnique Fédérale de Lausanne (EPFL)** Lausanne, CH
Visiting scholar at the Laboratory for Information and Inference Systems (LIONS)

2018, spring **UC Berkeley** Berkeley, CA, USA
Visiting scientist at the Simons Institute for the Theory of Computing

2016, fall **LUISS Guido Carli University** Rome, IT
Visiting professor

2010–2011 **École Polytechnique, Department of Economics** Paris, FR
Post-doctoral researcher in game theory

DISTINCTIONS, GRANTS, AND FELLOWSHIPS

DISTINCTIONS AND AWARDS

2021 Long talk at ICML 2021 for [52]
2020 Nominated for the bronze medal of the CNRS

2020	Two spotlights at NeurIPS 2020 for [54, 56]
2020	Spotlight at ICLR 2020 for [62]
2018	Outstanding reviewer award at NeurIPS 2018
2017	INFORMS George Nicholson award and Applied Probability Society award finalist for [7]
2012	Best paper award at NETGCOOP 2012 for [105]
2003	Valedictorian in the Physics Department of the University of Athens

AWARDED GRANTS

2020–2024	ALIAS – <i>Adaptive learning for interacting agents and systems</i> French National Research Agency international collaboration grant (ANR PRCI), co-PI
2020–2021	DISCMAN – <i>Distributed control for multi-agent systems and networks</i> “Investissements d’avenir” project (ANR-IDEX), PI
2016–2020	ORACLESS – <i>Online resource allocation for unpredictable large-scale wireless systems</i> French National Research Agency starting grant (ANR JCJC), PI
2017–2020	GAMENET – <i>European Network for Game Theory</i> EU COST action; working group chair
2017–2018	ULTRON – <i>Ultra-low latency scheduling via online learning</i> Huawei FLAGSHIP grant, PI
2018	MixedGAN – <i>Mixed-strategy generative adversarial networks</i> CNRS exploratory grant (PEPS I3A); co-PI
2014–2017	GAGA – <i>Geometric aspects of games</i> ANR grant; co-PI
2017	HEAVY.NET – <i>Optimization and analysis of heavily congested networks</i> PGMO/PRMO grant; PI
2016	REAL.net – <i>Resource allocation in dynamic network environments</i> CNRS exploratory grant (PEPS JCJC); PI
2014–2015	GATHERING – <i>Game theory, evolution and randomness in networks and graphs</i> CNRS exploratory grant (PEPS HuMaIn); PI
2012–2013	LACODS – <i>Learning algorithms for control and optimization in distributed systems</i> MSTIC (French competitiveness pole) career development grant; PI

FELLOWSHIPS

2003–2004	Brown University Providence, RI, USA <i>Dean’s Fellow</i> (fellowship awarded to meritorious incoming graduate students)
2003–2006	Embeirikeion Foundation Athens, GR Three-year fellowship in support of mathematical studies abroad
2003	Greek State Scholarship Foundation Athens, GR Honorary fellowship for graduating valedictorian in 2003

ADVISING AND TEACHING

Post-docs	<ul style="list-style-type: none"> • Dong Quan Vu (2020–present): Online optimization for path planning (ANR ALIAS) • Olivier Bilenne (2018–2020): MIMO gradient-free optimization (ANR ORACLESS) • Amélie Héliou (2017–2018): multi-agent bandit learning (ULTRON) • Luigi Vigneri (2017–2018): scalable latency minimization (ULTRON) • Ioannis Stiakogiannakis (2014–2015): dynamic MIMO optimization (ANR NETLEARN) • Nof Abuzainab (2014–2015): game theory for cognitive radio (funded by Inria)
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Ph.D. students	<ul style="list-style-type: none"> • Yu-Guan Hsieh (2019–present; co-supervised with J. Malick, CNRS & F. Iutzeler, UGA) Topic: “<i>Extra-gradient methods for variational inequalities and machine learning</i>” • Benjamin Roussillon (2018–present; co-supervised with P. Loiseau, Inria) Topic: “<i>Classification en présence de données adverses : modèles et solutions</i>” • Kimon Antonakopoulos (2017–present; co-supervised with E. V. Belmega, ENSEA) Topic: “<i>Online learning in variational inequality problems</i>” • Bruno Donassolo (2017–2020; co-supervised with A. Legrand, CNRS & I. Fajjari, Orange) Topic: “<i>Decentralized management of applications in Fog computing environments</i>” • Alexandre Marcastel (2015–2019; co-supervised with E. V. Belmega, ENSEA) Topic: “<i>Allocation de puissance en ligne dans un réseau IoT dynamique et non-prédictible</i>”
Graduate level	Game theory, learning, optimization
Undergraduate level	Probability theory, stochastic processes; advanced algorithms
Tutorials/Schools	<p>French Days on Optimization (2020): Tutorial course on algorithmic game theory</p> <p>EPFL (2019): Tutorial course on the mathematics of data science</p> <p>Trinity College Dublin (2019): Summer school on online optimization for wireless systems</p> <p>UC Berkeley (2018): Tutorial course on real-time decision-making</p> <p>RESCOM (2012): Summer school on the applications of game theory to data networks</p>

COMMITTEES, SERVICES AND RESEARCH NETWORKS

EDITORIAL ACTIVITIES AND TECHNICAL CHAIRING

Associate editor	<p>Operations Research Letters (ORL)</p> <p>RAIRO – Operations Research</p> <p>EURO Journal on Computational Optimization (EJCO)</p> <p>Methodology and Computing in Applied Probability (MCAP)</p> <p>Journal on Dynamics and Games (JDG)</p>
Reviewer	<p><i>Advances in Applied Probability, Annals of Operations Research, Dynamic Games and Applications, Games and Economic Behavior, IEEE Access, IEEE Journal on Selected Areas in Communications, IEEE Transactions on Information Theory / Signal Processing / Communications / Wireless Communications, IEEE/ACM Transactions on Networking, Journal of Economic Theory, Journal of Optimization Theory and Applications, Mathematics of Operations Research, Mathematical Programming, Operations Research, SIAM Journal on Control and Optimization, SIAM Journal on Optimization, Theoretical Economics, ...</i></p>
PC chair	<p>Area chair for ICLR 2021</p> <p>Area chair for NeurIPS 2019–2021</p> <p>TPC co-chair for NetGCoop 2020</p> <p>TPC co-chair for WiOpt 2014</p>
PC member	NeurIPS, ICML, ICLR, COLT, AAI, SODA, IEEE CDC

COMMITTEE SERVICE AND ADMINISTRATIVE RESPONSIBILITIES

2017–present	Working group coordinator of the European Network for Game Theory (GAMENET)
2021	Member of selection committee (CoS) for an MCF position at Univ. Gustave-Eiffel, on “ <i>Sciences des données, Apprentissage, Méthode mathématiques</i> ”
2020	Member of selection committee (CoS) for an MCF position at Grenoble IAE, Univ. Grenoble-Alpes, on “ <i>Intelligence des données: de l'extraction d'information à l'aide à la décision</i> ”
2014–2020	Member of the steering committee (<i>comité de liaison</i>) of the optimization and decision theory group of the French Society for Industrial and Applied Mathematics (SMAI–MODE)
2011–2019	Graduate students liaison (<i>chargé de mission doctorants</i>) for the LIG

PHD COMMITTEES

- 2020 Xavier Fontaine, Université Paris-Saclay; *rapporteur*
Topic: “*Sequential learning and stochastic optimization of convex functions*”
- 2020 Rafael Pinot, Université Paris-Dauphine; *rapporteur*
Topic: “*On the impact of randomization on robustness in machine learning*”
- 2020 Ya-Ping Hsieh, EPFL, *rapporteur*
Topic: “*Convergence without convexity: Sampling, optimization, and games*”
- 2018 Adil Salim, TELECOM ParisTech; *examineur*
Topic: “*Random monotone operators and application to stochastic optimization*”
- 2014 Tatiana Seregina, Université de Toulouse; *examineur*
Topic: “*Applications of game theory to distributed routing and delay-tolerant networking*”

CONFERENCE ORGANIZATION

- 2020, Erice (IT) Co-organizer of the 7th workshop on “Stochastic Methods in Game Theory” (postponed)
- 2019, Chania (GR) Co-organizer of the workshop “Twenty years of the Price of Anarchy” (20PoA)
- 2018, Paris (FR) Co-organizer of the 2018 Paris Symposium on Game Theory
- 2018, Grenoble (FR) General co-chair of the 2018 French Days on Optimization and Decision Science (“*Journées SMAI-MODE 2018*”)
- 2018, Vienna (AT) Co-organizer of the 2018 Workshop on Games, Dynamics and Optimization (GDO 2018)
- 2016, Luchon (FR) General co-chair of the GEL 2016 workshop on “*Geometry, Evolution and Learning in Games*”
- 2015, Seignosse (FR) Organizer of the mini-symposium “*Games, Learning and Applications*” in SMAI 2015
- 2014, Barcelona (ES) Co-organizer of the track “*Dynamics and Learning in Games*” in IFORS 2014
- 2013, Grenoble (FR) General co-chair of the 2013 Intl. Workshop on Algorithmic Game Theory (AlgoGT 2013)
- 2013, Tsukuba (JP) Publications chair of the 11th Intl. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2013)
- 2012, Cargèse (FR) Publications chair of the 7th Intl. Conference on Performance Evaluation, Methodologies and Tools (Valuetools 2013)

PARTICIPATION IN RESEARCH PROJECTS AND NETWORKS

- 2016–2018 **LEARN** – *Learning algorithms for games and applications*
Franco-Chilean Network of Excellence, co-financed by ECOS-Sud and CONICYT
- 2013–2017 **NETLEARN** – *Learning algorithms orchestration for mobile networks resource management*
Research project financed by the French National Research Agency (ANR)
- 2012–2015 **NEWCOM#** – *Network of excellence in wireless communications*
Network of Excellence formed under FP7
- 2012–2016 **ADGO** – *Algorithms and dynamics in games and optimization*
Franco-Chilean network funded by the Chilean National Research Agency (CONICYT)
- 2012–2016 **CROWN** – *Optimal control of self-organized wireless networks*
Research project co-financed by EU and Greek national funds under the THALES initiative
- 2006–2009 **NET-REFOUND** – *Network research foundations and trends*
Specific Targeted Research Project funded by the EU under FP6

INVITED TALKS AND TUTORIALS (LAST 4 YEARS ONLY)

- 2021 **RWTH Aachen – Mathematics and Information Processing Seminar** Aachen, DE
“*Generalized Robbins-Monro algorithms for min-min and min-max optimization*”
- 2021 **Télécom ParisTech – Signal, Statistics & Learning Seminar** Paris, FR
“*Online optimization: A unified view through the lens of stochastic approximation*”

2021	TSE – MAD-Stat Seminar “Dynamics, (min-max) optimization, and games”	Toulouse, FR
2021	Montréal Machine Learning and Optimization Seminar “Spurious attractors in min-max optimization”	Montréal, CA
2020	National Technical University of Athens (CoreLab seminar) “Games, dynamics, and spurious attractors”	Athens, GR
2020	French Days on Optimization and Decision Science (invited tutorial) “Algorithmic game theory: from multi-agent optimization to online learning”	Paris, FR
2020	One World Optimization Seminar / One World Game Theory Seminar “Games, Dynamics, and Optimization”	Virtual
2020	GDO 2020 – Games, Dynamics and Optimization “Learning in time-varying games”	Rome, IT
2020	Paris Game Theory Seminar (Institut Henri Poincaré) “Learning with scarce feedback”	Paris, FR
2019	LUISS Guido Carli University “From Hannan to Nash: cycles, learning, and equilibrium”	Rome, IT
2019	CONNECT Summer School on Machine Learning for Communications “Online learning and optimization for wireless systems”	Dublin, IE
2019	NPCG 2019 – Network, Population and Congestion Games “No-regret learning in games”	Paris, FR
2019	GDO 2019 – Games, Dynamics and Optimization “Hessian barrier algorithms for linearly constrained optimization problems”	Cluj-Napoca, RO
2019	OSL 2019 – Optimization and Statistical Learning “Extra-gradient methods for variational inequalities”	Les Houches, FR
2019	École polytechnique fédérale de Lausanne (EPFL) “Going the extra (gradient) mile in GAN training”	Lausanne, Switzerland
2019	Criteo AI Lab “Applications of multi-agent learning to computational advertising”	Paris, FR
2018	PGMO Days 2018 “Learning dynamics for routing problems”	Paris, FR
2018	Trinity College “Efficient network utility maximization algorithms”	Dublin, IE
2018	National Technical University of Athens (Athens Polytechnic) “Traffic in congested networks: Equilibrium, efficiency, and dynamics”	Athens, GR
2018	GDO 2018 – Games, Dynamics and Optimization “Bandit learning in concave N-person games”	Vienna, AT
2018	Google Inc. “Accelerated and optimistic methods for learning”	Mountain View, CA, USA
2018	UC Berkeley – Simons Institute for the Theory of Computing “Online learning in games”	Berkeley, CA, USA
2017	University of Aix-Marseille “Convergence and non-convergence in game-theoretic learning”	Marseille, FR
2017	PGMO Days 2017 “The price of anarchy in high and low traffic”	Paris, FR
2017	GDR ISIS workshop on Game Theory, Optimization and Learning “Game theory meets signal processing (and feels no regret)”	Paris, FR
2017	Emergent and Self-Adaptive Systems Workshop – panelist “Design and validation of future computer systems: Theory and practice”	Lancaster, UK

2017	Lancaster University “Multi-agent online learning: Game theory meets machine learning”	Lancaster, UK
2017	Paris Game Theory Seminar (Institut Henri Poincaré) “No-regret learning in games”	Paris, FR
2017	Erice 2017 – Stochastic Methods in Game Theory “How bad is selfish routing in highly congested networks?”	Erice, IT
2017	Stanford University “Learning in games via reinforcement and regularization”	Stanford, CA, USA

PUBLICATIONS AND SCIENTIFIC OUTPUT

SOFTWARE (1)

- [1] P. Mertikopoulos, “GameSeer: visualization software for game dynamics.” Available under the GNU public license at: <http://polaris.imag.fr/panayotis.mertikopoulos/files/GameSeer.zip>, 2014.

DISSERTATIONS (3)

- [2] P. Mertikopoulos, *Online Optimization and Learning in Games: Theory and Applications*. Habilitation à Diriger des Recherches (HDR), Université Grenoble-Alpes, December 2019.
- [3] P. Mertikopoulos, *Stochastic Perturbations in Game Theory and Applications to Networks*. PhD thesis, National and Kapodistrian University of Athens, November 2010.
- [4] P. Mertikopoulos, *Gauss’s Law and Residue Calculus in the Framework of de Rham Cohomology*. Major thesis, National and Kapodistrian University of Athens, May 2003.

WORKING/SUBMITTED PAPERS (7)

- [5] Y.-G. Hsieh, F. Iutzeler, J. Malick, and P. Mertikopoulos, “Multi-agent online optimization with delays: Asynchronicity, adaptivity, and optimism.” <https://arxiv.org/abs/2012.11579>, 2020.
- [6] B. Donassolo, A. Legrand, P. Mertikopoulos, and I. Fajjari, “Online reconfiguration of IoT applications in the fog: The information-coordination trade-off.” <https://hal.inria.fr/hal-02636987/document>, May 2020.
- [7] Z. Zhou, P. Mertikopoulos, N. Bambos, P. W. Glynn, and C. Tomlin, “Multi-agent online learning with imperfect information.” Under review, 2018.
- [8] B. Duvocelle, P. Mertikopoulos, M. Staudigl, and D. Vermeulen, “Learning in time-varying games.” <https://arxiv.org/abs/1809.03066>, 2018.
- [9] E. V. Belmega, P. Mertikopoulos, R. Negrel, and L. Sanguinetti, “Online convex optimization and no-regret learning: Algorithms, guarantees and applications.” <https://arxiv.org/abs/1804.04529>, 2018.
- [10] I. Stiakogiannakis, P. Mertikopoulos, and C. Touati, “Power control via online learning in non-stationary MIMO networks.” <http://arxiv.org/abs/1503.02155>, 2018.
- [11] P. Mertikopoulos, A. L. Moustakas, and A. Tzanakaki, “Boltzmann meets Nash: Energy-efficient routing in optical networks under uncertainty.” <https://arxiv.org/abs/1605.01451>, 2016.

JOURNAL PAPERS (35)

- [12] Z. Zhou, P. Mertikopoulos, N. Bambos, P. W. Glynn, and Y. Ye, “Distributed stochastic optimization with large delays,” *Mathematics of Operations Research*, to appear.
- [13] R. I. Boş, P. Mertikopoulos, M. Staudigl, and P. T. Vuong, “Minibatch stochastic forward-backward-forward methods for solving stochastic variational inequalities,” *Stochastic Systems*, to appear.
- [14] Z. Zhou, P. Mertikopoulos, A. L. Moustakas, N. Bambos, and P. W. Glynn, “Robust power management via learning and game design,” *Operations Research*, vol. 69, pp. 331–345, January 2021.
- [15] O. Bilenne, P. Mertikopoulos, and E. V. Belmega, “Fast optimization with zeroth-order feedback in distributed multi-user MIMO systems,” *IEEE Trans. Signal Process.*, vol. 68, pp. 6085–6100, October 2020.

- [16] Z. Zhou, P. Mertikopoulos, N. Bambos, S. P. Boyd, and P. W. Glynn, "On the convergence of mirror descent beyond stochastic convex programming," *SIAM Journal on Optimization*, vol. 30, no. 1, pp. 687–716, 2020.
- [17] R. Colini-Baldeschi, R. Cominetti, P. Mertikopoulos, and M. Scarsini, "When is selfish routing bad? The price of anarchy in light and heavy traffic," *Operations Research*, vol. 68, pp. 411–434, March 2020.
- [18] A. Marcastel, E. V. Belmega, P. Mertikopoulos, and I. Fijalkow, "Online power optimization in feedback-limited, dynamic and unpredictable IoT networks," *IEEE Trans. Signal Process.*, vol. 67, pp. 2987–3000, June 2019.
- [19] I. M. Bomze, P. Mertikopoulos, W. Schachinger, and M. Staudigl, "Hessian barrier algorithms for linearly constrained optimization problems," *SIAM Journal on Optimization*, vol. 29, no. 3, pp. 2100–2127, 2019.
- [20] P. Mertikopoulos and Z. Zhou, "Learning in games with continuous action sets and unknown payoff functions," *Mathematical Programming*, vol. 173, pp. 465–507, January 2019.
- [21] P. Mertikopoulos and M. Staudigl, "Stochastic mirror descent dynamics and their convergence in monotone variational inequalities," *Journal of Optimization Theory and Applications*, vol. 179, pp. 838–867, December 2018.
- [22] P. Mertikopoulos and W. H. Sandholm, "Riemannian game dynamics," *Journal of Economic Theory*, vol. 177, pp. 315–364, September 2018.
- [23] P. Mertikopoulos and M. Staudigl, "On the convergence of gradient-like flows with noisy gradient input," *SIAM Journal on Optimization*, vol. 28, pp. 163–197, January 2018.
- [24] M. Bravo and P. Mertikopoulos, "On the robustness of learning in games with stochastically perturbed payoff observations," *Games and Economic Behavior*, vol. 103, John Nash Memorial issue, pp. 41–66, May 2017.
- [25] P. Mertikopoulos, E. V. Belmega, R. Negrel, and L. Sanguinetti, "Distributed stochastic optimization via matrix exponential learning," *IEEE Trans. Signal Process.*, vol. 65, pp. 2277–2290, May 2017.
- [26] J. Kwon and P. Mertikopoulos, "A continuous-time approach to online optimization," *Journal of Dynamics and Games*, vol. 4, pp. 125–148, April 2017.
- [27] A. S. Shafiq, P. Mertikopoulos, S. Glisic, and Y. M. Fang, "Semi-cognitive radio networks: A novel dynamic spectrum sharing mechanism," *IEEE Trans. on Cogn. Commun. Netw.*, vol. 3, pp. 97–111, March 2017.
- [28] S. D'Oro, L. Galluccio, P. Mertikopoulos, G. Morabito, and S. Palazzo, "Auction-based resource allocation in OpenFlow multi-tenant networks," *Computer Networks*, vol. 115, pp. 29–41, March 2017.
- [29] S. Perkins, P. Mertikopoulos, and D. S. Leslie, "Mixed-strategy learning with continuous action sets," *IEEE Trans. Autom. Control*, vol. 62, pp. 379–384, January 2017.
- [30] P. Mertikopoulos and W. H. Sandholm, "Learning in games via reinforcement and regularization," *Mathematics of Operations Research*, vol. 41, pp. 1297–1324, November 2016.
- [31] A. L. Moustakas, P. Mertikopoulos, and N. Bambos, "Power optimization in random wireless networks," *IEEE Trans. Inf. Theory*, vol. 62, pp. 5030–5058, September 2016.
- [32] B. Gaujal and P. Mertikopoulos, "A stochastic approximation algorithm for stochastic semidefinite programming," *Probability in the Engineering and Informational Sciences*, vol. 30, pp. 431–454, July 2016.
- [33] P. Mertikopoulos and Y. Viossat, "Imitation dynamics with payoff shocks," *International Journal of Game Theory*, vol. 45, pp. 291–320, March 2016.
- [34] P. Mertikopoulos and E. V. Belmega, "Learning to be green: Robust energy efficiency maximization in dynamic MIMO-OFDM systems," *IEEE J. Sel. Areas Commun.*, vol. 34, pp. 743 – 757, April 2016.
- [35] P. Mertikopoulos and A. L. Moustakas, "Learning in an uncertain world: MIMO covariance matrix optimization with imperfect feedback," *IEEE Trans. Signal Process.*, vol. 64, pp. 5–18, January 2016.
- [36] R. Laraki and P. Mertikopoulos, "Inertial game dynamics and applications to constrained optimization," *SIAM Journal on Control and Optimization*, vol. 53, pp. 3141–3170, October 2015.
- [37] S. D'Oro, P. Mertikopoulos, A. L. Moustakas, and S. Palazzo, "Interference-based pricing for opportunistic multi-carrier cognitive radio systems," *IEEE Trans. Wireless Commun.*, vol. 14, pp. 6536–6549, December 2015.
- [38] G. Bacci, E. V. Belmega, P. Mertikopoulos, and L. Sanguinetti, "Energy-aware competitive power allocation for heterogeneous networks under QoS constraints," *IEEE Trans. Wireless Commun.*, vol. 14, pp. 4728–4742, September 2015.

- [39] P. Coucheney, B. Gaujal, and P. Mertikopoulos, “Penalty-regulated dynamics and robust learning procedures in games,” *Mathematics of Operations Research*, vol. 40, pp. 611–633, August 2015.
- [40] P. Mertikopoulos and E. V. Belmega, “Transmit without regrets: online optimization in MIMO–OFDM cognitive radio systems,” *IEEE J. Sel. Areas Commun.*, vol. 32, pp. 1987–1999, November 2014.
- [41] R. Laraki and P. Mertikopoulos, “Higher order game dynamics,” *Journal of Economic Theory*, vol. 148, pp. 2666–2695, November 2013.
- [42] P. Mertikopoulos, E. V. Belmega, A. L. Moustakas, and S. Lasaulce, “Distributed learning policies for power allocation in multiple access channels,” *IEEE J. Sel. Areas Commun.*, vol. 30, pp. 96–106, January 2012.
- [43] C. Pawlowitsch, P. Mertikopoulos, and N. Ritt, “Neutral stability, drift, and the diversification of languages,” *Journal of Theoretical Biology*, vol. 287, pp. 1–12, July 2011.
- [44] P. Kazakopoulos, P. Mertikopoulos, A. L. Moustakas, and G. Caire, “Living at the edge: a large deviations approach to the outage MIMO capacity,” *IEEE Trans. Inf. Theory*, vol. 57, pp. 1984–2007, April 2011.
- [45] P. Mertikopoulos and A. L. Moustakas, “The emergence of rational behavior in the presence of stochastic perturbations,” *The Annals of Applied Probability*, vol. 20, pp. 1359–1388, July 2010.
- [46] P. Mertikopoulos and A. L. Moustakas, “Correlated anarchy in overlapping wireless networks,” *IEEE J. Sel. Areas Commun.*, vol. 26, pp. 1160–1169, September 2008.

CONFERENCE PAPERS (67)

- [47] W. Azizian, F. Iutzeler, J. Malick, and P. Mertikopoulos, “The last-iterate convergence rate of optimistic mirror descent in stochastic variational inequalities,” in *COLT ’21: Proceedings of the 34th Annual Conference on Learning Theory*, 2021.
- [48] A. Giannou, E. V. Vlatakis-Gkaragkounis, and P. Mertikopoulos, “Survival of the strictest: Stable and unstable equilibria under regularized learning with partial information,” in *COLT ’21: Proceedings of the 34th Annual Conference on Learning Theory*, 2021.
- [49] Y.-G. Hsieh, K. Antonakopoulos, and P. Mertikopoulos, “Adaptive learning in continuous games: Optimal regret bounds and convergence to Nash equilibrium,” in *COLT ’21: Proceedings of the 34th Annual Conference on Learning Theory*, 2021.
- [50] N. Hallak, P. Mertikopoulos, and V. Cevher, “Regret minimization in stochastic non-convex learning via a proximal-gradient approach,” in *ICML ’21: Proceedings of the 38th International Conference on Machine Learning*, 2021.
- [51] A. Héliou, M. Martin, P. Mertikopoulos, and T. Rahier, “Zeroth-order non-convex learning via hierarchical dual averaging,” in *ICML ’21: Proceedings of the 38th International Conference on Machine Learning*, 2021.
- [52] Y.-P. Hsieh, P. Mertikopoulos, and V. Cevher, “The limits of min-max optimization algorithms: Convergence to spurious non-critical sets,” in *ICML ’21: Proceedings of the 38th International Conference on Machine Learning*, 2021.
- [53] K. Antonakopoulos, E. V. Belmega, and P. Mertikopoulos, “Adaptive extra-gradient methods for min-max optimization and games,” in *ICLR ’21: Proceedings of the 2021 International Conference on Learning Representations*, 2021.
- [54] Y.-G. Hsieh, F. Iutzeler, J. Malick, and P. Mertikopoulos, “Explore aggressively, update conservatively: Stochastic extragradient methods with variable stepsize scaling,” in *NeurIPS ’20: Proceedings of the 34th International Conference on Neural Information Processing Systems*, 2020.
- [55] A. Héliou, M. Martin, P. Mertikopoulos, and T. Rahier, “Online non-convex optimization with imperfect feedback,” in *NeurIPS ’20: Proceedings of the 34th International Conference on Neural Information Processing Systems*, 2020.
- [56] L. Flokas, E. V. Vlatakis-Gkaragkounis, T. Lianas, P. Mertikopoulos, and G. Piliouras, “No-regret learning and mixed Nash equilibria: They do not mix,” in *NeurIPS ’20: Proceedings of the 34th International Conference on Neural Information Processing Systems*, 2020.
- [57] P. Mertikopoulos, N. Hallak, A. Kavis, and V. Cevher, “On the almost sure convergence of stochastic gradient descent in non-convex problems,” in *NeurIPS ’20: Proceedings of the 34th International Conference on Neural Information Processing Systems*, 2020.

- [58] A. Alacaoglu, Y. Malitsky, P. Mertikopoulos, and V. Cevher, “A new regret analysis for Adam-type algorithms,” in *ICML '20: Proceedings of the 37th International Conference on Machine Learning*, 2020.
- [59] A. Héliou, P. Mertikopoulos, and Z. Zhou, “Gradient-free online learning in continuous games with delayed rewards,” in *ICML '20: Proceedings of the 37th International Conference on Machine Learning*, 2020.
- [60] T. Lin, Z. Zhou, P. Mertikopoulos, and M. I. Jordan, “Finite-time last-iterate convergence for multi-agent learning in games,” in *ICML '20: Proceedings of the 37th International Conference on Machine Learning*, 2020.
- [61] P. Mertikopoulos, H. H. Nax, and B. S. R. Pradelski, “Quick or cheap? Breaking points in dynamic markets,” in *EC '20: Proceedings of the 21st ACM Conference on Economics and Computation*, 2020.
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