

Associate Professor
Department of Computer Science and Operations Research (DIRO)
Université de Montréal

Université de Montréal
2920 chemin de la Tour
Montreal, QC, Canada

Email: (see website)
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Education

- 12/2009 **University of California, Berkeley**, Berkeley, CA, USA
Ph.D. in Computer Science Designated Emphasis in Communication,
Computation and Statistics
Dissertation title: Discriminative Machine Learning with Structure
Committee: Michael Jordan (chair), Peter L. Bartlett, Peter J. Bickel, Dan Klein
- 5/2003 **McGill University**, Montreal, QC, Canada
B.Sc. Triple Honours in Mathematics, Physics and Computer Science
First Class Honours in Math. & Physics, First Class Honours
in Math. & CS, Anne Molson Gold Medal (best in math),
Dean's Honour List, GPA 3.96/4.00

Academic and Research Positions

- since 01/2019 **Samsung, SAIT**
VP & Lab Director SAIT AI Lab - Montreal (part-time)
- since 06/2019 **Université de Montréal**
Associate Professor Department of Computer Science
and Operations Research (DIRO)
- 08/2016 - 06/2019 *Assistant Professor*, DIRO
- 09/2013 - 08/2016 **École Normale Supérieure & INRIA**, Paris, France
Research Scientist in SIERRA project team
- 09/2011 - 08/2013 **École Normale Supérieure & INRIA**, Paris, France
Computer Science Department
Research in Paris Fellow in SIERRA project team
- 11/2008 - 08/2011 **University of Cambridge**, Cambridge, UK
Department of Engineering
Research Associate in Machine Learning Group

Professional Affiliations

Since 01/2021	<i>Associate Scientific Director, Mila</i>
Since 01/2019	<i>VP - Lab Director, Samsung, SAIT AI Lab - Montreal</i>
Since 10/2017	<i>Lab Scientist, CDL Montreal</i>
Since 07/2019	<i>CIFAR Associate Fellow, CIFAR</i>
07/2017 - 06/2019	<i>CIFAR Fellow, CIFAR</i>
12/2016 - 12/2019	<i>Faculty Fellow, Element AI</i>
Since 11/2016	<i>Regular Member, Centre de recherches mathématiques (CRM)</i>
Since 08/2016	<i>Core Academic Member, Mila</i>

Selected Awards and Distinctions

2018	Canada CIFAR AI Chair
2016	Google Focused Research Award
2015	NIPS Best Reviewer Award
2015	Google Faculty Research Award
2014	MCMCSki IV Honorable Mention Poster Prize
2013	NIPS Reviewer Award
2011-2012	Research in Paris Fellowship, City of Paris
2009-2011	Wolfson College Junior Research Fellowship, University of Cambridge
2008	UC Berkeley College of Engineering Graduate Student Prize <i>For outstanding scholarship and achievement at the College of Engineering</i>

Professional Activities

- Associate editor for TPAMI; Action editor for JMLR (2019-...) and TLMR (2022-...)
- Senior area chair for ICML 2019, AAAI 2020, IJCAI 2020, NeurIPS 2021-2022, AISTATS 2023
- Area chair for ICML 2015–2018, 2020-2021; NeurIPS 2016–2017, 2019-2020; AISTATS 2018–2021,2023, ICLR 2019, 2021-2024; CLear 2023; UAI 2020 and CVPR 2018
- Sponsorship chair for AISTATS 2018, for ICML 2020-2021, for NeurIPS 2021
- Co-organizer for the Montreal AI Symposium, 2018; Board member, 2018-...
- Workshop co-organizer for:
 - Optimization workshop at DALI 2019
 - NeurIPS international workshops: *Smooth Games Optimization and Machine Learning* in 2018 and 2019; *The Generative and Discriminative Learning Interface* in 2009.
- Program Committee member for:
 - International Conference on Monte Carlo Methods and Application, MCM 2017
 - 15th EUROPT Workshop on Advances in Continuous Optimization, 2017
- Scientific Committee Member for ISMP 2024 (Random Methods for Continuous Optimization stream of the Continuous Optimization cluster)
- Mini-symposium organizer, SIAM Conference on Optimization, 2017
- Session chair for the International Conf. on Continuous Optimization (ICCOPT), 2013.
- Grant reviewer for ERC and for Israel Science Foundation
- Peer Reviewer for major journals and conferences in:
 - machine learning (JMLR, TPAMI, Machine Learning, TKDE; NeurIPS, ICML, ICLR, COLT, UAI, AISTATS, IJCAI, EMNLP)
 - statistics (Annals of Statistics, JRSS-B, Statistics and Computing)
 - optimization (Mathematical Programming, SIOPT, MOR, JOTA)
 - computer vision (IJCV; CVPR, ECCV).

Selected University Services

- Member of scientific council of Institut Courtois (2022-...)
- Associate Scientific Director, Mila (2021-...)
- Secretary and member of the scientific council, Mila (2017-2021)
- DIRO Faculty Recruitment Committee member (2017-...), president (2018-2021)

Funding

As Principal Investigator:

- 09/2018 - 08/2024 Canada CIFAR AI Chair (\$1,220,000)
Canadian Institute for Advanced Research (CIFAR)
- 04/2017 - 03/2025 Discovery Grant (\$175,000)
Natural Sciences and Engineering Research Council of Canada (NSERC)
- 01/2019 - 12/2021 IVADO Postdoctoral Fellowship (\$140,000) - for my postdoc Sharan Vaswani
- 12/2016 - 11/2019 Google Focused Research Award (\$495,000)
Google
- 02/2015 - 04/2017 Google Faculty Research Award (\$120,000)
Google

As Co-investigator:

- 11/2023 - 08/2025 Research Contract (\$3,840,000)
Samsung SAIT
- 09/2020 - 08/2023 Research Contract (\$5,213,000)
Samsung SAIT
- 01/2020 - 12/2022 IVADO Postdoctoral Fellowship, Fellow tier (\$325,000)
- for co-advised postdoc Nicolas Loizou
- 07/2017 - 6/2020 Research Grant (\$2,107,000)
Open Philanthropy
- 04/2018 - 03/2020 Research Grant (\$200,000)
IVADO, Fundamental Research Funding Program
- 04/2018 - 03/2020 Research Grant (\$200,000)
IVADO, Fundamental Research Funding Program
- 04/2018 - 03/2020 Research Grant (\$180,000)
IVADO, Fundamental Research Funding Program

04/2018 - 03/2020	Research Grant (\$195,000) IVADO, Fundamental Research Funding Program
02/2017 - 12/2019	Research Contract (\$3,962,400) Samsung SAIT
05/2013 - 04/2016	Research Contract (\$555,000) Microsoft Research

Teaching

2017-2023 (6)	University of Montreal Advanced Structured Prediction and Optimization (IFT 6132) - grad class
2016-2023 (7)	University of Montreal Probabilistic Graphical Model (IFT 6269) - grad class
2014, 2015	École Normale Supérieure Statistical Machine Learning - 1st year master
2014, 2015	École Normale Supérieure de Cachan Programming Projects for Machine Learning - 2nd year master
2015	École Normale Supérieure de Cachan Probabilistic Graphical Models - 2nd year master
2006, 2008	University of California, Berkeley Practical Machine Learning - grad class

Postdoctoral Researcher Supervision/Co-Supervision*

→ *last known affiliation*

since 10/2021	Quentin Bertrand (UdeM)*
08/2020 - 08/2021	Reza Babanezhad (SAIL Montreal) → <i>Research Scientist (SAIL Montreal)</i>
09/2019 - 12/2021	Nicolas Loizou (UdeM)* → <i>Assistant Professor (Johns Hopkins University)</i>
07/2019 - 08/2021	Damien Scieur (SAIL Montreal) → <i>Research Scientist (SAIL Montreal)</i>
09/2019 - 11/2020	Golnoosh Farnadi (UdeM)* → <i>Assistant Professor (McGill University)</i>
01/2019 - 12/2020	Sharan Vaswani (UdeM) → <i>Assistant Professor (Simon Fraser University)</i>
09/2014 - 08/2016	Anton Osokin (MSR-Inria Joint Centre) → <i>Assistant Prof. (CS HSE, Russia)</i>

Ph.D. Student Supervision/Co-Supervision*

→ *last known affiliation*

since 09/2023	Tianyue (Helen) Zhang (UdeM)
since 09/2022	Pedram Khorsandi (UdeM)
since 09/2022	Juan Ramirez (UdeM)
since 09/2021	Vitoria Pacela (UdeM)
since 09/2021	Mansi Rankawat (UdeM)
since 09/2021	Antonio Gois (UdeM)
since 09/2018	Jose Gallego-Posada (UdeM)
since 06/2018	Sébastien Lachapelle (UdeM)
09/2019 - 02/2023	Hugo Bérard (UdeM)* → <i>Postdoctoral Fellow (UdeM)</i>
09/2017 - 12/2021	Rémi Le Priol (UdeM) → <i>Analytics Engineer (Padam Mobility)</i>
01/2017 - 08/2021	Aristide Baratin (UdeM) → <i>Research Scientist (Samsung, SAIL Montreal)</i>
01/2017 - 08/2022	Gabriel Huang (UdeM) → <i>Research Scientist (ServiceNow)</i>
09/2016 - 05/2020	Gauthier Gidel (UdeM) → <i>Assistant Professor (UdeM)</i>
07/2017 - 12/2019	Yassine Yaakoubi (École Polytechnique)* → <i>Postdoc Fellow (McGill Univ.)</i>
09/2015 - 11/2018	Rémi Leblond (ENS) → <i>Research Scientist (DeepMind)</i>
09/2014 - 09/2018	Jean-Baptiste Alayrac (ENS)* → <i>Research Scientist (DeepMind)</i>
12/2013 - 12/2016	Anastasia Podosinnikova (ENS)* → <i>Postdoctoral researcher (MIT)</i>

MSc Student Supervision/Co-Supervision*

→ *last known affiliation*

since 09/2021	Motahareh Sohrabi (UdeM)
since 09/2021	Rozhin Nobahari (UdeM)
01/2020 - 08/2021	Lewis Liu (UdeM)* → <i>PhD student (Stanford University)</i>
04/2017 - 08/2017	Rémi Le Priol (ENS Cachan) → <i>Analytics Engineer (Padam Mobility)</i>
04/2016 - 08/2016	Gauthier Gidel (ENS) → <i>Assistant Professor (UdeM)</i>
04/2014 - 08/2014	Isabella Lukasewitz (École Polytechnique) → <i>Associate Partner (McKinsey)</i>

Invited Presentations (from 2016 to 2021)

(more than 100 presentations over my career)

- 2021 Microsoft Research Workshop, MSR, Montreal
Towards Hyperparameter-Free Optimization for Modern Machine Learning
- 2021 McGill Statistics Seminars
Department of Mathematics and Statistics, McGill University, Montreal
Learning Causal Structures via Continuous Optimization
- 2020 CIFAR LMB meeting (online)
Differentiable Causal Discovery from Interventional Data
- 2019 Google Brain, Paris, France
New Perspectives on Generative Adversarial Networks
- 2019 Talk at Cégep Bois-de-Boulogne
Apprentissage automatique et données massives
- 2019 Samsung AI Forum, Seoul, Korea
New Optimization Perspectives on Generative Adversarial Networks
- 2019 The Deep Learning Summit by Re-Work, Montreal, Canada
New Optimization Perspectives on Generative Adversarial Networks
- 2019 Session “Variational Inequalities, Minimax Problems and GANs”
at ICCOPT 2019, Berlin, Germany
Negative Momentum for Improved Game Dynamics
- 2019 Gatsby Computational Neuroscience Unit, London, UK
New perspectives on GANs
- 2019 Invited Tutorial, Optimization Days 2019, HEC, Montreal
Modern Optimization for Structured Machine Learning
- 2019 Forum : Nos organisations face à la 4e révolution industrielle,
UQAM, Montreal
Éléments de contexte pour l’Intelligence Artificielle
- 2019 Optimization and Statistical Learning workshop, OSL 2019,
Les Houches, France

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- Extragradient and Negative Momentum to Optimize GANs*
- 2019 Facebook AI Research, Montreal
Extragradient and Negative Momentum to Optimize GANs
- 2019 DALI Meeting 2019, Optimization workshop, George, South Africa
Extragradient and Negative Momentum to Optimize GANs
- 2018 Optimization and Deep Learning Seminar series,
Department of Mathematics and Statistics, McGill University, Montreal
Recent Advances in Frank-Wolfe Optimization
- 2018 Element AI, Montreal
Modern Optimization for Structures Machine Learning
- 2018 DeepMind, London, UK
New Perspectives on Generative Adversarial Networks
- 2018 CIFAR LMB meeting, Montreal
Negative Momentum for Improved Game Dynamics
- 2018 Club de Math talk, University of Montreal
La borne d'Occam ou le principe le plus fondamental de l'épistémologie des sciences!
- 2018 Data Analytics Lab, ETH Zurich
Modern Optimization for Structured Machine Learning
- 2018 Journée de coconstruction de la Déclaration de Montréal IA responsable,
Montreal
Éléments de contexte pour l'Intelligence Artificielle
- 2018 Machine Learning Group, Department of Computer Science, UBC,
Montreal
Recent Advances in Frank-Wolfe Optimization
- 2018 NSF-DIMACS sponsored workshop on Optimization in Machine Learning,
Lehigh, PA, USA
Frank-Wolfe Splitting via Augmented Lagrangian Method
- 2018 TechAide AI Conference, Montreal
New Perspectives on Generative Adversarial Networks

- 2018 Session "First-order methods for large-scale convex problems,
at ISMP 2018, Bordeaux, France
Frank-Wolfe Splitting via Augmented Lagrangian Method
- 2018 CIFAR LMB meeting, Montreal
A Variational Inequality Perspective on GANs
- 2018 MPI for Intelligent Systems, Tuebingen, Germany
A Variational Inequality Perspective on GANs
- 2018 Invited lecturer for the Winter School on Optimization and Operations
Research organized by EPFL, Zinal, Switzerland
*Recent advances in large scale convex optimization and applications
to machine learning*
- 2018 Samsung SAIT, Seoul, Korea
New Perspectives on Generative Adversarial Networks
- 2018 Center for Advanced Intelligence Project (AIP), RIKEN, Tokyo, Japan
New Perspectives on Generative Adversarial Networks
- 2018 Department of Statistics, University of Oxford, Oxford, UK
New Perspectives on Generative Adversarial Networks
- 2018 Statistical Inference, Learning and Models in Data Science workshop
at the Fields Institute for Research in Mathematical Sciences, Toronto,
Canada
New Perspectives on Generative Adversarial Networks
- 2018 Workshop "l'IA fait ses classes" organized by College Sainte-Anne,
Montreal
Éléments de contexte pour l'Intelligence Artificielle
- 2018 MPI for Intelligent Systems, Tuebingen, Germany
Revisiting unsupervised learning with lessons from discriminative learning
- 2018 Machine Learning and Optimization laboratory, EPFL, Lausanne,
Switzerland
Modern Optimization for Structured Machine Learning
- 2018 SIERRA Group seminar at Inria Paris, France
New Perspectives on Generative Adversarial Networks

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- 2017 Toronto Learning Group seminar, Department of CS, University of Toronto
Toronto, Canada
Modern Optimization for Structured Machine Learning
- 2017 Discrete optimization workshop organized by the CERC
"Data Science for Real-time Decision Making",
Université de Montréal, Montreal
Recent Advances in Frank-Wolfe Optimization
- 2017 Le 65e Congrès de la CSN, Montreal
Éléments d'une 4e révolution:
Apprentissage automatique et données massives (Big Data)
- 2017 Tutte Colloquium, Combinatorics and Optimization Department,
University of Waterloo, Waterloo, Canada
Recent Advances in Frank-Wolfe Optimization
- 2017 Talk in the context of "cours d'initiation à la recherche"
organized by Cégep de Maisonneuve, Montreal
Apprentissage automatique et données massives (Big Data)
- 2017 Mini-symposium "Modern Frank-Wolfe Optimization and Applications",
2017 SIAM Conference on Optimization, Montreal
Recent Advances in Frank-Wolfe Optimization
- 2017 NIPS, Long Beach, CA, USA
On Structured Prediction Theory with Calibrated Convex Surrogate Losses
- 2017 NIPS Workshop "Learning on Distributions, Functions, Graphs and
Groups", Long Beach, CA, USA
*On Structured Prediction Theory with Calibrated Convex Surrogate
Losses*
- 2017 Optimization and Statistical Learning workshop, OSL 2017,
Les Houches, France
Recent Advances in Frank-Wolfe Optimization
- 2017 Session "Quasi-Monte Carlo, Sequential Monte Carlo and Applications
in Machine Learning" at the International Conference on Monte Carlo
Methods and Application (MCM 2017), Montreal
Optimization Tools for Adaptive MonteCarlo Integration
- 2017 CIFAR LMB meeting, Long Beach, CA, USA

- SeaRNN: training RNNs with global-local losses*
- 2017 IS Colloquium, MPI for Intelligent Systems, Tuebingen, Germany
Modern Optimization for Structured Machine Learning
- 2016 DIRO Colloquium, University of Montreal
Modern Optimization for Structured Machine Learning
- 2016 Conic and Polynomial Optimization cluster at ICCOPT 2016, Tokyo, Japan
On the Global Linear Convergence of Frank-Wolfe Optimization Variants
- 2016 CIFAR LMB meeting, Barcelona Spain
Revisiting unsupervised learning with lessons from discriminative learning
- 2016 Conference: "Rêvez votre avenir en sciences" , Collège Bois-de-Boulogne , Montreal
Apprentissage automatique et données massives (Big Data)
- 2016 Learning and Optimization workshop of DALI meeting, Sestri Levante, Italy
On the Global Linear Convergence of Frank-Wolfe Optimization Variants

Publications

Refereed Journal Publications

1. Benjamin Dubois-Taine, Sharan Vaswani, Reza Babanezhad, Mark Schmidt, Simon Lacoste-Julien, SVRG Meets AdaGrad: Painless Variance Reduction. *MLJ*, 2022.
2. Gabriel Huang, Issam Laradji, David Vazquez, Simon Lacoste-Julien, Pau Rodriguez. A Survey of Self-Supervised and Few-Shot Object Detection. *TPAMI*, 2022.
3. E. Larsen, S. Lachapelle, Y. Bengio, E. Frejinger, S. Lacoste-Julien, A. Lodi. Predicting Tactical Solutions to Operational Planning Problems under Imperfect Information, *INFORMS Journal on Computing*, 2021.
4. Yassine Yaakoubis, François Soumis, Simon Lacoste-Julien, Machine Learning in Airline Crew Pairing to Construct Initial Clusters for Dynamic Constraint Aggregation, *EURO Journal on Transportation and Logistics*, 2020.

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5. Rémi Leblond, Fabian Pedregosa, Simon Lacoste-Julien. Improved Asynchronous Parallel Optimization Analysis for Stochastic Incremental Methods. *JMLR*, 2018.
 6. Edouard Oyallon, Sergey Zagoryuko, Gabriel Huang, Nikos Komodakis, Simon Lacoste-Julien, Matthew Blaschko, Eugene Belilovsky. Scattering Networks for Hybrid Representation Learning. *TPAMI*, 2018.
 7. Jean-Baptiste Alayrac, Piotr Bojanowski, Nishant Agrawal, Josef Sivic, Ivan Laptev, Simon Lacoste-Julien. Learning from Narrated Instruction Videos. *TPAMI*, 2017.
 8. B. Taskar, S. Lacoste-Julien and M. Jordan. Structured Prediction, Dual Extragradient and Bregman Projections. *JMLR*, 2006.

Refereed Conference Publications

9. Sébastien Lachapelle, Divyat Mahajan, Ioannis Mitliagkas, Simon Lacoste-Julien, Additive Decoders for Latent Variables Identification and Cartesian-Product Extrapolation, *NeurIPS*, 2023. **(oral)**
10. Sébastien Lachapelle, Tristan Deleu, Divyat Mahajan, Ioannis Mitliagkas, Yoshua Bengio, Simon Lacoste-Julien. Synergies Between Disentanglement and Sparsity: a Multi-Task Learning Perspective, *ICML*, 2023.
11. Boris Knyazev, Doha Hwang, Simon Lacoste-Julien. Can We Scale Transformers to Predict Parameters of Diverse ImageNet Models? *ICML*, 2023.
12. Yan Zhang, David W. Zhang, Simon Lacoste-Julien, Gertjan J. Burghouts, Cees G. M. Snoek. Unlocking Slot Attention by Changing Optimal Transport Costs. *ICML*, 2023.
13. Jihye Kim, Aristide Baratin, Yan Zhang, Simon Lacoste-Julien. CrossSplit: Mitigating Label Noise Memorization through Data Splitting. *ICML*, 2023.
14. Jose Gallego-Posada, Juan Ramirez, Akram Erraqabi, Yoshua Bengio, Simon Lacoste-Julien. Controlled Sparsity via Constrained Optimization or: How I Learned to Stop Tuning Penalties and Love Constraints, *NeurIPS*, 2022.
15. Marwa El Halabi, Suraj Srinivas, Simon Lacoste-Julien. Data-Efficient Structured Pruning via Submodular Optimization, *NeurIPS*, 2022.

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16. Antonio Orvieto, Simon Lacoste-Julien, Nicolas Loizou. Dynamics of SGD with Stochastic Polyak Stepsizes: Truly Adaptive Variants and Convergence to Exact Solution, *NeurIPS*, 2022.
 17. Tristan Deleu, António Góis, Chris Emezue, Mansi Rankawat, Simon Lacoste-Julien, Stefan Bauer, Yoshua Bengio. Bayesian Structure Learning with Generative Flow Network, *UAI*, 2022.
 18. Sébastien Lachapelle, Pau Rodríguez López, Yash Sharma, Katie Everett, Rémi Le Priol, Alexandre Lacoste, Simon Lacoste-Julien. Disentanglement via Mechanism Sparsity Regularization: A New Principle for Nonlinear ICA, *CLear*, 2022.
 19. Yan Zhang, David W Zhang, Simon Lacoste-Julien, Gertjan J. Burghouts, Cees G. M. Snoek. Multiset-Equivariant Set Prediction with Approximate Implicit Differentiation, *ICLR*, 2022.
 20. Andjela Mladenovic, Avishek Joey Bose, Hugo Berard, William L. Hamilton, Simon Lacoste-Julien, Pascal Vincent, Gauthier Gidel. Online Adversarial Attacks, *ICLR*, 2022.
 21. Ignavier Ng, Sébastien Lachapelle, Nan Rosemary Ke, Simon Lacoste-Julien, Kun Zhang. On the Convergence of Continuous Constrained Optimization for Bayesian Network Structure Learning, *AISTATS*, 2022.
 22. Nicolas Loizou, Hugo Berard, Gauthier Gidel, Ioannis Mitliagkas, Simon Lacoste-Julien. Stochastic Gradient Descent-Ascent and Consensus Optimization for Smooth Games: Convergence Analysis under Expected Co-coercivity, *NeurIPS* 2021.
 23. Y Yaakoubi, F Soumis, S Lacoste-Julien. Structured Convolutional Kernel Networks for Airline Crew Scheduling, *ICML*, 2021.
 24. T Kerdreux, L Liu, S Lacoste-Julien, D Scieur. Affine Invariant Analysis of Frank-Wolfe on Strongly Convex Sets, *ICML*, 2021.
 25. Namyong Kwon, Hwidong Na, Gabriel Huang, Simon Lacoste-Julien. Repurposing Pretrained Models for Robust Out-of-domain Few-Shot Learning, *ICLR*, 2021.
 26. Aristide Baratin, Thomas George, César Laurent, R Devon Hjelm, Guillaume Lajoie, Pascal Vincent, Simon Lacoste-Julien. Implicit Regularization via Neural Feature Alignment, *AISTATS*, 2021.
 27. Rémi Le Priol, Reza Babanezhad Harikandeh, Yoshua Bengio, Simon Lacoste-Julien. An Analysis of the Adaptation Speed of Causal Models, *AISTATS*, 2021.

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28. Nicolas Loizou, Sharan Vaswani, Issam Laradji, Simon Lacoste-Julien. Stochastic Polyak Step-size for SGD: An Adaptive Learning Rate for Fast Convergence, *AISTATS*, 2021.
 29. Philippe Brouillard, Sébastien Lachapelle, Alexandre Lacoste, Simon Lacoste-Julien, Alexandre Drouin. Differentiable Causal Discovery from Interventional Data, *NeurIPS*, 2020. **(spotlight)**
 30. Avishek Joey Bose, Gauthier Gidel, Hugo Berard, Andre Cianflone, Pascal Vincent, Simon Lacoste-Julien, William L. Hamilton. Adversarial Example Games, *NeurIPS*, 2020.
 31. Nicolas Loizou, Hugo Berard, Alexia Jolicoeur-Martineau, Pascal Vincent, Simon Lacoste-Julien, Ioannis Mitliagkas. Stochastic Hamiltonian Gradient Methods for Smooth Games, *ICML*, 2020.
 32. J. Gallego, A. Vani, M. Schwarzer, S. Lacoste-Julien. GAIT: A Geometric Approach to Information Theory, *AISTATS*, 2020.
 33. W. Azizian, D. Scieur, I. Mitliagkas, S. Lacoste-Julien, G. Gidel. Accelerating Smooth Games by Manipulating Spectral Shapes, *AISTATS*, 2020.
 34. W. Azizian, I. Mitliagkas, S. Lacoste-Julien, G. Gidel. A Tight and Unified Analysis of Extragradient for a Whole Spectrum of Differentiable Games, *AISTATS*, 2020.
 35. S. Y. Meng, S. Vaswani, I. Laradji, M. Schmidt, S. Lacoste-Julien. Fast and Furious Convergence: Stochastic Second Order Methods under Interpolation, *AISTATS*, 2020.
 36. S. Lachapelle, P. Brouillard, T. Deleu, S. Lacoste-Julien. Gradient-Based Neural DAG Learning, *ICLR*, 2020.
 37. H. Berard, G. Gidel, A. Almahairi, P. Vincent, S. Lacoste-Julien. A Closer Look at the Optimization Landscapes of Generative Adversarial Networks, *ICLR*, 2020.
 38. S. Vaswani, A. Mishkin, I. Laradji, M. Schmidt, G. Gidel, S. Lacoste-Julien. Painless Stochastic Gradient: Interpolation, Line-Search, and Convergence Rates, *NeurIPS*, 2019.
 39. G. Gidel, F. Bach, S. Lacoste-Julien. Implicit Regularization of Discrete Gradient Dynamics in Deep Linear Neural Networks, *NeurIPS*, 2019.
 40. T. Chavdarova, G. Gidel, F. Fleuret, S. Lacoste-Julien. Reducing Noise in GAN Training with Variance Reduced Extragradient. *NeurIPS*, 2019.
 41. G. Gidel, H. Berard, G. Vignoud, P. Vincent, S. Lacoste-Julien. A Variational Inequality Perspective on Generative Adversarial Networks. *ICLR*, 2019.

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42. G. Gidel, R. Askari, M. Pezeshki, R. Le Priol, G. Huang, S. Lacoste-Julien, I. Mitliagkas. Negative Momentum for Improved Game Dynamics. *AISTATS*, 2019.
 43. K. Struminsky, S. Lacoste-Julien, A. Osokin. Quantifying Learning Guarantees for Convex but Inconsistent Surrogates. *NIPS*, 2018.
 44. R. Le Priol, A. Piché, S. Lacoste-Julien. Adaptive Stochastic Dual Coordinate Ascent for Conditional Random Fields. *UAI*, 2018.
 45. G. Gidel, F. Pedregosa, S. Lacoste-Julien. Frank-Wolfe Splitting via Augmented Lagrangian Method. *AISTATS*, 2018. **(oral)**
 46. R. Leblond, J.-B. Alayrac, A. Osokin, S. Lacoste-Julien. SEARNN: Training RNNs with Global-Local Losses. *ICLR*, 2018.
 47. F. Pedregosa, R. Leblond, S. Lacoste-Julien. Breaking the Nonsmooth Barrier: a Scalable Parallel Method for Composite Optimization. *NIPS*, 2017. **(spotlight)**
 48. A. Osokin, F. Bach, S. Lacoste-Julien. On Structured Prediction Theory with Calibrated Convex Surrogate Losses. *NIPS*, 2017. **(oral)**
 49. J.-B. Alayrac, J. Sivic, I. Laptev, S. Lacoste-Julien. Joint Discovery of Object States and Manipulating Actions. *ICCV*, 2017.
 50. D. Arpit, S. Jastrzebski, N. Ballas, D. Krueger, E. Bengio, M. S. Kanwal, T. Maharaj, A. Fischer, A. Courville, Y. Bengio, S. Lacoste-Julien. A Closer Look at Memorization in Deep Networks. *ICML*, 2017. **(oral)**
 51. Gauthier Gidel, Tony Jebara, Simon Lacoste-Julien. Frank-Wolfe Algorithms for Saddle Point Problem, *AISTATS*, 2017.
 52. Rémi Leblond, Fabian Pedregosa, Simon Lacoste-Julien. ASAGA: Asynchronous Parallel Saga. *AISTATS*, 2017.
 53. Pascal Germain, Francis Bach, Alexandre Lacoste, Simon Lacoste-Julien. PAC-Bayesian Theory Meets Bayesian Inference. *NIPS*, 2016.
 54. Jean-Baptiste Alayrac, Piotr Bojanowski, Nishant Agrawal, Josef Sivic, Ivan Laptev and Simon Lacoste-Julien. Unsupervised Learning from Narrated Instruction Videos. *CVPR*, 2016. **(oral)**

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55. Anton Osokin, Jean-Baptiste Alayrac, Isabella Lukasewitz, Puneet K Dokania, Simon Lacoste-Julien, Minding the Gaps for Block Frank-Wolfe Optimization of Structured SVMs. *ICML*, 2016. **(oral)**
 56. Anastasia Podosinnikova, Francis Bach, Simon Lacoste-Julien. Beyond CCA: Moment Matching for Multi-View Models. *ICML*, 2016. **(oral)**
 57. Thomas Hofmann, Aurelien Lucchi, Simon Lacoste-Julien, Brian McWilliams. Variance Reduced Stochastic Gradient Descent with Neighbors. *NIPS*, 2015.
 58. Rahul G Krishnan, Simon Lacoste-Julien, David Sontag. Barrier Frank-Wolfe for Marginal Inference. *NIPS*, 2015.
 59. Anastasia Podosinnikova, Francis Bach, Simon Lacoste-Julien. Rethinking LDA: Moment Matching for Discrete ICA. *NIPS*, 2015.
 60. Simon Lacoste-Julien, Martin Jaggi. On the Global Linear Convergence of Frank-Wolfe Optimization Variants. *NIPS*, 2015.
 61. Visesh Chari, Simon Lacoste-Julien, Ivan Laptev, Josef Sivic. On Pairwise Costs for Network Flow Multi-Object Tracking. *CVPR*, 2015.
 62. Simon Lacoste-Julien, Fredrik Lindsten, Francis Bach. Sequential Kernel Herding: Frank-Wolfe Optimization for Particle Filtering. *AISTATS*, 2015.
 63. Aaron Defazio, Francis Bach, Simon Lacoste-Julien. SAGA: A fast incremental gradient method with support for non-strongly convex composite objectives. *NIPS*, 2014.
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