

Alessandro Rudi

PROFESSOR OF PRACTICE

Digital Transformation

ALESSANDRO.RUDI@SDABOCCONI.IT

ARTICOLI SU RIVISTA SCIENTIFICA

RUDI A., MARTEAU-FEREY U., BACH F.

Finding global minima via kernel approximations

Mathematical Programming, 2025, vol.209, pp.703-784

VACHER A., MUZELLEC B., BACH F., VIALARD F., RUDI A.

Optimal Estimation of Smooth Transport Maps with Kernel SoS

SIAM Journal on Mathematics of Data Science, 2024, vol.6, no. 2, pp.311-342

AUBIN-FRANKOWSKI P., RUDI A.

Approximation of optimization problems with constraints through kernel Sum-of-Squares

Optimization, 2024, pp.1-26

MARTEAU-FEREY U., BACH F., RUDI A.

Second Order Conditions to Decompose Smooth Functions as Sums of Squares

Siam Journal on Optimization, 2024, vol.34, no. 1, pp.616-641

BACH F., RUDI A.

Exponential Convergence of Sum-of-Squares Hierarchies for Trigonometric Polynomials

Siam Journal on Optimization, 2023, vol.33, no. 3, pp.2137-2159

BROGAT-MOTTE L., RUDI A., BROUARD C., ROUSU J., D'ALCHÉ-BUC F.

Vector-Valued Least-Squares Regression under Output Regularity Assumptions

Journal of Machine Learning Research, 2022, vol.23, no. 344, pp.1-50

CILIBERTO C., ROCCHETTO A., RUDI A., WOSSNIG L.

Statistical limits of supervised quantum learning

Physical Review A, 2020, vol.102, no. 4

LIN J., RUDI A., ROSASCO L., CEVHER V.

Optimal rates for spectral algorithms with least-squares regression over Hilbert spaces

Applied and Computational Harmonic Analysis, 2020, vol.48, no. 3, pp.868-890

CILIBERTO C., RUDI A., ROSASCO L.

A General Framework for Consistent Structured Prediction with Implicit Loss Embeddings

Journal of Machine Learning Research, 2020, vol.21, no. 98, pp.1-67

RUDI A., WOSSNIG L., CILIBERTO C., ROCCHETTO A., PONTIL M., SEVERINI S.

Approximating Hamiltonian dynamics with the Nyström method

Quantum, 2020, vol.4, pp.234

LU X., RUDI A., BORGONOVO E., ROSASCO L.

Faster Kriging: Facing High-Dimensional Simulators

Operations Research, 2020, vol.68, no. 1, pp.233–249

RUDI A., DE VITO E., VERRI A., ODOE F.

Regularized Kernel Algorithms for Support Estimation

Frontiers in Applied Mathematics and Statistics, 2017, vol.3, pp.23

RUDI A., ODOE F., DE VITO E.

Geometrical and computational aspects of Spectral Support Estimation for novelty detection

Pattern Recognition Letters, 2014, vol.36, pp.107–116

PROCEEDINGS/PRESENTATIONS

RAJ A., SIMSEKLI U., RUDI A.

Efficient Sampling of Stochastic Differential Equations with Positive Semi-Definite Models

Advances in Neural Information Processing Systems 36 (NeurIPS 2023) -the Thirty-Seventh Annual Conference on Neural Information Processing Systems - December 10-16, 2023, New Orléans, Stati Uniti d'America

BEUGNOT G., MAIRAL J., RUDI A.

GloptiNets: Scalable Non-Convex Optimization with Certificates

Advances in Neural Information Processing Systems 36 (NeurIPS 2023) -the Thirty-Seventh Annual Conference on Neural Information Processing Systems - December 10-16, 2023, New Orléans, Stati Uniti d'America

BERTHIER E., CARPENTIER J., RUDI A., BACH F.

Infinite-Dimensional Sums-of-Squares for Optimal Control

Proceedings of the 61st IEEE Conference on Decision and Control - Dec. 6-9 2022, Cancún, Messico

CABANNES V., BACH F., PERCHET V., RUDI A.

Active Labeling: Streaming Stochastic Gradients

NeurIPS 2022 - The Thirty-Sixth Annual Conference on Neural Information Processing Systems, Nov. 28-Dec. 9 2022, New Orléans, Stati Uniti d'America

CANTELOBRE T., CILIBERTO C., GUEDJ B., RUDI A.

Measuring dissimilarity with diffeomorphism invariance

Proceedings of Machine Learning Research, Volume 162: International Conference on Machine Learning, July 17-23 2022, Baltimore, Maryland, Stati Uniti d'America

WOODWORTH B., BACH F., RUDI A.

Non-Convex Optimization with Certificates and Fast Rates Through Kernel Sums of Squares

Proceedings of Machine Learning Research, Volume 178: Conference on Learning Theory, July 2-5 2022, London, Gran Bretagna

CHATALIC A., SCHREUDER N., ROSASCO L., RUDI A.

Nyström Kernel Mean Embeddings

Proceedings of Machine Learning Research, Volume 162: International Conference on Machine Learning, July 17-23 2022, Baltimore, Maryland, Stati Uniti d'America

BEUGNOT G., MAIRAL J., RUDI A.

On the Benefits of Large Learning Rates for Kernel Methods

Proceedings of Machine Learning Research, Volume 178: Conference on Learning Theory, July 2-5 2022, London, Gran Bretagna

NOWAK-VILA A., RUDI A., BACH F.

On the Consistency of Max-Margin Losses

Proceedings of Machine Learning Research, Volume 151: International Conference on Artificial Intelligence and Statistics, A Virtual Conference - March 28-30, 2022

MARTEAU-FEREY U., BACH F., RUDI A.

Sampling from Arbitrary Functions via PSD Models

Proceedings of Machine Learning Research, Volume 151: International Conference on Artificial Intelligence and Statistics, A Virtual Conference - March 28-30, 2022

BEUGNOT G., MAIRAL J., RUDI A.

Beyond Tikhonov: faster learning with self-concordant losses, via iterative regularization

NeurIPS 2021 · Thirty-Fifth Annual Conference on Neural Information Processing Systems, December 6-14 2021, Virtual Conference

JÉZÉQUEL R., GAILLARD P., RUDI A.

Mixability made efficient: Fast online multiclass logistic regression

NeurIPS 2021 · Thirty-Fifth Annual Conference on Neural Information Processing Systems, December 6-14 2021, Virtual Conference

CABANNES V., PILLAUD-VIVIEN L., BACH F., RUDI A.

Overcoming the curse of dimensionality with Laplacian regularization in semi-supervised learning

NeurIPS 2021 · Thirty-Fifth Annual Conference on Neural Information Processing Systems, December 6-14 2021, Virtual Conference

RUDI A., CILIBERTO C.

PSD Representations for Effective Probability Models

NeurIPS 2021 · Thirty-Fifth Annual Conference on Neural Information Processing Systems, December 6-14 2021, Virtual Conference

VACHER A., MUZELLEC B., RUDI A., BACH F., VIALARD F.

A Dimension-free Computational Upper-bound for Smooth Optimal Transport Estimation

Proceedings of Machine Learning Research, Volume 134: Conference on Learning Theory, August 15-19 2021, Boulder, Colorado, Stati Uniti d'America

CABANNES V., BACH F., RUDI A.

Fast Rates for Structured Prediction

Proceedings of Machine Learning Research, Volume 134: Conference on Learning Theory, August 15-19 2021, Boulder, Colorado, Stati Uniti d'America

CABANNES V., BACH F., RUDI A.

Disambiguation of Weak Supervision leading to Exponential Convergence rates

Proceedings of Machine Learning Research, Volume 139: International Conference on Machine Learning, July 18-24 2021, Virtual Conference

NOWAK-VILA A., RUDI A., BACH F.

Max-margin is dead, long live max-margin!

The Thirty-Eighth International Conference on Machine Learning - July 18-24 2021, Virtual Conference

MEANTI G., CARRATINO L., ROSASCO L., RUDI A.

Kernel Methods Through the Roof: Handling Billions of Points Efficiently

NeurIPS 2020 · Thirty-Fourth Annual Conference on Neural Information Processing Systems, Dec. 6-12 2020, Virtual-Only Conference

MARTEAU-FEREY U., BACH F., RUDI A.

Non-parametric Models for Non-negative Functions

NeurIPS 2020 · Thirty-Fourth Annual Conference on Neural Information Processing Systems, Dec. 6-12 2020, Virtual-Only Conference

STERGE N., SRIPERUMBUDUR B., ROSASCO L., RUDI A., STOLTZ G.

Gain with no Pain: Efficiency of Kernel-PCA by Nyström Sampling

Proceedings of Machine Learning Research, Volume 108: International Conference on Artificial Intelligence and Statistics, August 26-28, 2020, Online

PILLAUD-VIVIEN L., BACH F., LELIÈVRE T., RUDI A., STOLTZ G.

Statistical Estimation of the Poincaré constant and Application to Sampling Multimodal Distributions

Proceedings of Machine Learning Research, Volume 108: International Conference on Artificial Intelligence and Statistics, August 26-28, 2020, Online

NOWAK-VILA A., BACH F., RUDI A.

Consistent Structured Prediction with Max-Min Margin Markov Networks

Proceedings of Machine Learning Research, Volume 119: International Conference on Machine Learning, July 13-18 2020, Virtual

JÉZÉQUEL R., GAILLARD P., RUDI A.

Efficient improper learning for online logistic regression

Proceedings of Machine Learning Research, Volume 125: Conference on Learning Theory, July 9-12 2020, Online

CABANNES V., RUDI A., BACH F.

Structured Prediction with Partial Labelling through the Infimum Loss

Proceedings of Machine Learning Research, Volume 119: International Conference on Machine Learning, July 13-18 2020, Virtual

JÉZÉQUEL R., GAILLARD P., RUDI A.

Efficient online learning with kernels for adversarial large scale problems

Advances in Neural Information Processing Systems 32 (NeurIPS 2019), Dec. 8-14 2019, Vancouver, Canada

MARTEAU-FEREY U., BACH F., RUDI A.

Globally Convergent Newton Methods for Ill-conditioned Generalized Self-concordant Losses

Advances in Neural Information Processing Systems 32 (NeurIPS 2019), Dec. 8-14 2019, Vancouver, Canada

CILIBERTO C., BACH F., RUDI A.

Localized Structured Prediction

Advances in Neural Information Processing Systems 32 (NeurIPS 2019), Dec. 8-14 2019, Vancouver, Canada

ALTSCHULER J., BACH F., RUDI A., NILES-WEED J.

Massively scalable Sinkhorn distances via the Nyström method

Advances in Neural Information Processing Systems 32 (NeurIPS 2019), Dec. 8-14 2019, Vancouver, Canada

OSTROVSKII D., RUDI A.

Affine Invariant Covariance Estimation for Heavy-Tailed Distributions

Proceedings of Machine Learning Research, Volume 99: Conference on Learning Theory, June 25-28 2019, Phoenix, Stati Uniti d'America

MARTEAU-FEREY U., OSTROVSKII D., BACH F., RUDI A.

Beyond Least-Squares: Fast Rates for Regularized Empirical Risk Minimization through Self-Concordance

Proceedings of Machine Learning Research, Volume 99: Conference on Learning Theory, June 25-28 2019, Phoenix, Stati Uniti d'America

NOWAK-VILA A., BACH F., RUDI A.

Sharp Analysis of Learning with Discrete Losses

Proceedings of Machine Learning Research, Volume 89: The 22nd International Conference on Artificial Intelligence and Statistics, April 16-18, 2019, Naha, Okinawa, Giappone

LUISE G., RUDI A., PONTIL M., CILIBERTO C.

Differential Properties of Sinkhorn Approximation for Learning with Wasserstein Distance

Advances in Neural Information Processing Systems 31 (NeurIPS 2018), Dec. 2-8 2018, Montréal, Canada

PILLAUD-VIVIEN L., RUDI A., BACH F.

Exponential Convergence of Testing Error for Stochastic Gradient Methods

Proceedings of Machine Learning Research, Volume 75: Conference On Learning Theory, July 6-9 2018, Stockholm, Svezia

CARRATINO L., RUDI A., ROSASCO L.

Learning with SGD and Random Features

Advances in Neural Information Processing Systems 31 (NeurIPS 2018), Dec. 2-8 2018, Montréal, Canada

RUDI A., CILIBERTO C., MARCONI G., ROSASCO L.

Manifold Structured Prediction

Advances in Neural Information Processing Systems 31 (NeurIPS 2018), Dec. 2-8 2018, Montréal, Canada

RUDI A., CALANDRIELLO D., CARRATINO L., ROSASCO L.

On Fast Leverage Score Sampling and Optimal Learning

Advances in Neural Information Processing Systems 31 (NeurIPS 2018), Dec. 2-8 2018, Montréal, Canada

PILLAUD-VIVIEN L., RUDI A., BACH F.

Statistical Optimality of Stochastic Gradient Descent on Hard Learning Problems through Multiple Passes

Advances in Neural Information Processing Systems 31 (NeurIPS 2018), Dec. 2-8 2018, Montréal, Canada

CILIBERTO C., RUDI A., ROSASCO L., PONTIL M.

Consistent Multitask Learning with Nonlinear Output Relations

Advances in Neural Information Processing Systems 30 (NIPS 2017), Dec. 4-9 2017, Long Beach, CA, Stati Uniti d'America

RUDI A., CARRATINO L., ROSASCO L.

FALKON: An Optimal Large Scale Kernel Method

Advances in Neural Information Processing Systems 30 (NIPS 2017), Dec. 4-9 2017, Long Beach, CA, Stati Uniti d'America

RUDI A., ROSASCO L.

Generalization Properties of Learning with Random Features

Advances in Neural Information Processing Systems 30 (NIPS 2017), Dec. 4-9 2017, Long Beach, CA, Stati Uniti d'America

CILIBERTO C., ROSASCO L., RUDI A.

A Consistent Regularization Approach for Structured Prediction

Advances in Neural Information Processing Systems 29 (NIPS 2016), Dec. 5-10 2016, Barcelona, Spagna

CAMORIANO R., ANGLES T., RUDI A., ROSASCO L.

NYTRO: When Subsampling Meets Early Stopping

Proceedings of Machine Learning Research, Volume 51: International Conference on Artificial Intelligence and Statistics, May 9-11, 2016, Cadiz, Spagna

RUDI A., CAMORIANO R., ROSASCO L.

Less is More: Nyström Computational Regularization

Advances in Neural Information Processing Systems 28 (NIPS 2015), Dec. 7-10 2015, Montréal, Canada

RUDI A., CANAS G. D., ROSASCO L.

On the Sample Complexity of Subspace Learning

Advances in Neural Information Processing Systems 26 (NIPS 2013), Dec. 5-8 2013, Lake Tahoe, Nevada, Stati Uniti d'America

PIRRI F., PIZZOLI M., RUDI A.

A general method for the point of regard estimation in 3D space

2011 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), June 20-25, 2011, Colorado Springs, Stati Uniti d'America
