Optimal scaling of discrete approximations to Langevin diffusions [209] Further and stronger analogy between sampling and optimization Langevin Monte Carlo and gradient descent [61] Bayesian System Identification using auxiliary stochastic dynamical systems [47] An efficient framework for optimal robust stochastic system design using stochastic simulation [246] Bayesian Inference and Optimal Design for the Sparse Linear Model [230] Hierarchical dictionary learning for invariant classification [22] Deep Learning A [198] Towards experimental design using a Bayesian framework for parameter identification in dynamic intracellular network models [138] Fisher Discrimination Dictionary Learning for sparse representation [287] Parametric dictionary learning using steepest descent [15] Supervised dictionary learning [171] Proximal Methods for Sparse Hierarchical Dictionary Learning [117] Kernelized Supervised Dictionary Learning [79] Dictionaries for Sparse Representation Modeling [215] Trainlets Dictionary Learning in High Dimensions [243] Learning sparsifying transforms [205] Supervised Dictionary Learning and Sparse Representation-A Review [80] Shift-invariant dictionary learning for sparse representations Extending K-SVD [169] Method of optimal directions for frame design [71] Greedy feature selection for subspace clustering [68] Efficient Algorithms for Convolutional Sparse Representations [283] Sample Complexity of Dictionary Learning and Other Matrix Factorizations [89] Shift 2D rotation invariant sparse coding for multivariate signals [24] Sparse image representation with epitomes [28] Toward Fast Transform Learning [49] Explicit Shift-Invariant Dictionary Learning [216] Point coding Sparse image representation with adaptive shiftable-kernel dictionaries [17] A shift tolerant dictionary training method [85] A split-and-merge dictionary learning algorithm for sparse representation Application to image denoising [181] Order-Preserving Factor Analysis - Application to Longitudinal Gene Expression [202] Dictionary Learning for Audio Inpainting [91] An unsupervised algorithm for hybridmorphological signal decomposition [136] Learning pattern transformation manifolds with parametric atom selection [260] Sliding window denoising K-Singular Value Decomposition and its application on rolling bearing impact fault diagnosis [286]Learning and exploiting recurrent patterns in neural data [34] New theory and methods for signals in unions of subspaces [69] Learning Recurrent Waveforms Within EEGs [36] Explicit versus implicit source estimation for blind multiple input single output system identification [35] Learning sparse representation using iterative subspace identification [86] Learning phase-invariant dictionaries [199] Compressed sensing based on dictionary learning for extracting impulse components [54] Dictionary Learning with Large Step Gradient Descent for Sparse Representations [170] Classification of transient signals using sparse representations over adaptive dictionaries [180] An Online Clustering Algorithm That Ignores Outliers Application to Hierarchical Feature Learning from Sensory Data [19]Nonparametric Bayesian data analysis [182] Non- and semi-parametric estimation of interaction in inhomogeneous point patterns [16] Bayesian Nonparametric Spatial Modeling With Dirichlet Process Mixing [81] A Bayesian Nonparametric Approach to Inference for Quantile Regression [245] Bayesian Model Averaging A Systematic Review and Conceptual Classification [74]

The Practical Implementation of Bayesian Model Selection [59]

Bayesian model selection for linear regression [65]

Bayesian evidence and model selection [132]

Bayesian model selection and model averaging [276]

Catching Up Faster in Bayesian Model Selection and Model Averaging [254]

Selection properties of type II [116]

Likelihood-free inference via classification [97]

Direct Learning of Sparse Changes in Markov Networks by Density Ratio Estimation [158]

Complex-Valued Independent Component Analysis of Natural Images [144]

A Family of Computationally Efficient and Simple Estimators for Unnormalized Statistical Models [194]

Learning Natural Image Structure with a Horizontal Product Model [137]

Hierarchical Generalized Linear Models and Frailty Models with Bayesian Nonparametric Mixing [266]

Bayesian Optimization for Likelihood-Free Inference of Simulator-Based Statistical Models [96]

Noise-Contrastive Estimation of Unnormalized Statistical Models, with Applications to Natural Image Statistics [95]

Simultaneous Estimation of Nongaussian Components and Their Correlation Structure [222]

Bregman divergence as general framework to estimate unnormalized statistical models [93]

Lambdascope another optimal implementation of the lambda-calculus [257]

Interaction Systems II [12]

Interaction Systems I The theory of optimal reductions [11]

Compiling the lambda-calculus into Interaction Combinators [166]

Frequent Pattern Mining Algorithms A Survey [2]

Grey-box model identification via evolutionary computing [248]

Sheaf and Duality Methods for Analyzing Multi-Model Systems [210]

Sheaves are the canonical data structure for sensor integration [211]

The Morse Theory of vC [25]

Deconvolution of weakly-sparse signals and dynamical-system identification by Gaussian message passing [39]

Blind topology identification for power systems [153]

Dictionary Learning-Based Subspace Structure Identification in Spectral Clustering [118]

Robust Recovery of Subspace Structures by Low-Rank Representation [155]

Extracting Coactivated Features from Multiple Data Sets [94]

Partial differential equations and stochastic methods in molecular dynamics [150]

Dissipative particle dynamics [275]

A Gentle Stochastic Thermostat for Molecular Dynamics [148]

Adaptive stochastic methods for sampling driven molecular systems [119]

Neural Responding Machine for Short-Text Conversation [233]

Simulating Microscopic Hydrodynamic Phenomena with Dissipative Particle Dynamics [111]

Langevin Dynamics with Variable Coefficients and Nonconservative Forces From Stationary States to Numerical Methods [219]

Comparative analysis between SOM [251]

The computation of averages from equilibrium and nonequilibrium Langevin molecular dynamics [149]

A direct geometrical construction of the dynamics of non-holonomic Lagrangian systems [221]

Combining Semi-Physical and Neural Network Modeling An Example of Its [73]

Grey-box modelling for nonlinear systems [103]

Distributed Stochastic Optimization via Adaptive Stochastic Gradient Descent [60]

Models for concurrency [282]

Robust estimation of marginal regression parameters in clustered data [62]

Latent Low-Rank Representation for subspace segmentation and feature extraction [156]

Boundary conditions and correlations in path integrals for quantum field theory of thermal and non-equilibrium states [106]

On the stability of non-conservative elastic systems under mixed perturbations [51]

Adaptive observers with persistency of excitation for synchronization of chaotic systems [163]

A modified robust adaptive chaos synchronization [204]

H-Infinity robust controller design for the synchronization of master-slave chaotic systems with disturbance input [267] Controllability of molecular systems [203]

Nonlinear model-based friction compensation in control systems theory and experiment. [178]

Robust control for manipulators with uncertain dynamics [235]

Optical control of molecular dynamics Molecular cannons, reflectrons, and wave-packet focusers [139]

Combining Optimal Control Theory and Molecular Dynamics for Protein Folding [10]

Robust and Efficient Constrained DFT [206]

Efficient and robust strong-field control of population transfer in sensitizer dyes with designed femtosecond laser pulses [226]

Adaptive Sliding Mode Observers in Uncertain Chaotic Cryptosystems with a Relaxed Matching Condition [204]

Synchronization of chaotic systems with unknown time delay by sliding mode observer approach and unknown delay identification [27]

Synchronization of time-delay chaotic systems in the presence of parameters uncertainties with sliding mode observer design [26]

Simplified chaotic diffusionless Lorentz attractor and its application to secure communication systems [193]

Research of chaotic synchronization based on Lorenz mode [242]

Secure communication using a modified chaotic masking scheme employing Sprott94 case a chaotic attractor [191] Stability of non-conservative elastic structures under additional kinematics constraints [52]

Robust synchronization and parameter identification on a class of uncertain chaotic systems [234]

Implementation of Ro [145]

Stabilizing DLEs system with periodic parametric perturbations using backstepping control [273]

Robust finite-time synchronization of uncertain chaotic systems application on Duffing-Holmes system and chaos gyros [179]

Synchronization between integer-order chaotic systems and a class of fractional-order chaotic system based on fuzzy sliding mode control [53]

A modified adaptive control method for synchronization of some fractional chaotic systems with unknown parameters [3]

Parameter Identification and Synchronization of Uncertain Chaotic Systems Based on Sliding Mode Observer [154]

Robust Synchronization Controller Design for a Class of Uncertain Fractional Order Chaotic Systems [270]

System identification for control [253]

Determining the form of ordinary differential equations using model inversion [280]

Model completion and validation using inversion of grey box models [279]

Dynamic self-organising map [214]

Essentials of the self-organizing map [135]

Bootstrapping Self-Organizing Maps to assess the statistical significance of local proximity [63]

Mapping model behaviour using Self-Organizing Maps [108]

Towards model evaluation and identification using Self-Organizing Maps [107]

A Monte Carlo evaluation of the moving method, k-means and two self-organising neural networks [252]

ASPECTS OF ARTIFICIAL NEURAL NETWORKS [212]

Sampling from a log-concave distribution with compact support with proximal Langevin Monte Carlo [38]

Riemann manifold langevin and hamiltonian monte carlo methods [83]

Applications of the self-organising map to reinforcement learning [241]

Fast Langevin based algorithm for MCMC in high dimensions [67]

Hamiltonian Monte Carlo acceleration using surrogate functions with random bases [294]

Self-organizing maps [255]

ML [44]

Neural networks and learning machines [104]

Initialization of Self-Organizing Maps Principal Components Versus Random Initialization. A [4]

Some Bayesian and multivariate analysis methods in statistical machine learning and applications [297]

Rational design of patchy colloids via landscape engineering [162]

Information-Geometric Markov Chain Monte Carlo Methods Using Diffusions [159]

Artificial neural networks for feature extraction and multivariate data projection [173]

Discriminant analysis neural networks [172]

Multiscale Dictionary Learning Non-Asymptotic Bounds and Robustness [168]

Machine Learning using Principal Manifolds and Mode Seeking [183]

Learning nonlinear principal manifolds by self-organising maps [289]

Agnostic System Identification for Monte Carlo Planning [247]

PRSOM [285]

Generalizing self-organizing map for categorical data [113]

Perspectives on system identification [160]

Auto-SOM Recursive Parameter Estimation for Guidance of Self-Organizing Feature Maps [98]

Topology Preservation and Cooperative Learning in Identification of Multiple Model Systems [157]

Analysis and modeling of complex systems using the self-organizing map [237]

Time series prediction with the self-organizing map A review [23]

Phase synchronization of chaotic oscillators [213]

CHAOS CONTROL AND SYNCHRONIZATION USING SYNERGETIC CONTROLLER WITH FRACTIONAL AND LINEAR EXTENDED MANIFOLD [200]

Randomized algorithms for nonlinear system identification with deep learning modification [142]

Robust Output Regulation Of Uncertain Chaotic Systems With Input Magnitude And Rate Constraints [259]

Non-linear system modelling based on constrained Volterra series estimates [239]

Wiener-Hammerstein systems modeling using diagonal Volterra kernels coefficients [125]

Fading memory and the problem of approximating nonlinear operators with Volterra series [31]

Initialization of nonlinear state-space models applied to the Wiener-Hammerstein benchmark [174]

How Correlations Influence Lasso Prediction [105]

Direct identification of the linear block in Wiener system [263]

Aggregative Modeling of Nonlinear Systems [264]

An Extended Kalman Filtering Approach to Modeling Nonlinear Dynamic Gene Regulatory Networks via Short Gene Expression Time Series [274]

Sparse Volterra and Polynomial Regression Models Recoverability and Estimation [124]

Parametric identification of parallel Wiener-Hammerstein systems [228]

Volterra-series-based nonlinear system modeling and its engineering applications A state-of-the-art review [56]

System identification using Laguerre models [265]

Nonlinear black-box models in system identification Mathematical foundations [120]

Measurement and identification of nonlinear systems consisting of linear dynamic blocks and one static nonlinearity [258]

A consideration of the discrete Volterra series [6]

Analytical Foundations of Volterra Series [32]

Uniform approximation with doubly finite Volterra series [220]

Regularization Techniques for Learning with Matrices [121]

Functional aggregation for nonparametric regression [188]

Wiener-hammerstein benchmark [227]

On the LASSO [190]

A new approach to variable selection in least squares problems [190]

Regression shrinkage and selection via the lasso a retrospective [250]

Least Angle Regression [167]

On Model Selection Consistency of Lasso [296]

Persistence in high-dimensional linear predictor selection and the virtue of overparametrization [88]

Lasso-type recovery of sparse representations for high-dimensional data [176]

Aggregative modeling of Wiener systems [143]

Kernel-based identification of Wiener-Hammerstein system [184]

Nonlinearity recovery by standard and aggregative orthogonal series algorithms [240]

Generalised Hammersteintextendash [281]

A nonparametric kernel-based approach to Hammerstein system identification [208]

Regularized nonparametric Volterra kernel estimation [29]

Convex aggregative modelling of infinite memory nonlinear systems [261]

Wiener system modelling by exponentially weighted aggregation [262]

Maximum Entropy vector kernels for MIMO [201]

Leading impulse response identification via the Elastic Net criterion [43]

A new kernel-based approach to hybrid system identification [195]

Kernel methods in system identification, machine learning and function estimation A [196]

On-line wavelet estimation of Hammerstein system nonlinearity [238]

Identification of block-oriented nonlinear systems starting from linear approximations A [229]

A Granger Causality Measure for Point Process Models of Ensemble Neural Spiking Activity [130]

NEUROSCIENCE [131]

Causality Models, Reasoning and Inference, Second Edition by Judea Pearl [82]

Information field theory [70]

Information and entropy [48]

Bayesian field theory [151]

Operator calculus for information field theory [147]

Quantization of dynamical systems and stochastic control theory [90]

Model predictive heuristic control [207]

On a non-linear semi-group attached to stochastic optimal control [189]

Pathwise Stochastic Control Problems and Stochastic HJB [41]

Stochastic Differential Games and Viscosity Solutions of Hamilton-Jacobi-Bellman-Isaacs Equations [40]

Nelsontextquotesingle [66]

On self tuning regulators [14]

Hamiltons principle in stochastic mechanics [192]

A robust parallel algorithm for combinatorial compressed sensing [177]

Hamilton-Jacobi-Bellman equations for the optimal control of the Duncan-Mortensen-Zakai equation [87]

Lagrangian variational principle in stochastic mechanics Gauge structure and stability [161]

Dynamical equations for optimal nonlinear filtering [140]

A stabilization approach for mesh-free simulations of systems developing shocks or extreme strain localizations [197]

The explicit solution of the unnormalized conditional probability equation of a one-dimensional linear system [45]

Linear optimal control systems [141]

Conjugate convex functions in optimal stochastic control [30]

Optimal limited state variable feedback controllers for linear systems [152]

Optimal stochastic linear systems with exponential performance criteria and their relation to deterministic differential games [115]

Stochastic Optimal Control [1]

Quantum state reconstruction and detection of quantum coherences on different observation levels [42]

Statistical inference for dynamical systems A review [175]

A dynamical systems approach to modeling input-output systems [46]

Identification and control of dynamical systems using neural networks [186]

Generalized synchronization, predictability, and equivalence of unidirectionally coupled dynamical systems [133]

II Homodyne Detection and Quantum-State Reconstruction [278]

Phase-space formulation of quantum mechanics and quantum-state reconstruction for physical systems with Lie-group symmetries [33]

Optical Wavefront Reconstruction Theory and Numerical Methods [164]

Linear optimal control systems [141]

An Improved Approach to Kalman Bucy Filter using the Identification Algorithm [7]

Some applications of stochastic differential equations to optimal nonlinear filtering [284]

Ergodic behaviour of stochastic parabolic equations [231]

The self-organizing map [134]

A growing Bayesian self-organizing map for data clustering [92]

A Bayesian analysis of self-organizing maps [165]

The Self-Organizing Maps Background, Theories, Extensions and Applications [290]

Latent structure analysis in pharmaceutical formulations using Kohonens self-organizing map and a Bayesian network [126]

Self-Organising Maps in Document Classification A [218]

Alan Turing The Chemical Basis of Morphogenesis [75]

Bayesian self-organising map for Gaussian mixtures [288]

NBSOM [217]

Coherence in Large-Scale Networks Dimension-Dependent Limitations of Local Feedback [18]

Model Reduction by Moment Matching for Linear and Nonlinear Systems [13]

Decentralized Stochastic Control with Partial History Sharing A [187]

A Nonstochastic Information Theory for Communication and State Estimation [185]

On Schrodingers bridge problem [76]

Optimal Steering of a Linear Stochastic System to a Final Probability Distribution, Part I [55]

Monte Carlo, harmonic approximation, and coarse-graining approaches for enhanced sampling of biomolecular structure [224]

Systems engineering-key to modern development [223]

Non-Ewald methods theory and applications to molecular systems [78]

Optimizing threshold-schedules for approximate Bayesian computation sequential Monte Carlo samplers applications to molecular systems [236]

A test for independence based on the correlation dimension [37]

Dictionary Learning and Sparse Coding on Grassmann Manifolds An Extrinsic Solution [102]

Riemannian coding and dictionary learning Kernels to the rescue [101]

Elastic functional coding of human actions From vector-fields to latent variables [8]

Riemannian Sparse Coding for Positive Definite Matrices [57]

Extrinsic Methods for Coding and Dictionary Learning on Grassmann Manifolds [100]

Sparse Coding on Symmetric Positive Definite Manifolds Using Bregman Divergences [99]

More about VLAD [72]

Riemannian Dictionary Learning and Sparse Coding for Positive Definite Matrices [58]

Heterogeneous Tensor Decomposition for Clustering via Manifold Optimization [244]

Low Rank Representation on Riemannian Manifold of Symmetric Positive Definite Matrices [77]

Sparse Coding and Dictionary Learning with Linear Dynamical Systems [114]

Nonlinear Regression on Riemannian Manifolds and Its Applications to Neuro-Image Analysis [21]

Riemannian multi-manifold modeling [271]

Kernel Sparse Subspace Clustering on Symmetric Positive Definite Manifolds [292]

Online SSVEP-based BCI [123]

A Nonlinear Regression Technique for Manifold Valued Data with Applications to Medical Image Analysis [20]

Manifold-valued Dirichlet Processes [129]

Low Rank Representation on Grassmann Manifolds An Extrinsic Perspective [268]

Elastic Functional Coding of Riemannian Trajectories [9]

Nonlinear low-rank representation on Stiefel manifolds [291]

Multi-Manifold Modeling in Non-Euclidean spaces [272]

Not all frames are equal aggregating salient features for dynamic texture classification [110]

Online kernel nonnegative matrix factorization [298]

A Grassmann framework for 4D facial shape analysis [5]

Canonical Correlation Analysis on SPD [127]

An information theoretic formulation of the Dictionary Learning and Sparse Coding Problems on Statistical Manifolds [50]

Riemannian coding for covariance interpolation in massive MIMO [64]

Localized LRR [269]

Using Riemannian geometry for SSVEP-based Brain Computer Interface [122]

Geometry-aware principal component analysis for symmetric positive definite matrices [112]

Wasserstein Dictionary Learning Optimal Transport-based unsupervised non-linear dictionary learning [225]

Improving Sparse Representation-Based Classification Using Local Principal Component Analysis [277]

Riemannian Nonlinear Mixed Effects Models Analyzing Longitudinal Deformations in Neuroimaging [128]

Neighborhood Preserved Sparse Representation for Robust Classification on Symmetric Positive Definite Matrices [293]

Nonlinear dictionary learning based deep neural networks [295]

Kernel dictionary learning [256]

Learning Parametric Dictionaries for Signals on Graphs [249]

Linearized Kernel Dictionary Learning [84]

Entropy of Overcomplete Kernel Dictionaries [109]

Markov Beta Processes for Time Evolving Dictionary Learning [232]

Dimensionality reduction and surrogate modelling for high-dimensional UQ problems [146]

References

- [1] Stochastic optimal control. In Optimal Control Theory, pages 339–362. Springer-Verlag.
- [2] Charu C. Aggarwal, Mansurul A. Bhuiyan, and Mohammad Al Hasan. Frequent pattern mining algorithms: A survey. In *Frequent Pattern Mining*, pages 19–64. Springer International Publishing, 2014.
- [3] S. K. Agrawal and S. Das. A modified adaptive control method for synchronization of some fractional chaotic systems with unknown parameters. *Nonlinear Dynamics*, 73(1-2):907–919, mar 2013.
- [4] A. A. Akinduko and Evgeny M. Mirkes. Initialization of self-organizing maps: Principal components versus random initialization. A case study. *CoRR*, abs/1210.5873, 2012.
- [5] Taleb Alashkar, Boulbaba Ben Amor, Mohamed Daoudi, and Stefano Berretti. A grassmann framework for 4d facial shape analysis. *Pattern Recognition*, 57:21–30, 2016.
- [6] P. Alper. A consideration of the discrete volterra series. *IEEE Transactions on Automatic Control*, 10(3):322–327, jul 1965.
- [7] Nguyen Dong Anh and Pham Duc Phung La Duc Viet. An improved approach to kalman bucy filter using the identification algorithm. *TECHNISCHE MECHANIK*, 28(3-4):279–288, 2008.
- [8] Rushil Anirudh, Pavan K. Turaga, Jingyong Su, and Anuj Srivastava. Elastic functional coding of human actions: From vector-fields to latent variables. In *CVPR*, pages 3147–3155. IEEE Computer Society, 2015.
- [9] Rushil Anirudh, Pavan K. Turaga, Jingyong Su, and Anuj Srivastava. Elastic functional coding of riemannian trajectories. *IEEE Trans. Pattern Anal. Mach. Intell.*, 39(5):922–936, 2017.
- [10] Yaman Arkun and Mert Gur. Combining optimal control theory and molecular dynamics for protein folding. *PLoS ONE*, 7(1):e29628, jan 2012.
- [11] Andrea Asperti and Cosimo Laneve. Interaction systems i: The theory of optimal reductions, 1993.
- [12] Andrea Asperti and Cosimo Laneve. Interaction systems II: the practice of optimal reductions. *Theor. Comput. Sci.*, 159(2):191–244, 1996.
- [13] Alessandro Astolfi. Model reduction by moment matching for linear and nonlinear systems. In *Analysis and Design of Nonlinear Control Systems*, pages 429–444. Springer Berlin Heidelberg.
- [14] K.J. Åström and B. Wittenmark. On self tuning regulators. Automatica, 9(2):185–199, mar 1973.
- [15] Mahdi Ataee, Hadi Zayyani, Massoud Babaie-Zadeh, and Christian Jutten. Parametric dictionary learning using steepest descent. In *ICASSP*, pages 1978–1981. IEEE, 2010.

- [16] A. J. Baddeley, J. Moller, and R. Waagepetersen. Non- and semi-parametric estimation of interaction in inhomogeneous point patterns. *Statistica Neerlandica*, 54(3):329–350, nov 2000.
- [17] Doru C Balcan and Michael S Lewicki. Point coding: Sparse image representation with adaptive shiftable-kernel dictionaries. In SPARS'09-Signal Processing with Adaptive Sparse Structured Representations, 2009.
- [18] Bassam Bamieh, Mihailo R. Jovanovic, Partha P. Mitra, and Stacy Patterson. Coherence in large-scale networks: Dimension-dependent limitations of local feedback. *IEEE Trans. Automat. Contr.*, 57(9):2235–2249, 2012.
- [19] Bonny Banerjee and Jayanta K. Dutta. An online clustering algorithm that ignores outliers: Application to hierarchical feature learning from sensory data. In *ICDM Workshops*, pages 505–512. IEEE Computer Society, 2013.
- [20] Monami Banerjee, Rudrasis Chakraborty, Edward Ofori, Michael S. Okun, David E. Vaillancourt, and Baba C. Vemuri. A nonlinear regression technique for manifold valued data with applications to medical image analysis. In *CVPR*, pages 4424–4432. IEEE Computer Society, 2016.
- [21] Monami Banerjee, Rudrasis Chakraborty, Edward Ofori, David E. Vaillancourt, and Baba C. Vemuri. Nonlinear regression on riemannian manifolds and its applications to neuro-image analysis. In *MICCAI* (1), volume 9349 of *Lecture Notes in Computer Science*, pages 719–727. Springer, 2015.
- [22] Leah Bar and Guillermo Sapiro. Hierarchical dictionary learning for invariant classification. In ICASSP, pages 3578–3581. IEEE, 2010.
- [23] Guilherme A Barreto. Time series prediction with the self-organizing map: A review. In *Perspectives of neural-symbolic integration*, pages 135–158. Springer, 2007.
- [24] Quentin Barthélemy, Anthony Larue, Aurélien Mayoue, David Mercier, and Jérôme I Mars. Shift & 2d rotation invariant sparse coding for multivariate signals. *IEEE Transactions on Signal Processing*, 60(4):1597–1611, 2012.
- [25] Ulrich Bauer and Herbert Edelsbrunner. The morse theory of čech and delaunay filtrations. In *Annual Symposium on Computational Geometry SOCG14*. ACM Press, 2014.
- [26] S. Beheshti and H. Khaloozadeh. Synchronization of time-delay chaotic systems in the presence of parameters uncertainties with sliding mode observer design. In *The 2nd International Conference on Control, Instrumentation and Automation*. IEEE, dec 2011.
- [27] Shirin Beheshti and Hamid Khaloozadeh. Synchronization of chaotic systems with unknown time delay by sliding mode observer approach and unknown delay identification. In 2013 21st Iranian Conference on Electrical Engineering (ICEE). IEEE, may 2013.
- [28] Louise Benoît, Julien Mairal, Francis R. Bach, and Jean Ponce. Sparse image representation with epitomes. In *CVPR*, pages 2913–2920. IEEE Computer Society, 2011.
- [29] Georgios Birpoutsoukis, Anna Marconato, John Lataire, and Johan Schoukens. Regularized nonparametric volterra kernel estimation. *Automatica*, 82:324–327, 2017.
- [30] Jean-Michel Bismut. Conjugate convex functions in optimal stochastic control. *Journal of Mathematical Analysis and Applications*, 44(2):384–404, nov 1973.
- [31] S. Boyd and L. Chua. Fading memory and the problem of approximating nonlinear operators with volterra series. *IEEE Transactions on Circuits and Systems*, 32(11):1150–1161, nov 1985.
- [32] STEPHEN BOYD, L. O. CHUA, and C. A. DESOER. Analytical foundations of volterra series. IMA Journal of Mathematical Control and Information, 1(3):243–282, 1984.
- [33] C. Brif and A. Mann. Phase-space formulation of quantum mechanics and quantum-state reconstruction for physical systems with lie-group symmetries. *Physical Review A*, 59(2):971–987, feb 1999.
- [34] Austin J Brockmeier. Learning and exploiting recurrent patterns in neural data. PhD thesis, University of Florida, 2014.
- [35] Austin J. Brockmeier and Jos' e C. Pr' incipe. Explicit versus implicit source estimation for blind multiple input single output system identification. In *ICASSP*, pages 2140–2144. IEEE, 2015.
- [36] Austin J. Brockmeier and Jos' C. Pr' incipe. Learning recurrent waveforms within eegs. *IEEE Trans. Biomed. Engineering*, 63(1):43–54, 2016.

- [37] William A Broock, José Alexandre Scheinkman, W Davis Dechert, and Blake LeBaron. A test for independence based on the correlation dimension. *Econometric reviews*, 15(3):197–235, 1996.
- [38] Nicolas Brosse, Alain Durmus, Eric Moulines, and Marcelo Pereyra. Sampling from a log-concave distribution with compact support with proximal langevin monte carlo. In *COLT*, volume 65 of *Proceedings of Machine Learning Research*, pages 319–342. PMLR, 2017.
- [39] Lukas Bruderer, Hampus Malmberg, and Hans-Andrea Loeliger. Deconvolution of weakly-sparse signals and dynamical-system identification by gaussian message passing. In *ISIT*, pages 326–330. IEEE, 2015.
- [40] Rainer Buckdahn and Juan Li. Stochastic differential games and viscosity solutions of hamilton–jacobi–bellman–isaacs equations. SIAM J. Control and Optimization, 47(1):444–475, 2008.
- [41] Rainer Buckdahn and Jin Ma. Pathwise stochastic control problems and stochastic HJB equations. SIAM J. Control and Optimization, 45(6):2224–2256, 2007.
- [42] V. Bužek, G. Adam, and G. Drobný. Quantum state reconstruction and detection of quantum coherences on different observation levels. *Physical Review A*, 54(1):804–820, jul 1996.
- [43] Giuseppe C. Calafiore, Carlo Novara, and Michele Taragna. Leading impulse response identification via the elastic net criterion. *Automatica*, 80:75–87, 2017.
- [44] Wei Cao, Wei Zhan, and ZhiQiang Chen. ML-MOEA/SOM: A manifold-learning-based multiobjective evolutionary algorithm via self-organizing maps. *International Journal of Signal Processing, Image Processing and Pattern Recognition*, 9(7):391–406, jul 2016.
- [45] Xi-Ren Cao. The explicit solution of the unnormalized conditional probability equation of a one-dimensional linear system. Systems & Control Letters, 3(1):13–22, jun 1983.
- [46] Martin Casdagli. A dynamical systems approach to modeling input-output systems. In SANTA FE INSTITUTE STUD-IES IN THE SCIENCES OF COMPLEXITY-PROCEEDINGS VOLUME-, volume 12, pages 265–265. ADDISON-WESLEY PUBLISHING CO, 1992.
- [47] Thomas A Catanach and James L Beck. Bayesian system identification using auxiliary stochastic dynamical systems. International Journal of Non-Linear Mechanics, 94:72–83, 2017.
- [48] Ariel Caticha. Information and entropy. In AIP conference proceedings, volume 954, pages 11–22. AIP, 2007.
- [49] Olivier Chabiron, François Malgouyres, Jean-Yves Tourneret, and Nicolas Dobigeon. Toward fast transform learning. *International Journal of Computer Vision*, 114(2-3):195–216, 2015.
- [50] Rudrasis Chakraborty, Monami Banerjee, Victoria Crawford, and Baba C Vemuri. An information theoretic formulation of the dictionary learning and sparse coding problems on statistical manifolds. arXiv preprint arXiv:1604.06939, 2016.
- [51] Noël Challamel, François Nicot, Jean Lerbet, and Félix Darve. On the stability of non-conservative elastic systems under mixed perturbations. Revue européenne de génie civil, 13(3):347–367, mar 2009.
- [52] Noël Challamel, François Nicot, Jean Lerbet, and Félix Darve. Stability of non-conservative elastic structures under additional kinematics constraints. *Engineering Structures*, 32(10):3086–3092, oct 2010.
- [53] Diyi Chen, Runfan Zhang, Julien Clinton Sprott, and Xiaoyi Ma. Synchronization between integer-order chaotic systems and a class of fractional-order chaotic system based on fuzzy sliding mode control. *Nonlinear Dynamics*, 70(2):1549–1561, aug 2012.
- [54] Xuefeng Chen, Zhaohui Du, Jimeng Li, Xiang Li, and Han Zhang. Compressed sensing based on dictionary learning for extracting impulse components. *Signal Processing*, 96:94–109, 2014.
- [55] Yongxin Chen, Tryphon T. Georgiou, and Michele Pavon. Optimal steering of a linear stochastic system to a final probability distribution, part I. *IEEE Trans. Automat. Contr.*, 61(5):1158–1169, 2016.
- [56] C.M. Cheng, Z.K. Peng, W.M. Zhang, and G. Meng. Volterra-series-based nonlinear system modeling and its engineering applications: A state-of-the-art review. *Mechanical Systems and Signal Processing*, 87:340–364, mar 2017.
- [57] Anoop Cherian and Suvrit Sra. Riemannian sparse coding for positive definite matrices. In *Computer Vision ECCV* 2014, pages 299–314. Springer International Publishing, 2014.
- [58] Anoop Cherian and Suvrit Sra. Riemannian dictionary learning and sparse coding for positive definite matrices. *IEEE Trans. Neural Netw. Learning Syst.*, 28(12):2859–2871, 2017.

- [59] Hugh Chipman, Edward I. George, and Robert E. McCulloch. The practical implementation of bayesian model selection. In *Institute of Mathematical Statistics Lecture Notes Monograph Series*, pages 65–116. Institute of Mathematical Statistics, 2001.
- [60] Ashok Cutkosky and Robert Busa-Fekete. Distributed stochastic optimization via adaptive stochastic gradient descent. *CoRR*, abs/1802.05811, 2018.
- [61] Arnak S. Dalalyan. Further and stronger analogy between sampling and optimization: Langevin monte carlo and gradient descent. In *COLT*, volume 65 of *Proceedings of Machine Learning Research*, pages 678–689. PMLR, 2017.
- [62] Somnath Datta and James D Beck. Robust estimation of marginal regression parameters in clustered data. *Statistical Modelling: An International Journal*, 14(6):489–501, sep 2014.
- [63] Eric de Bodt and Marie Cottrell. Bootstrapping self-organizing maps to assess the statistical significance of local proximity. In ESANN, pages 245–254, 2000.
- [64] Alexis Decurninge, Maxime Guillaud, and Dirk T. M. Slock. Riemannian coding for covariance interpolation in massive MIMO frequency division duplex systems. In SAM, pages 1–5. IEEE, 2016.
- [65] Miguel de Benito Delgado and Philipp Wacker. Bayesian model selection for linear regression. arXiv preprint arXiv:1512.04823, 2015.
- [66] D. Dohrn and F. Guerra. Nelsons stochastic mechanics on riemannian manifolds. Lettere al Nuovo Cimento, 22(4):121–127, may 1978.
- [67] Alain Durmus, Gareth O Roberts, Gilles Vilmart, Konstantinos C Zygalakis, et al. Fast langevin based algorithm for mcmc in high dimensions. *The Annals of Applied Probability*, 27(4):2195–2237, 2017.
- [68] Eva L. Dyer, Aswin C. Sankaranarayanan, and Richard G. Baraniuk. Greedy feature selection for subspace clustering. Journal of Machine Learning Research, 14(1):2487–2517, 2013.
- [69] Eva Lauren Dyer. New theory and methods for signals in unions of subspaces. PhD thesis, 2014.
- [70] Torsten Enaylin. Information field theory. AIP Conference Proceedings, 1553(1):184–191, 2013.
- [71] Kjersti Engan, Sven Ole Aase, and John Håkon Husøy. Method of optimal directions for frame design. In *ICASSP*, pages 2443–2446. IEEE Computer Society, 1999.
- [72] Masoud Faraki, Mehrtash Tafazzoli Harandi, and Fatih Murat Porikli. More about VLAD: A leap from euclidean to riemannian manifolds. In CVPR, pages 4951–4960. IEEE Computer Society, 2015.
- [73] U. Forssell and P. Lindskog. Combining semi-physical and neural network modeling: An example of ts usefulness. *IFAC Proceedings Volumes*, 30(11):767–770, jul 1997.
- [74] Tiago M. Fragoso, Wesley Bertoli, and Francisco Louzada. Bayesian model averaging: A systematic review and conceptual classification. *International Statistical Review*, dec 2017.
- [75] W. J. Freeman. Alan turing: The chemical basis of morphogenesis. In *Brain Theory*, pages 235–236. Springer Berlin Heidelberg, 1986.
- [76] Shmuel Friedland. On schrodinger's bridge problem. 208, 01 2017.
- [77] Yifan Fu, Junbin Gao, Xia Hong, and David Tien. Low rank representation on riemannian manifold of symmetric positive definite matrices. In *SDM*, pages 316–324. SIAM, 2015.
- [78] Ikuo Fukuda and Haruki Nakamura. Non-ewald methods: theory and applications to molecular systems. *Biophysical reviews*, 4(3):161–170, 2012.
- [79] Mehrdad J. Gangeh. Kernelized Supervised Dictionary Learning. PhD thesis, University of Waterloo, Ontario, Canada, 2013.
- [80] Mehrdad J. Gangeh, Ahmed K. Farahat, Ali Ghodsi, and Mohamed S. Kamel. Supervised dictionary learning and sparse representation-a review. CoRR, abs/1502.05928, 2015.
- [81] Alan E Gelfand, Athanasios Kottas, and Steven N MacEachern. Bayesian nonparametric spatial modeling with dirichlet process mixing. *Journal of the American Statistical Association*, 100(471):1021–1035, sep 2005.
- [82] Jayanta K. Ghosh. Causality: Models, reasoning and inference, second edition by judea pearl. *International Statistical Review*, 79(2):289–290, aug 2011.

- [83] Mark Girolami and Ben Calderhead. Riemann manifold langevin and hamiltonian monte carlo methods. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 73(2):123–214, 2011.
- [84] Alona Golts and Michael Elad. Linearized kernel dictionary learning. J. Sel. Topics Signal Processing, 10(4):726–739, 2016.
- [85] B Vikrham Gowreesunker and Ahmed H Tewfik. A shift tolerant dictionary training method. In SPARS'09-Signal Processing with Adaptive Sparse Structured Representations, 2009.
- [86] B. Vikrham Gowreesunker and Ahmed H. Tewfik. Learning sparse representation using iterative subspace identification. *IEEE Trans. Signal Processing*, 58(6):3055–3065, 2010.
- [87] Fausto Gozzi and Andrzej Świech. Hamilton-jacobi-bellman equations for the optimal control of the duncan-mortensen-zakai equation. *Journal of Functional Analysis*, 172(2):466–510, 2000.
- [88] Eitan Greenshtein and YaAcov Ritov. Persistence in high-dimensional linear predictor selection and the virtue of overparametrization. *Bernoulli*, 10(6):971–988, dec 2004.
- [89] R'emi Gribonval, Rodolphe Jenatton, Francis R. Bach, Martin Kleinsteuber, and Matthias Seibert. Sample complexity of dictionary learning and other matrix factorizations. *IEEE Trans. Information Theory*, 61(6):3469–3486, 2015.
- [90] Francesco Guerra and Laura M. Morato. Quantization of dynamical systems and stochastic control theory. *Physical Review D*, 27(8):1774–1786, apr 1983.
- [91] Corentin Guichaoua. Dictionary learning for audio inpainting. HAL Robotics [cs. RO]. 2012, 2012.
- [92] Xiao-Lian Guo, Hai-Ying Wang, and David H. Glass. A growing bayesian self-organizing map for data clustering. In 2012 International Conference on Machine Learning and Cybernetics. IEEE, jul 2012.
- [93] Michael Gutmann and Junichiro Hirayama. Bregman divergence as general framework to estimate unnormalized statistical models. *CoRR*, abs/1202.3727, 2012.
- [94] Michael Gutmann and Aapo Hyv" arinen. Extracting coactivated features from multiple data sets. In *ICANN* (1), volume 6791 of *Lecture Notes in Computer Science*, pages 323–330. Springer, 2011.
- [95] Michael Gutmann and Aapo Hyv" arinen. Noise-contrastive estimation of unnormalized statistical models, with applications to natural image statistics. *Journal of Machine Learning Research*, 13:307–361, 2012.
- [96] Michael U. Gutmann and Jukka Corander. Bayesian optimization for likelihood-free inference of simulator-based statistical models. *Journal of Machine Learning Research*, 17:125:1–125:47, 2016.
- [97] Michael U. Gutmann, Ritabrata Dutta, Samuel Kaski, and Jukka Corander. Likelihood-free inference via classification. Statistics and Computing, 28(2):411–425, 2018.
- [98] Karin Haese and Geoffrey J. Goodhill. Auto-som: Recursive parameter estimation for guidance of self-organizing feature maps. *Neural Computation*, 13(3):595–619, 2001.
- [99] Mehrtash Tafazzoli Harandi, Richard I. Hartley, Brian C. Lovell, and Conrad Sanderson. Sparse coding on symmetric positive definite manifolds using bregman divergences. *IEEE Trans. Neural Netw. Learning Syst.*, 27(6):1294–1306, 2016.
- [100] Mehrtash Tafazzoli Harandi, Richard I. Hartley, Chunhua Shen, Brian C. Lovell, and Conrad Sanderson. Extrinsic methods for coding and dictionary learning on grassmann manifolds. *International Journal of Computer Vision*, 114(2-3):113–136, 2015.
- [101] Mehrtash Tafazzoli Harandi and Mathieu Salzmann. Riemannian coding and dictionary learning: Kernels to the rescue. In CVPR, pages 3926–3935. IEEE Computer Society, 2015.
- [102] Mehrtash Tafazzoli Harandi, Conrad Sanderson, Chunhua Shen, and Brian C. Lovell. Dictionary learning and sparse coding on grassmann manifolds: An extrinsic solution. In *ICCV*, pages 3120–3127. IEEE Computer Society, 2013.
- [103] Jan Hauth. Grey-box modelling for nonlinear systems. 2008.
- [104] Simon S Haykin, Simon S Haykin, Simon S Haykin, and Simon S Haykin. Neural networks and learning machines, volume 3. Pearson Upper Saddle River, NJ, USA:, 2009.

- [105] Mohamed Hebiri and Johannes Lederer. How correlations influence lasso prediction. *IEEE Trans. Information Theory*, 59(3):1846–1854, 2013.
- [106] Peter A Henning and R Fauser. Boundary conditions and correlations in path integrals for quantum field theory of thermal and non-equilibrium states. arXiv preprint hep-ph/9605372, 1996.
- [107] M. Herbst and M. C. Casper. Towards model evaluation and identification using self-organizing maps. *Hydrology and Earth System Sciences Discussions*, 4(6):3953–3978, nov 2007.
- [108] M. Herbst, H. V. Gupta, and M. C. Casper. Mapping model behaviour using self-organizing maps. *Hydrology and Earth System Sciences Discussions*, 5(6):3517–3555, dec 2008.
- [109] Paul Honeine. Entropy of overcomplete kernel dictionaries. CoRR, abs/1411.0161, 2014.
- [110] Sungeun Hong, Jongbin Ryu, and Hyun S. Yang. Not all frames are equal: aggregating salient features for dynamic texture classification. *Multidimensional Systems and Signal Processing*, 29(1):279–298, nov 2016.
- [111] P. J Hoogerbrugge and J. M. V. A Koelman. Simulating microscopic hydrodynamic phenomena with dissipative particle dynamics. *Europhysics Letters (EPL)*, 19(3):155–160, jun 1992.
- [112] Inbal Horev, Florian Yger, and Masashi Sugiyama. Geometry-aware principal component analysis for symmetric positive definite matrices. *Machine Learning*, 106(4):493–522, 2017.
- [113] Chung-Chian Hsu. Generalizing self-organizing map for categorical data. *IEEE Trans. Neural Networks*, 17(2):294–304, 2006.
- [114] Wen-bing Huang, Fuchun Sun, Le-le Cao, Deli Zhao, Huaping Liu, and Mehrtash Harandi. Sparse coding and dictionary learning with linear dynamical systems. In CVPR, pages 3938–3947. IEEE Computer Society, 2016.
- [115] David Jacobson. Optimal stochastic linear systems with exponential performance criteria and their relation to deterministic differential games. *IEEE Transactions on Automatic control*, 18(2):124–131, 1973.
- [116] Tahira Jamil and Cajo J. F. ter Braak. Selection properties of type II maximum likelihood (empirical bayes) in linear models with individual variance components for predictors. *Pattern Recognition Letters*, 33(9):1205–1212, 2012.
- [117] Rodolphe Jenatton, Julien Mairal, Guillaume Obozinski, and Francis R. Bach. Proximal methods for sparse hierarchical dictionary learning. In *ICML*, pages 487–494. Omnipress, 2010.
- [118] Liping Jing, Michael K. Ng, and Tieyong Zeng. Dictionary learning-based subspace structure identification in spectral clustering. *IEEE Trans. Neural Netw. Learning Syst.*, 24(8):1188–1199, 2013.
- [119] Andrew Jones and Ben Leimkuhler. Adaptive stochastic methods for sampling driven molecular systems. *The Journal of Chemical Physics*, 135(8):084125, aug 2011.
- [120] Anatoli Juditsky, Håkan Hjalmarsson, Albert Benveniste, Bernard Delyon, Lennart Ljung, Jonas Sj" oberg, and Qinghua Zhang. Nonlinear black-box models in system identification: Mathematical foundations. *Automatica*, 31(12):1725–1750, 1995.
- [121] Sham M. Kakade, Shai Shalev-Shwartz, and Ambuj Tewari. Regularization techniques for learning with matrices. Journal of Machine Learning Research, 13:1865–1890, 2012.
- [122] Emmanuel K Kalunga, Sylvain Chevallier, and Quentin Barthélemy. Using riemannian geometry for ssvep-based brain computer interface. arXiv preprint arXiv:1501.03227, 2015.
- [123] Emmanuel K. Kalunga, Sylvain Chevallier, Quentin Barthelemy, Karim Djouani, Eric Monacelli, and Yskandar Hamam. Online ssvep-based BCI using riemannian geometry. *Neurocomputing*, 191:55–68, 2016.
- [124] Vassilis Kekatos and Georgios B. Giannakis. Sparse volterra and polynomial regression models: Recoverability and estimation. *IEEE Trans. Signal Processing*, 59(12):5907–5920, 2011.
- [125] Alain Y. Kibangou and G' erard Favier. Wiener-hammerstein systems modeling using diagonal volterra kernels coefficients. *IEEE Signal Process. Lett.*, 13(6):381–384, 2006.
- [126] Shingo Kikuchi, Yoshinori Onuki, Akihito Yasuda, Yoshihiro Hayashi, and Kozo Takayama. Latent structure analysis in pharmaceutical formulations using kohonen's self-organizing map and a bayesian network. *Journal of pharmaceutical sciences*, 100(3):964–975, 2011.

- [127] Hyunwoo J. Kim, Nagesh Adluru, Barbara B. Bendlin, Sterling C. Johnson, Baba C. Vemuri, and Vikas Singh. Canonical correlation analysis on SPD(n) manifolds. In *Riemannian Computing in Computer Vision*, pages 69–100. Springer International Publishing, 2016.
- [128] Hyunwoo J. Kim, Nagesh Adluru, Heemanshu Suri, Baba C. Vemuri, Sterling C. Johnson, and Vikas Singh. Riemannian nonlinear mixed effects models: Analyzing longitudinal deformations in neuroimaging. In CVPR, pages 5777–5786. IEEE Computer Society, 2017.
- [129] Hyunwoo J. Kim, Jia Xu, Baba C. Vemuri, and Vikas Singh. Manifold-valued dirichlet processes. In *ICML*, volume 37 of *JMLR Workshop and Conference Proceedings*, pages 1199–1208. JMLR.org, 2015.
- [130] Sanggyun Kim, David Putrino, Soumya Ghosh, and Emery N. Brown. A granger causality measure for point process models of ensemble neural spiking activity. *PLoS Computational Biology*, 7(3), 2011.
- [131] R. T. Knight. NEUROSCIENCE: Neural networks debunk phrenology. Science, 316(5831):1578–1579, jun 2007.
- [132] Kevin H. Knuth, Michael Habeck, Nabin K. Malakar, M. Asim Mubeen, and Ben Placek. Bayesian evidence and model selection. *Digital Signal Processing*, 47:50–67, 2015.
- [133] Lj Kocarev and U Parlitz. Generalized synchronization, predictability, and equivalence of unidirectionally coupled dynamical systems. *Physical review letters*, 76(11):1816, 1996.
- [134] Teuvo Kohonen. The self-organizing map. Proceedings of the IEEE, 78(9):1464–1480, 1990.
- [135] Teuvo Kohonen. Essentials of the self-organizing map. Neural Networks, 37:52-65, 2013.
- [136] Matthieu Kowalski and Thomas Rodet. An unsupervised algorithm for hybrid/morphological signal decomposition. In 2011 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). IEEE, may 2011.
- [137] Urs K" oster, Jussi T. Lindgren, Michael Gutmann, and Aapo Hyv" arinen. Learning natural image structure with a horizontal product model. In *ICA*, volume 5441 of *Lecture Notes in Computer Science*, pages 507–514. Springer, 2009.
- [138] Andrei Kramer and Nicole Radde. Towards experimental design using a bayesian framework for parameter identification in dynamic intracellular network models. In *ICCS*, volume 1 of *Procedia Computer Science*, pages 1645–1653. Elsevier, 2010.
- [139] Jeffrey L. Krause, Robert M. Whitnell, Kent R. Wilson, YiJing Yan, and Shaul Mukamel. Optical control of molecular dynamics: Molecular cannons, reflectrons, and wave-packet focusers. *The Journal of Chemical Physics*, 99(9):6562–6578, nov 1993.
- [140] H.J Kushner. Dynamical equations for optimal nonlinear filtering. *Journal of Differential Equations*, 3(2):179–190, apr 1967.
- [141] Huibert Kwakernaak and Raphael Sivan. Linear optimal control systems, volume 1. Wiley-interscience New York, 1972.
- [142] Erick De la Rosa and Wen Yu. Randomized algorithms for nonlinear system identification with deep learning modification. *Inf. Sci.*, 364-365:197–212, 2016.
- [143] Szymon Lagosz, Przemyslaw Sliwinski, and Pawel Wachel. Aggregative modeling of wiener systems. In MMAR, pages 375–378. IEEE, 2016.
- [144] Valero Laparra, Michael Gutmann, Jes'us Malo, and Aapo Hyv"arinen. Complex-valued independent component analysis of natural images. In *ICANN* (2), volume 6792 of *Lecture Notes in Computer Science*, pages 213–220. Springer, 2011.
- [145] S Larptwee and W San-Um. Implementation of rössler chaotic system through inherent exponential nonlinearity of a diode with two-channel chaotic synchronization applications. In *Intelligent Control and Information Processing* (ICICIP), 2013 Fourth International Conference on, pages 787–791. IEEE, 2013.
- [146] Christos Lataniotis, Stefano Marelli, and Bruno Sudret. Dimensionality reduction and surrogate modelling for highdimensional uq problems. In 2nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2017). ETH Zurich, 2017.
- [147] Reimar H. Leike and Torsten A. Enßlin. Operator calculus for information field theory. *Physical Review E*, 94(5), nov 2016.

- [148] Ben Leimkuhler, Emad Noorizadeh, and Florian Theil. A gentle stochastic thermostat for molecular dynamics. *Journal of Statistical Physics*, 135(2):261–277, apr 2009.
- [149] Benedict Leimkuhler, Charles Matthews, and Gabriel Stoltz. The computation of averages from equilibrium and nonequilibrium langevin molecular dynamics. *IMA Journal of Numerical Analysis*, page dru056, jan 2015.
- [150] Tony Lelievre and Gabriel Stoltz. Partial differential equations and stochastic methods in molecular dynamics. Acta Numerica, 25:681–880, 2016.
- [151] Jörg C Lemm. Bayesian field theory. JHU Press, 2003.
- [152] W Levine, T Johnson, and Michael Athans. Optimal limited state variable feedback controllers for linear systems. *IEEE Transactions on Automatic Control*, 16(6):785–793, 1971.
- [153] Xiao Li, H. Vincent Poor, and Anna Scaglione. Blind topology identification for power systems. In *SmartGridComm*, pages 91–96. IEEE, 2013.
- [154] Li lian Huang and Lei Lin. Parameter identification and synchronization of uncertain chaotic systems based on sliding mode observer. *Mathematical Problems in Engineering*, 2013:1–5, 2013.
- [155] Guangcan Liu, Zhouchen Lin, Shuicheng Yan, Ju Sun, Yong Yu, and Yi Ma. Robust recovery of subspace structures by low-rank representation. *IEEE Trans. Pattern Anal. Mach. Intell.*, 35(1):171–184, 2013.
- [156] Guangcan Liu and Shuicheng Yan. Latent low-rank representation for subspace segmentation and feature extraction. In ICCV, pages 1615–1622. IEEE Computer Society, 2011.
- [157] Jianbo Liu and Dragan Djurdjanovic. Topology preservation and cooperative learning in identification of multiple model systems. *IEEE Trans. Neural Networks*, 19(12):2065–2072, 2008.
- [158] Song Liu, John A. Quinn, Michael U. Gutmann, Taiji Suzuki, and Masashi Sugiyama. Direct learning of sparse changes in markov networks by density ratio estimation. *Neural Computation*, 26(6):1169–1197, 2014.
- [159] Samuel Livingstone and Mark A. Girolami. Information-geometric markov chain monte carlo methods using diffusions. Entropy, 16(6):3074–3102, 2014.
- [160] Lennart Ljung. Perspectives on system identification. Annual Reviews in Control, 34(1):1–12, 2010.
- [161] Maria I. Loffredo and Laura M. Morato. Lagrangian variational principle in stochastic mechanics: Gauge structure and stability. *Journal of Mathematical Physics*, 30(2):354–360, feb 1989.
- [162] Andrew W. Long and Andrew L. Ferguson. Rational design of patchy colloids via landscape engineering. *Molecular Systems Design & Engineering*, 3(1):49–65, 2018.
- [163] Antonio Loría, Elena Panteley, and Arturo Zavala-Río. Adaptive observers with persistency of excitation for synchronization of chaotic systems. *IEEE Transactions on Circuits and Systems I: Regular Papers*, 56(12):2703–2716, 2009.
- [164] D. Russell Luke, James V. Burke, and Richard G. Lyon. Optical wavefront reconstruction: Theory and numerical methods. SIAM Review, 44(2):169–224, 2002.
- [165] Stephen P Luttrell. A bayesian analysis of self-organizing maps. Neural Computation, 6(5):767–794, 1994.
- [166] Ian Mackie and Jorge Sousa Pinto. Compiling the lambda-calculus into interaction combinators. 1998.
- [167] David Madigan. Least angle regression. In Springer Series in Statistics, pages 385–479. Springer New York.
- [168] Mauro Maggioni, Stanislav Minsker, and Nate Strawn. Multiscale dictionary learning: Non-asymptotic bounds and robustness. *Journal of Machine Learning Research*, 17:2:1–2:51, 2016.
- [169] Boris Mailh'e, Sylvain Lesage, R'emi Gribonval, Fr'ed'eric Bimbot, and Pierre Vandergheynst. Shift-invariant dictionary learning for sparse representations: Extending K-SVD. In *EUSIPCO*, pages 1–5. IEEE, 2008.
- [170] Boris Mailh' and Mark D. Plumbley. Dictionary learning with large step gradient descent for sparse representations. In LVA/ICA, volume 7191 of Lecture Notes in Computer Science, pages 231–238. Springer, 2012.
- [171] Julien Mairal, Jean Ponce, Guillermo Sapiro, Andrew Zisserman, and Francis R Bach. Supervised dictionary learning. In Advances in neural information processing systems, pages 1033–1040, 2009.

- [172] J. Mao and A.K. Jain. Discriminant analysis neural networks. In *IEEE International Conference on Neural Networks*. IEEE.
- [173] Jianchang Mao and Anil K. Jain. Artificial neural networks for feature extraction and multivariate data projection. *IEEE Trans. Neural Networks*, 6(2):296–317, 1995.
- [174] Anna Marconato, Jonas Sjöberg, and Johan Schoukens. Initialization of nonlinear state-space models applied to the wiener-hammerstein benchmark. *Control Engineering Practice*, 20(11):1126–1132, 2012.
- [175] Kevin McGoff, Sayan Mukherjee, and Natesh Pillai. Statistical inference for dynamical systems: A review. Statistics Surveys, 9(0):209–252, 2015.
- [176] Nicolai Meinshausen and Bin Yu. Lasso-type recovery of sparse representations for high-dimensional data. Technical report, dec 2006.
- [177] Rodrigo Mendoza-Smith, Jared Tanner, and Florian Wechsung. A robust parallel algorithm for combinatorial compressed sensing. CoRR, abs/1704.09012, 2017.
- [178] Gina Miller. Nonlinear model-based friction compensation in control systems: theory and experiment. Queen's University at Kingston, 1998.
- [179] Sammaneh Mohammadpour and Tahereh Binazadeh. Robust finite-time synchronization of uncertain chaotic systems: application on duffing-holmes system and chaos gyros. Systems Science & Control Engineering, 6(1):28–36, jan 2018.
- [180] Daniela I Moody, Steven P Brumby, Kary L Myers, and Norma H Pawley. Classification of transient signals using sparse representations over adaptive dictionaries. In *Independent Component Analyses, Wavelets, Neural Networks*, Biosystems, and Nanoengineering IX, volume 8058, page 805804. International Society for Optics and Photonics, 2011.
- [181] Subhadip Mukherjee and Chandra Sekhar Seelamantula. A split-and-merge dictionary learning algorithm for sparse representation: Application to image denoising. In *DSP*, pages 310–315. IEEE, 2014.
- [182] Peter Müller and Fernando A Quintana. Nonparametric bayesian data analysis. Statistical science, pages 95–110, 2004.
- [183] Jonas Nordhaug Myhre. Machine learning using principal manifolds and mode seeking. 2016.
- [184] Grzegorz Mzyk and Pawel Wachel. Kernel-based identification of wiener-hammerstein system. *Automatica*, 83:275–281, 2017.
- [185] Girish N. Nair. A nonstochastic information theory for communication and state estimation. *IEEE Trans. Automat. Contr.*, 58(6):1497–1510, 2013.
- [186] Kumpati S Narendra and Kannan Parthasarathy. Identification and control of dynamical systems using neural networks. *IEEE Transactions on neural networks*, 1(1):4–27, 1990.
- [187] Ashutosh Nayyar, Aditya Mahajan, and Demosthenis Teneketzis. Decentralized stochastic control with partial history sharing: A common information approach. *IEEE Trans. Automat. Contr.*, 58(7):1644–1658, 2013.
- [188] Arkadii Nemirovski and Anatoli Juditsky. Functional aggregation for nonparametric regression. *The Annals of Statistics*, 28(3):681–712, may 2000.
- [189] Makiko Nisio. On a non-linear semi-group attached to stochastic optimal control. *Publications of the Research Institute* for Mathematical Sciences, 12(2):513–537, 1976.
- [190] Michael R. Osborne, Brett Presnell, and Berwin A. Turlach. On the LASSO and its dual. *Journal of Computational and Graphical Statistics*, 9(2):319–337, jun 2000.
- [191] Alpana Pandey and Shikha Dahate. Secure communication using a modified chaotic masking scheme employing sprott94 case a chaotic attractor. In 2014 2nd International Conference on Emerging Technology Trends in Electronics, Communication and Networking. IEEE, dec 2014.
- [192] Michele Pavon. Hamiltons principle in stochastic mechanics. Journal of Mathematical Physics, 36(12):6774–6800, 1995.
- [193] Ihsan Pehlivan and Yilmaz Uyaroglu. Simplified chaotic diffusionless lorentz attractor and its application to secure communication systems. *IET Communications*, 1(5):1015–1022, 2007.
- [194] Miika Pihlaja, Michael Gutmann, and Aapo Hyv" arinen. A family of computationally efficient and simple estimators for unnormalized statistical models. *CoRR*, abs/1203.3506, 2012.

- [195] Gianluigi Pillonetto. A new kernel-based approach to hybrid system identification. Automatica, 70:21–31, 2016.
- [196] Gianluigi Pillonetto, Francesco Dinuzzo, Tianshi Chen, Giuseppe De Nicolao, and Lennart Ljung. Kernel methods in system identification, machine learning and function estimation: A survey. *Automatica*, 50(3):657–682, 2014.
- [197] N. Pimprikar, S. Sarkar, G. Devaraj, D. Roy, and S.R. Reid. A stabilization approach for mesh-free simulations of systems developing shocks or extreme strain localizations. *International Journal of Mechanical Sciences*, 91:18–32, feb 2015.
- [198] Nicholas Polson and Vadim Sokolov. Deep learning: A bayesian perspective. CoRR, abs/1706.00473, 2017.
- [199] Graeme Pope, C' eline Aubel, and Christoph Studer. Learning phase-invariant dictionaries. In *ICASSP*, pages 5979–5983. IEEE, 2013.
- [200] Morteza Pourmehdi, Abolfazl Ranjbar Noei, and Jalil Sadati. Chaos control and synchronization using synergetic controller with fractional and linear extended manifold. *IIUM Engineering Journal*, 17(1):115–126, 2016.
- [201] Giulia Prando, Alessandro Chiuso, and Gianluigi Pillonetto. Maximum entropy vector kernels for MIMO system identification. *Automatica*, 79:326–339, 2017.
- [202] Arnau Tibau Puig, Ami Wiesel, Aimee K. Zaas, Christopher W. Woods, Geoffrey S. Ginsburg, Gilles Fleury, and Alfred O. Hero III. Order-preserving factor analysis - application to longitudinal gene expression. *IEEE Trans. Signal Processing*, 59(9):4447–4458, 2011.
- [203] Viswanath Ramakrishna, Murti V Salapaka, Mohammed Dahleh, Herschel Rabitz, and Anthony Peirce. Controllability of molecular systems. *Physical Review A*, 51(2):960, 1995.
- [204] R. Raoufi and H. Khaloozadeh. A modifid robust adaptive chaos synchronization. In 2004 International Conference on Signal Processing and Communications, 2004. SPCOM 04. IEEE.
- [205] Saiprasad Ravishankar and Yoram Bresler. Learning sparsifying transforms. *IEEE Transactions on Signal Processing*, 61(5):1072–1086, 2013.
- [206] Jan Řezáč, Bernard Lévy, Isabelle Demachy, and Aurélien de la Lande. Robust and efficient constrained DFT molecular dynamics approach for biochemical modeling. *Journal of Chemical Theory and Computation*, 8(2):418–427, jan 2012.
- [207] J. Richalet, A. Rault, J.L. Testud, and J. Papon. Model predictive heuristic control. *Automatica*, 14(5):413–428, sep 1978.
- [208] Riccardo Sven Risuleo, Giulio Bottegal, and Håkan Hjalmarsson. A nonparametric kernel-based approach to hammer-stein system identification. *Automatica*, 85:234–247, 2017.
- [209] Gareth O. Roberts and Jeffrey S. Rosenthal. Optimal scaling of discrete approximations to langevin diffusions. *Journal* of the Royal Statistical Society: Series B (Statistical Methodology), 60(1):255–268, feb 1998.
- [210] Michael Robinson. Sheaf and duality methods for analyzing multi-model systems. In *Recent Applications of Harmonic Analysis to Function Spaces, Differential Equations, and Data Science*, pages 653–703. Springer International Publishing, 2017.
- [211] Michael Robinson. Sheaves are the canonical data structure for sensor integration. *Information Fusion*, 36:208–224, 2017.
- [212] THORSTEINN S RÖGNVALDSSON. Aspects of artificial neural networks.
- [213] Michael G Rosenblum, Arkady S Pikovsky, and Jürgen Kurths. Phase synchronization of chaotic oscillators. *Physical review letters*, 76(11):1804, 1996.
- [214] Nicolas Rougier and Yann Boniface. Dynamic self-organising map. Neurocomputing, 74(11):1840–1847, may 2011.
- [215] Ron Rubinstein, Alfred M. Bruckstein, and Michael Elad. Dictionaries for sparse representation modeling. *Proceedings* of the IEEE, 98(6):1045–1057, 2010.
- [216] Cristian Rusu, Bogdan Dumitrescu, and Sotirios A. Tsaftaris. Explicit shift-invariant dictionary learning. *IEEE Signal Processing Letters*, 21(1):6–9, jan 2014.
- [217] Gonzalo A. Ruz and Duc Truong Pham. NBSOM: the naive bayes self-organizing map. Neural Computing and Applications, 21(6):1319–1330, 2012.

- [218] Jyri Saarikoski, Jorma Laurikkala, Kalervo J" arvelin, and Martti Juhola. Self-organising maps in document classification: A comparison with six machine learning methods. In *ICANNGA* (1), volume 6593 of *Lecture Notes in Computer Science*, pages 260–269. Springer, 2011.
- [219] Matthias Sachs, Benedict J. Leimkuhler, and Vincent Danos. Langevin dynamics with variable coefficients and non-conservative forces: From stationary states to numerical methods. *Entropy*, 19(12):647, 2017.
- [220] Irwin W. Sanderg. Uniform approximation with doubly finite volterra series. *IEEE Trans. Signal Processing*, 40(6):1438–1442, 1992.
- [221] Willy Sarlet. A direct geometrical construction of the dynamics of non-holonomic lagrangian systems. Extracta Mathematicae, 11(1):202–212, 1996.
- [222] Hiroaki Sasaki, Michael Gutmann, Hayaru Shouno, and Aapo Hyv" arinen. Simultaneous estimation of nongaussian components and their correlation structure. *Neural Computation*, 29(11), 2017.
- [223] Kenneth J. Schlager. Systems engineering-key to modern development. *IRE Transactions on Engineering Management*, EM-3(3):64–66, jul 1956.
- [224] Tamar Schlick. Monte carlo, harmonic approximation, and coarse-graining approaches for enhanced sampling of biomolecular structure. F1000 biology reports, 1, 2009.
- [225] Morgan A. Schmitz, Matthieu Heitz, Nicolas Bonneel, Fred Maurice Ngolè Mboula, David Coeurjolly, Marco Cuturi, Gabriel Peyr'e, and Jean-Luc Starck. Wasserstein dictionary learning: Optimal transport-based unsupervised non-linear dictionary learning. *CoRR*, abs/1708.01955, 2017.
- [226] Johannes Schneider, Matthias Wollenhaupt, Andreas Winzenburg, Tim Bayer, Jens Köhler, Rüdiger Faust, and Thomas Baumert. Efficient and robust strong-field control of population transfer in sensitizer dyes with designed femtosecond laser pulses. *Physical Chemistry Chemical Physics*, 13(19):8733, 2011.
- [227] Johan Schoukens and Lennart Ljung. Wiener-hammerstein benchmark, 2009.
- [228] Maarten Schoukens, Anna Marconato, Rik Pintelon, Gerd Vandersteen, and Yves Rolain. Parametric identification of parallel wiener-hammerstein systems. *CoRR*, abs/1708.06543, 2017.
- [229] Maarten Schoukens and Koen Tiels. Identification of block-oriented nonlinear systems starting from linear approximations: A survey. Automatica, 85:272–292, 2017.
- [230] Matthias W. Seeger. Bayesian inference and optimal design for the sparse linear model. *Journal of Machine Learning Research*, 9:759–813, 2008.
- [231] Jan Seidler. Ergodic behaviour of stochastic parabolic equations. Czechoslovak Mathematical Journal, 47(2):277–316, jun 1997.
- [232] Amar Shah and Zoubin Ghahramani. Markov beta processes for time evolving dictionary learning. In *UAI*. AUAI Press, 2016.
- [233] Lifeng Shang, Zhengdong Lu, and Hang Li. Neural responding machine for short-text conversation. In ACL (1), pages 1577–1586. The Association for Computer Linguistics, 2015.
- [234] Liquin Shen and Mao Wang. Robust synchronization and parameter identification on a class of uncertain chaotic systems. Chaos, Solitons & Fractals, 38(1):106–111, 2008.
- [235] Rahmat Shoureshi, Michael Momot, and M. D. Roesler. Robust control for manipulators with uncertain dynamics. *Automatica*, 26(2):353–359, 1990.
- [236] Daniel Silk, Saran Filippi, and Michael PH Stumpf. Optimizing threshold-schedules for approximate bayesian computation sequential monte carlo samplers: applications to molecular systems. arXiv preprint arXiv:1210.3296, 2012.
- [237] Olli Simula, Juha Vesanto, Esa Alhoniemi, and Jaakko Hollmén. Analysis and modeling of complex systems using the self-organizing map. Neuro-fuzzy techniques for intelligent information systems, pages 3–22, 1999.
- [238] Przemysław Śliwiński. On-line wavelet estimation of hammerstein system nonlinearity. *International Journal of Applied Mathematics and Computer Science*, 20(3):513–523, 2010.
- [239] Przemysław Śliwiński, Anna Marconato, Paweł Wachel, and Georgios Birpoutsoukis. Non-linear system modelling based on constrained volterra series estimates. *IET Control Theory & Applications*, 11(15):2623–2629, oct 2017.

- [240] Przemysław Śliwiński, Paweł Wachel, and Szymon Lagosz. Nonlinearity recovery by standard and aggregative orthogonal series algorithms. Applied Stochastic Models in Business and Industry, jan 2018.
- [241] Andrew James Smith. Applications of the self-organising map to reinforcement learning. *Neural Networks*, 15(8-9):1107–1124, 2002.
- [242] Yanyong Su, Huaming Wu, and Aijun Liu. Research of chaotic synchronization based on lorenz mode. In 2010 2nd International Conference on Signal Processing Systems. IEEE, jul 2010.
- [243] Jeremias Sulam, Boaz Ophir, Michael Zibulevsky, and Michael Elad. Trainlets: Dictionary learning in high dimensions. *IEEE Trans. Signal Processing*, 64(12):3180–3193, 2016.
- [244] Yanfeng Sun, Junbin Gao, Xia Hong, Bamdev Mishra, and Baocai Yin. Heterogeneous tensor decomposition for clustering via manifold optimization. *IEEE Trans. Pattern Anal. Mach. Intell.*, 38(3):476–489, 2016.
- [245] Matthew A. Taddy and Athanasios Kottas. A bayesian nonparametric approach to inference for quantile regression. Journal of Business & Economic Statistics, 28(3):357–369, jul 2010.
- [246] Alexandros A. Taflanidis and James L. Beck. An efficient framework for optimal robust stochastic system design using stochastic simulation. *Computer Methods in Applied Mechanics and Engineering*, 198(1):88–101, nov 2008.
- [247] Erik Talvitie. Agnostic system identification for monte carlo planning. In AAAI, pages 2986–2992. AAAI Press, 2015.
- [248] K.C. Tan and Y. Li. Grey-box model identification via evolutionary computing. *Control Engineering Practice*, 10(7):673–684, jul 2002.
- [249] Dorina Thanou, David I. Shuman, and Pascal Frossard. Learning parametric dictionaries for signals on graphs. *IEEE Trans. Signal Processing*, 62(15):3849–3862, 2014.
- [250] Robert Tibshirani. Regression shrinkage and selection via the lasso: a retrospective. Journal of the Royal Statistical Society: Series B (Statistical Methodology), 73(3):273–282, apr 2011.
- [251] Mauricio Pedroza Torres, Efrain Guillermo Mariotte Parra, Jabid Eduardo Quiroga, and Yecid Alfonso Muñoz. Comparative analysis between SOM networks and bayesian networks applied to structural failure detection. *TECCIENCIA*, 11(20):47–55, feb 2016.
- [252] Eric W. Tyree and J. A. Long. A monte carlo evaluation of the moving method, k-means and two self-organising neural networks. *Pattern Anal. Appl.*, 1(2):79–90, 1998.
- [253] P Van den Hof, Xavier Bombois, and Lecture Notes DISC Course. System identification for control. 2004.
- [254] Tim van Erven, Peter Grunwald, and Steven de Rooij. Catching up faster in bayesian model selection and model averaging. In NIPS, pages 417–424. Curran Associates, Inc., 2007.
- [255] Marc M Van Hulle. Self-organizing maps. In Handbook of Natural Computing, pages 585–622. Springer, 2012.
- [256] Hien Van Nguyen, Vishal M Patel, Nasser M Nasrabadi, and Rama Chellappa. Kernel dictionary learning. In Acoustics, Speech and Signal Processing (ICASSP), 2012 IEEE International Conference on, pages 2021–2024. IEEE, 2012.
- [257] Vincent van Oostrom, Kees-Jan van de Looij, and Marijn Zwitserlood. Lambdascope: another optimal implementation of the lambda-calculus. In Workshop on Algebra and Logic on Programming Systems (ALPS), 2004.
- [258] Gerd Vandersteen and Johan Schoukens. Measurement and identification of nonlinear systems consisting of linear dynamic blocks and one static nonlinearity. *IEEE Trans. Automat. Contr.*, 44(6):1266–1271, 1999.
- [259] Carlos M.N. Velosa and Kouamana Bousson. Robust output regulation of uncertain chaotic systems with input magnitude and rate constraints. *Acta Mechanica et Automatica*, 9(4), jan 2015.
- [260] Elif Vural and Pascal Frossard. Learning pattern transformation manifolds with parametric atom selection. In Sampling Theory and Applications (SAMPTA), number EPFL-CONF-163450, 2011.
- [261] Pawel Wachel. Convex aggregative modelling of infinite memory nonlinear systems. Int. J. Control, 89(8):1613–1621, 2016.
- [262] Pawel Wachel. Wiener system modelling by exponentially weighted aggregation. *Int. J. Control*, 90(11):2480–2489, 2017.
- [263] Paweł Wachel and Grzegorz Mzyk. Direct identification of the linear block in wiener system. *International Journal of Adaptive Control and Signal Processing*, 30(1):93–105, 2016.

- [264] Pawel Wachel and Przemyslaw Sliwinski. Aggregative modeling of nonlinear systems. *IEEE Signal Process. Lett.*, 22(9):1482–1486, 2015.
- [265] B. Wahlberg. System identification using laguerre models. *IEEE Transactions on Automatic Control*, 36(5):551–562, may 1991.
- [266] Stephen G. Walker and Bani K. Mallick. Hierarchical generalized linear models and frailty models with bayesian nonparametric mixing. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 59(4):845–860, nov 1997.
- [267] Bo Wang, Peng Shi, Hamid Reza Karimi, and Jun Wang. H-infinity robust controller design for the synchronization of master-slave chaotic systems with disturbance input. *Modeling, Identification and Control*, 33(1):27, 2012.
- [268] Boyue Wang, Yongli Hu, Junbin Gao, Yanfeng Sun, and Baocai Yin. Low rank representation on grassmann manifolds: An extrinsic perspective. *CoRR*, abs/1504.01807, 2015.
- [269] Boyue Wang, Yongli Hu, Junbin Gao, Yanfeng Sun, and Baocai Yin. Localized LRR on grassmann manifolds: An extrinsic view. *CoRR*, abs/1705.06599, 2017.
- [270] Lin Wang and Chunzhi Yang. Robust synchronization controller design for a class of uncertain fractional order chaotic systems. *Discrete Dynamics in Nature and Society*, 2016, 2016.
- [271] Xu Wang, Konstantinos Slavakis, and Gilad Lerman. Riemannian multi-manifold modeling. arXiv preprint arXiv:1410.0095, 2014.
- [272] Xu Wang, Konstantinos Slavakis, and Gilad Lerman. Multi-manifold modeling in non-euclidean spaces. In AISTATS, volume 38 of JMLR Workshop and Conference Proceedings. JMLR.org, 2015.
- [273] Zhen Wang, Xiaojian Xi, and Wei Sun. Stabilizing dles system with periodic parametric perturbations using back-stepping control. In *Information Science and Technology (ICIST)*, 2013 International Conference on, pages 102–105. IEEE, 2013.
- [274] Zidong Wang, Xiaohui Liu, Yurong Liu, Jinling Liang, and Veronica Vinciotti. An extended kalman filtering approach to modeling nonlinear dynamic gene regulatory networks via short gene expression time series. *IEEE/ACM Trans. Comput. Biology Bioinform.*, 6(3):410–419, 2009.
- [275] Patrick B Warren. Dissipative particle dynamics. Current opinion in colloid & interface science, 3(6):620–624, 1998.
- [276] Larry Wasserman. Bayesian model selection and model averaging. Journal of mathematical psychology, 44(1):92–107, 2000.
- [277] Chelsea Weaver and Naoki Saito. Improving sparse representation-based classification using local principal component analysis. CoRR, abs/1607.01059, 2016.
- [278] Dirk-Gunnar Welsch, Werner Vogel, and Tomáš Opatrný. Ii homodyne detection and quantum-state reconstruction. In *Progress in Optics*, volume 39, pages 63–211. Elsevier, 1999.
- [279] Bill Whiten. Model completion and validation using inversion of grey box models. ANZIAM Journal, 54:187, may 2013.
- [280] Bill Whiten. Determining the form of ordinary differential equations using model inversion. ANZIAM Journal, 54:329, aug 2014.
- [281] Adrian Wills and Brett Ninness. Generalised hammerstein-wiener system estimation and a benchmark application. Control Engineering Practice, 20(11):1097–1108, nov 2012.
- [282] Glynn Winskel and Mogens Nielsen. Models for concurrency. Citeseer, 1994.
- [283] Brendt Wohlberg. Efficient algorithms for convolutional sparse representations. *IEEE Trans. Image Processing*, 25(1):301–315, 2016.
- [284] W Murray Wonham. Some applications of stochastic differential equations to optimal nonlinear filtering. *Journal of the Society for Industrial and Applied Mathematics, Series A: Control*, 2(3):347–369, 1964.
- [285] Sitao Wu and Tommy W. S. Chow. PRSOM: a new visualization method by hybridizing multidimensional scaling and self-organizing map. *IEEE Trans. Neural Networks*, 16(6):1362–1380, 2005.

- [286] Honggang Yang, Huibin Lin, and Kang Ding. Sliding window denoising k-singular value decomposition and its application on rolling bearing impact fault diagnosis. *Journal of Sound and Vibration*, 421:205–219, 2018.
- [287] Meng Yang, Lei Zhang, Xiangchu Feng, and David Zhang. Fisher discrimination dictionary learning for sparse representation. In 2011 International Conference on Computer Vision. IEEE, nov 2011.
- [288] H. Yin and N.M. Allinson. Bayesian self-organising map for gaussian mixtures. *IEE Proceedings Vision, Image, and Signal Processing*, 148(4):234, 2001.
- [289] Hujun Yin. Learning nonlinear principal manifolds by self-organising maps. In *Principal manifolds for data visualization* and dimension reduction, pages 68–95. Springer, 2008.
- [290] Hujun Yin. The self-organizing maps: Background, theories, extensions and applications. In *Computational Intelligence:* A Compendium, volume 115 of Studies in Computational Intelligence, pages 715–762. Springer, 2008.
- [291] Ming Yin, Junbin Gao, and Yi Guo. Nonlinear low-rank representation on stiefel manifolds. *Electronics Letters*, 51(10):749–751, may 2015.
- [292] Ming Yin, Yi Guo, Junbin Gao, Zhaoshui He, and Shengli Xie. Kernel sparse subspace clustering on symmetric positive definite manifolds. In *CVPR*, pages 5157–5164. IEEE Computer Society, 2016.
- [293] Ming Yin, Shengli Xie, Yi Guo, Junbin Gao, and Yun Zhang. Neighborhood preserved sparse representation for robust classification on symmetric positive definite matrices. CoRR, abs/1601.07336, 2016.
- [294] Cheng Zhang, Babak Shahbaba, and Hongkai Zhao. Hamiltonian monte carlo acceleration using surrogate functions with random bases. *Statistics and Computing*, 27(6):1473–1490, 2017.
- [295] Hui Zhang, Huaping Liu, Rui Song, and Fuchun Sun. Nonlinear dictionary learning based deep neural networks. In *IJCNN*, pages 3771–3776. IEEE, 2016.
- [296] Peng Zhao and Bin Yu. On model selection consistency of lasso. *Journal of Machine Learning Research*, 7:2541–2563, 2006.
- [297] Wen Zhou. Some Bayesian and multivariate analysis methods in statistical machine learning and applications. PhD thesis, Iowa State University, 2014.
- [298] Fei Zhu and Paul Honeine. Online kernel nonnegative matrix factorization. Signal Processing, 131:143–153, 2017.