# P-A Absil

List of Publications by Year
in descending order

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|---|---|---|---|
| 65<br>papers | 3,477<br>citations | 257450<br>24<br>h-index | 214800<br>47<br>g-index |
| 65<br>all docs | 65<br>docs citations | 65<br>times ranked | 2033<br>citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Optimization Algorithms on Matrix Manifolds. , 2008, , . | | 1,058 |
| 2 | Trust-Region Methods on Riemannian Manifolds. Foundations of Computational Mathematics, 2007, 7, 303-330. | 2.5 | 272 |
| 3 | Riemannian Geometry of Grassmann Manifolds with a View on Algorithmic Computation. Acta Applicandae Mathematicae, 2004, 80, 199-220. | 1.0 | 241 |
| 4 | Projection-like Retractions on Matrix Manifolds. SIAM Journal on Optimization, 2012, 22, 135-158. | 2.0 | 161 |
| 5 | <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi mathvariant="script">H</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math>-optimal model reduction of MIMO systems. Applied Mathematics Letters, 2008, 21, 1267-1273. | 2.7 | 128 |
| 6 | Low-Rank Optimization on the Cone of Positive Semidefinite Matrices. SIAM Journal on Optimization, 2010, 20, 2327-2351. | 2.0 | 117 |
| 7 | Two algorithms for orthogonal nonnegative matrix factorization with application to clustering. Neurocomputing, 2014, 141, 15-25. | 5.9 | 111 |
| 8 | A Broyden Class of Quasi-Newton Methods for Riemannian Optimization. SIAM Journal on Optimization, 2015, 25, 1660-1685. | 2.0 | 104 |
| 9 | Global rates of convergence for nonconvex optimization on manifolds. IMA Journal of Numerical Analysis, 2019, 39, 1-33. | 2.9 | 103 |
| 10 | On the stable equilibrium points of gradient systems. Systems and Control Letters, 2006, 55, 573-577. | 2.3 | 96 |
| 11 | Best Low Multilinear Rank Approximation of Higher-Order Tensors, Based on the Riemannian Trust-Region Scheme. SIAM Journal on Matrix Analysis and Applications, 2011, 32, 115-135. | 1.4 | 81 |
| 12 | Low-rank matrix completion via preconditioned optimization on the Grassmann manifold. Linear Algebra and Its Applications, 2015, 475, 200-239. | 0.9 | 58 |
| 13 | A Gradient-Descent Method for Curve Fitting on Riemannian Manifolds. Foundations of Computational Mathematics, 2012, 12, 49-73. | 2.5 | 57 |
| 14 | Differential-geometric Newton method for the best rank-(R 1, R 2, R 3) approximation of tensors. Numerical Algorithms, 2009, 51, 179-194. | 1.9 | 47 |
| 15 | On the largest principal angle between random subspaces. Linear Algebra and Its Applications, 2006, 414, 288-294. | 0.9 | 45 |
| 16 | A Riemannian symmetric rank-one trust-region method. Mathematical Programming, 2015, 150, 179-216. | 2.4 | 45 |
| 17 | Jacobi Algorithm for the Best Low Multilinear Rank Approximation of Symmetric Tensors. SIAM Journal on Matrix Analysis and Applications, 2013, 34, 651-672. | 1.4 | 38 |
| 18 | Robust Low-Rank Matrix Completion by Riemannian Optimization. SIAM Journal of Scientific Computing, 2016, 38, S440-S460. | 2.8 | 34 |

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|---|---------|----|-----------|
| 19 | Quotient Geometry with Simple Geodesics for the Manifold of Fixed-Rank Positive-Semidefinite Matrices. SIAM Journal on Matrix Analysis and Applications, 2020, 41, 171-198. | 1.4 | 33 |
| 20 | Joint Diagonalization on the Oblique Manifold for Independent Component Analysis. , 0, , . | | 32 |
| 21 | $\mathcal{H}_2$-Optimal Model Reduction with Higher-Order Poles. SIAM Journal on Matrix Analysis and Applications, 2010, 31, 2738-2753. | 1.4 | 32 |
| 22 | A Riemannian BFGS Method Without Differentiated Retraction for Nonconvex Optimization Problems. SIAM Journal on Optimization, 2018, 28, 470-495. | 2.0 | 32 |
| 23 | Low-rank retractions: a survey and new results. Computational Optimization and Applications, 2015, 62, 5-29. | 1.6 | 31 |
| 24 | A truncated-CG style method for symmetric generalized eigenvalue problems. Journal of Computational and Applied Mathematics, 2006, 189, 274-285. | 2.0 | 29 |
| 25 | An implicit trust-region method on Riemannian manifolds. IMA Journal of Numerical Analysis, 2008, 28, 665-689. | 2.9 | 27 |
| 26 | A Riemannian subgradient algorithm for economic dispatch with valve-point effect. Journal of Computational and Applied Mathematics, 2014, 255, 848-866. | 2.0 | 26 |
| 27 | A discrete regression method on manifolds and its application to data on SO(n). IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2284-2289. | 0.4 | 25 |
| 28 | Newton-KKT interior-point methods for indefinite quadratic programming. Computational Optimization and Applications, 2007, 36, 5-41. | 1.6 | 23 |
| 29 | Intrinsic representation of tangent vectors and vector transports on matrix manifolds. Numerische Mathematik, 2017, 136, 523-543. | 1.9 | 22 |
| 30 | ROPTLIB. ACM Transactions on Mathematical Software, 2018, 44, 1-21. | 2.9 | 22 |
| 31 | Data Fitting on Manifolds with Composite BÃ©zier-Like Curves and Blended Cubic Splines. Journal of Mathematical Imaging and Vision, 2019, 61, 645-671. | 1.3 | 22 |
| 32 | A Geometric Newton Method for Oja's Vector Field. Neural Computation, 2009, 21, 1415-1433. | 2.2 | 21 |
| 33 | Robust estimation of rotations from relative measurements by maximum likelihood. , 2013, , . | | 21 |
| 34 | Accelerated Line-search and Trust-region Methods. SIAM Journal on Numerical Analysis, 2009, 47, 997-1018. | 2.3 | 19 |
| 35 | Differentiable Piecewise-BÃ©zier Surfaces on Riemannian Manifolds. SIAM Journal on Imaging Sciences, 2016, 9, 1788-1828. | 2.2 | 19 |
| 36 | Riemannian BFGS Algorithm with Applications. , 2010, , 183-192. | | 19 |

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| 37 | Spherical Mesh Adaptive Direct Search for Separating Quasi-Uncorrelated Sources by Range-Based Independent Component Analysis. Neural Computation, 2013, 25, 2486-2522. | 2.2 | 18 |
| 38 | Two Newton methods on the manifold of fixed-rank matrices endowed with Riemannian quotient geometries. Computational Statistics, 2014, 29, 569-590. | 1.5 | 17 |
| 39 | A Collection of Nonsmooth Riemannian Optimization Problems. International Series of Numerical Mathematics, 2019, , 1-15. | 1.1 | 17 |
| 40 | Riemannian Optimization on the Symplectic Stiefel Manifold. SIAM Journal on Optimization, 2021, 31, 1546-1575. | 2.0 | 17 |
| 41 | On the Best Low Multilinear Rank Approximation of Higher-order Tensors*. , 2010, , 145-164. | | 16 |
| 42 | A Riemannian Limited-Memory BFGS Algorithm for Computing the Matrix Geometric Mean. Procedia Computer Science, 2016, 80, 2147-2157. | 2.0 | 16 |
| 43 | A Riemannian rank-adaptive method for low-rank matrix completion. Computational Optimization and Applications, 2022, 81, 67-90. | 1.6 | 15 |
| 44 | Optimization On Manifolds: Methods and Applications. , 2010, , 125-144. | | 14 |
| 45 | Continuous dynamical systems that realize discrete optimization on the hypercube. Systems and Control Letters, 2004, 52, 297-304. | 2.3 | 10 |
| 46 | Tucker compression and local optima. Chemometrics and Intelligent Laboratory Systems, 2011, 106, 57-64. | 3.5 | 10 |
| 47 | A Riemannian BFGS Method for Nonconvex Optimization Problems. Lecture Notes in Computational Science and Engineering, 2016, , 627-634. | 0.3 | 10 |
| 48 | Curvature of the Manifold of Fixed-Rank Positive-Semidefinite Matrices Endowed with the Bures–Wasserstein Metric. Lecture Notes in Computer Science, 2019, , 739-748. | 1.3 | 8 |
| 49 | A convex formulation for informed source separation in the single channel setting. Neurocomputing, 2014, 141, 26-36. | 5.9 | 7 |
| 50 | Computing Symplectic Eigenpairs of Symmetric Positive-Definite Matrices via Trace Minimization and Riemannian Optimization. SIAM Journal on Matrix Analysis and Applications, 2021, 42, 1732-1757. | 1.4 | 7 |
| 51 | Two-sided Grassmann–Rayleigh quotient iteration. Numerische Mathematik, 2010, 114, 549-571. | 1.9 | 6 |
| 52 | Matrix geometric means based on shuffled inductive sequences. Linear Algebra and Its Applications, 2018, 542, 334-359. | 0.9 | 6 |
| 53 | Global Solution of Economic Dispatch with Valve Point Effects and Transmission Constraints. Electric Power Systems Research, 2020, 189, 106786. | 3.6 | 5 |
| 54 | Variable Projection Applied to Block Term Decomposition of Higher-Order Tensors. Lecture Notes in Computer Science, 2018, , 139-148. | 1.3 | 5 |

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| 55 | Computing the matrix geometric mean: Riemannian versus Euclidean conditioning, implementation techniques, and a Riemannian BFGS method. Numerical Linear Algebra With Applications, 2020, 27, e2321. | 1.6 | 4 |
| 56 | Riemannian gradient descent methods for graph-regularized matrix completion. Linear Algebra and Its Applications, 2021, 623, 193-235. | 0.9 | 4 |
| 57 | A Riemannian Dennis-Moré Condition. , 2012, , 281-293. | | 4 |
| 58 | New relations between norms of system transfer functions. Systems and Control Letters, 2011, 60, 151-155. | 2.3 | 2 |
| 59 | A Riemannian approach for computing geodesies in elastic shape analysis. , 2015, , . | | 2 |
| 60 | MILP-Based Algorithm for the Global Solution of Dynamic Economic Dispatch Problems with Valve-Point Effects. , 2019, , . | | 2 |
| 61 | Solving non-convex economic dispatch with valve-point effects and losses with guaranteed accuracy. International Journal of Electrical Power and Energy Systems, 2022, 134, 107143. | 5.5 | 2 |
| 62 | On the Quality of First-Order Approximation of Functions with Hölder Continuous Gradient. Journal of Optimization Theory and Applications, 2020, 185, 17-33. | 1.5 | 1 |
| 63 | Geometry of the Symplectic Stiefel Manifold Endowed with the Euclidean Metric. Lecture Notes in Computer Science, 2021, , 789-796. | 1.3 | 1 |
| 64 | Fast Method to Fit a $\mathcal {C}^1$ Piecewise-Bézier Function to Manifold-Valued Data Points: How Suboptimal is the Curve Obtained on the Sphere $\mathbb {S}^2$ ?. Lecture Notes in Computer Science, 2017, , 595-603. | 1.3 | 0 |
| 65 | Low-rank multi-parametric covariance identification. BIT Numerical Mathematics, 0, , 1. | 2.0 | 0 |