## Akimichi Takemura

## List of Publications by Year

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Educational Goals and Achievements of Undergraduate and Graduate Programs of Data Science in
Shiga University. Journal of Jsee, 2022, 70, $1 \_7-1 \_12$.

The volume-of-tube method for Gaussian random fields with inhomogeneous variance. Journal of Multivariate Analysis, 2021, , 104819.

Came-theoretic derivation of upper hedging prices of multivariate contingent claims and submodularity. Japan Journal of Industrial and Applied Mathematics, 2020, 37, 213-248.

ErdÅ‘sâ€"Fellerâ€"Kolmogorovâ€"Petrowsky law of the iterated logarithm for self-normalized martingales: A game-theoretic approach. Annals of Probability, 2019, 47, .

Distribution of the ratio of two Wishart matrices and cumulative probability evaluation by the holonomic gradient method. Journal of Multivariate Analysis, 2018, 165, 270-278.

Relation between the rate of convergence of strong law of large numbers and the rate of
6 concentration of Bayesian prior in game-theoretic probability. Stochastic Processes and Their Applications, 2018, 128, 1466-1484.
$7 \quad$ A new era of statistics and data science education in Japanese universities. Japanese Journal of
$7 \quad$ Statistics and Data Science, 2018, 1, 109-116.

A-hypergeometric distributions and Newton polytopes. Advances in Applied Mathematics, 2018, 99, 109-133.

Exact ZF Analysis and Computer-Algebra-Aided Evaluation in Rank-1 LoS Rician Fading. IEEE Transactions
$9 \quad$ on Wireless Communications, 2016, 15, 5245-5259.

An objective look at obtaining the plotting positions for QQ-plots. Communications in Statistics -
10 Theory and Methods, 2016, 45, 4716-4728.
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11 Chi-square mixture representations for the distribution of the scalar Schur complement in a noncentral Wishart matrix. Statistics and Probability Letters, 2016, 115, 79-87.
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Exponential decay rate of partial autocorrelation coefficients of ARMA and short-memory processes.
Statistics and Probability Letters, 2016, 110, 207-210.
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Holonomic gradient method for distribution function of a weighted sum of noncentral chi-square random variables. Computational Statistics, 2016, 31, 1645-1659.

Conformal geometry of sequential test in multidimensional curved exponential family. Sequential Analysis, 2016, 35, 30-68.

Estimation of exponential-polynomial distribution by holonomic gradient descent. Communications in Statistics - Theory and Methods, 2016, 45, 6860-6882.

A Power-Law Growth and Decay Model with Autocorrelation for Posting Data to Social Networking Services. PLoS ONE, 2016, 11, e0160592.

Properties of powers of functions satisfying second-order linear differential equations with
applications to statistics. Japan Journal of Industrial and Applied Mathematics, 2015, 32, 553-572.
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Statistical Modeling of Soil Moisture, Integrating Satellite Remote-Sensing (SAR) and Ground-Based
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Decidability in complex social choices. Evolutionary and Institutional Economics Review, 2015, 12,
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MIMO Zero-Forcing Performance Evaluation Using the Holonomic Gradient Method. IEEE Transactions on Wireless Communications, 2015, 14, 2322-2335.

Non-linear time-varying stochastic models for agroclimate risk assessment. Environmental and Ecological Statistics, 2015, 22, 227-246.

Calculation of orthant probabilities by the holonomic gradient method. Japan Journal of Industrial and Applied Mathematics, 2015, 32, 187-204.

Schur Complement Based Analysis of MIMO Zero-Forcing for Rician Fading. IEEE Transactions on Wireless Communications, 2015, 14, 1757-1771.

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Standard imsets for undirected and chain graphical models. Bernoulli, 2015, 21, .
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Discussion on â€œSequentia
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Exact MIMO Zero-Forcing Detection Analysis for Transmit-Correlated Rician Fading. IEEE Transactions
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Graver basis for an undirected graph and its application to testing the beta model of random graphs.
Annals of the Institute of Statistical Mathematics, 2013, 65, 191-212.

The law of the iterated logarithm in game-theoretic probability with quadratic and stronger hedges.
Stochastic Processes and Their Applications, 2013, 123, 3132-3152.

The holonomic gradient method for the distribution function of the largest root of a Wishart
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matrix. Journal of Multivariate Analysis, 2013, 117, 296-312.

Properties and applications of Fisher distribution on the rotation group. Journal of Multivariate
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Separation of integer points by a hyperplane under some weak notions of discrete convexity. Discrete
Mathematics, 2013, 313, 8-18.

Bayesian Logistic Betting Strategy Against Probability Forecasting. Stochastic Analysis and
Applications, 2013, 31, 214-234.
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Markov Bases and Designed Experiments. , 2013, , 165-221.

Design and Analysis of Fractional Factorial Experiments From the Viewpoint of Computational
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Markov bases for typical block effect models of two-way contingency tables. Journal of Multivariate Analysis, 2012, 112, 219-229.

On Intersection Lattices of Hyperplane Arrangements Generated by Generic Points. Annals of
Combinatorics, 2012, 16, 789-813.

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Hierarchical subspace models for contingency tables. Journal of Multivariate Analysis, 2012, 103, 19-34.
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Convergence of random series and the rate of convergence of the strong law of large numbers in
game-theoretic probability. Stochastic Processes and Their Applications, 2012, 122, 1-30.

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Approximations and asymptotics of upper hedging prices in multinomial models. Japan Journal of
Industrial and Applied Mathematics, 2012, 29, 1-21.
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$48 \quad$ GrÃๆbner Basis Techniques for Design of Experiments. Springer Series in Statistics, 2012, , 261-273.
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45 LÃ@vyâ€ ${ }^{T M}$ s Zeroâ€"One Law in Game-Theoretic Probability. Journal of Theoretical Probability, 2012, 25, 1-24.
46 Running Markov Chain Without Markov Bases. Springer Series in Statistics, 2012, , 275-286.

> 47 A lower bound for the Graver complexity of the incidence matrix of a complete bipartite graph.
> Electronic Journal of Combinatorics, 2012, 3, 695-708.

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51 New Procedures for Testing Whether Stock Price Processes are Martingales. Computational
51 New Procedures for Testing Whether Stock Price Processes are Martingales. Computational
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An asymptotically optimal policy for finite support models in the multiarmed bandit problem. Machine

Ranking patterns of unfolding models of codimension one. Advances in Applied Mathematics, 2011, 47,
$379-400$.

Holonomic gradient descent and its application to the Fisherâ€"Bingham integral. Advances in Applied Mathematics, 2011, 47, 639-658.

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Conformal Geometry of Statistical Manifold with Application to Sequential Estimation. Sequential
Analysis, 2011, 30, 308-337.
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A Markov Basis for Two-state Toric Homogeneous Markov Chain Model Without Initial Parameters.
Journal of the Japan Statistical Society, 2011, 41, 033-049.

Minimal and minimal invariant Markov bases of decomposable models for contingency tables.
Bernoulli, 2010, 16, .

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Inference, 2010, 140, 817-830.

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Multivariate Analysis, 2010, 101, 909-925.

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Continuous Time. Stochastic Analysis and Applications, 2010, 28, 842-861.

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Communications in Statistics - Theory and Methods, 2010, 39, 1643-1654.

Integral representations of one-dimensional projections for multivariate stable densities. Journal of Multivariate Analysis, 2009, 100, 334-344.

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Some characterizations of affinely full-dimensional factorial designs. Journal of Statistical Planning
and Inference, 2009, 139, 3525-3532.

Iterative proportional scaling via decomposable submodels for contingency tables. Computational
Statistics and Data Analysis, 2009, 53, 966-978.

A new formulation of asset trading games in continuous time with essential forcing of variation
$79 \quad$ GrÃ〒bner bases of nested configurations. Journal of Algebra, 2008, 320, 2583-2593.
The largest group of invariance for Markov bases and toric ideals. Journal of Symbolic Computation,
Game-theoretic versions of strong law of large numbers for unbounded variables. Stochastics, 2007,
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Game-Theoretic Derivation of Discrete Distributions and Discrete Pricing Formulas. Journal of the

Distribution of eigenvalues and eigenvectors of Wishart matrix when the population eigenvalues are
102 infinitely dispersed and its application to minimax estimation of covariance matrix. Journal of
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109 Tail probabilities of the limiting null distributions of the Andersonâ $€^{\prime \prime}$ Stephens statistics. Journal of Multivariate Analysis, 2004, 89, 261-291.

Minimal Basis for a Connected Markov Chain over $3 \times 3 \times$ K Contingency Tables with Fixed
110 Two-Dimensional Marginals. Australian and New Zealand Journal of Statistics, 2003, 45, 229-249.
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111 Tail probability via tube formula when the critical radius is zero. Bernoulli, 2003, 9, 535.
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On the equivalence of the tube and Euler characteristic methods for the distribution of the maximum of Gaussian fields over piecewise smooth domains. Annals of Applied Probability, 2002, 12, 768.
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Application of tube formula to distributional problems in multiway layouts. Applied Stochastic
Models in Business and Industry, 2002, 18, 245-257.

MINIMUM UNSAFE AND MAXIMUM SAFE SETS OF VARIABLES FOR DISCLOSURE RISK ASSESSMENT OF INDIVIDUAL RECORDS IN A MICRODATA SET. Journal of the Japan Statistical Society, 2002, 32, 107-117.
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115 Tail probabilities of the maxima of multilinear forms and their applications. Annals of Statistics, 2001, 29, .

Shrinkage Estimation towards a Closed Convex Set with a Smooth Boundary. Journal of Multivariate Analysis, 2000, 75, 79-111.

Some Geometry of the Cone of Nonnegative Definite Matrices and Weights of Associated
X2Distribution. Annals of the Institute of Statistical Mathematics, 2000, 52, 1-14.

RANKINGS GENERATED BY SPHERICAL DISCRIMINANT ANALYSIS. Journal of the Japan Statistical Society, 2000, 30, 43-51.

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Shrinkage to smooth non-convex cone :Principal component analysis as stein estimation.
120 Communications in Statistics - Theory and Methods, 1999, 28, 651-669.
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RELATIONSHIP BETWEEN LOGARITHMIC SERIES MODEL AND OTHER SUPERPOPULATION MODELS USEFUL FOR MICRODATA DISCLOSURE RISK ASSESSMENT. Journal of the Japan Statistical Society, 1998, 28, 125-134.
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On Rankings Generated by Pairwise Linear Discriminant Analysis ofmPopulations. Journal of Multivariate Analysis, 1997, 61, 1-28.

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Annals of Statistics, 1997, 25, .

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THE EFFECT OF HETEROSCEDASTICITY ON THE ACTUAL SIZE OF THE CHOW TEST. Journal of the Japan
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Inadmissibility of non-order-preserving orthogonally invariant estimators of the covariance matrix in the case of Stein's loss. Journal of Multivariate Analysis, 1992, 41, 117-131.

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