

Karel Hron

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3280203/publications.pdf>

Version: 2024-02-01

107
papers

5,034
citations

159358

30
h-index

102304

66
g-index

120
all docs

120
docs citations

120
times ranked

4133
citing authors

#	ARTICLE	IF	CITATIONS
1	Principal component analysis for compositional data with outliers. <i>Environmetrics</i> , 2009, 20, 621-632.	0.6	376
2	Univariate statistical analysis of environmental (compositional) data: Problems and possibilities. <i>Science of the Total Environment</i> , 2009, 407, 6100-6108.	3.9	354
3	Compositional data analysis for physical activity, sedentary time and sleep research. <i>Statistical Methods in Medical Research</i> , 2018, 27, 3726-3738.	0.7	273
4	Imputation of missing values for compositional data using classical and robust methods. <i>Computational Statistics and Data Analysis</i> , 2010, 54, 3095-3107.	0.7	216
5	The concept of compositional data analysis in practice – Total major element concentrations in agricultural and grazing land soils of Europe. <i>Science of the Total Environment</i> , 2012, 426, 196-210.	3.9	211
6	Outlier Detection for Compositional Data Using Robust Methods. <i>Mathematical Geosciences</i> , 2008, 40, 233-248.	1.4	178
7	Bayesian-multiplicative treatment of count zeros in compositional data sets. <i>Statistical Modelling</i> , 2015, 15, 134-158.	0.5	175
8	The compositional isotemporal substitution model: A method for estimating changes in a health outcome for reallocation of time between sleep, physical activity and sedentary behaviour. <i>Statistical Methods in Medical Research</i> , 2019, 28, 846-857.	0.7	169
9	The bivariate statistical analysis of environmental (compositional) data. <i>Science of the Total Environment</i> , 2010, 408, 4230-4238.	3.9	160
10	Applications of Machine Learning in Human Microbiome Studies: A Review on Feature Selection, Biomarker Identification, Disease Prediction and Treatment. <i>Frontiers in Microbiology</i> , 2021, 12, 634511.	1.5	157
11	Applied Compositional Data Analysis. <i>Springer Series in Statistics</i> , 2018, , .	0.9	150
12	Linear regression with compositional explanatory variables. <i>Journal of Applied Statistics</i> , 2012, 39, 1115-1128.	0.6	132
13	Compositional Data Analysis in Time-Use Epidemiology: What, Why, How. <i>International Journal of Environmental Research and Public Health</i> , 2020, 17, 2220.	1.2	123
14	Model-based replacement of rounded zeros in compositional data: Classical and robust approaches. <i>Computational Statistics and Data Analysis</i> , 2012, 56, 2688-2704.	0.7	118
15	Robust factor analysis for compositional data. <i>Computers and Geosciences</i> , 2009, 35, 1854-1861.	2.0	116
16	Correlation Analysis for Compositional Data. <i>Mathematical Geosciences</i> , 2009, 41, 905-919.	1.4	99
17	A new method for correlation analysis of compositional (environmental) data – a worked example. <i>Science of the Total Environment</i> , 2017, 607-608, 965-971.	3.9	99
18	Interpretation of multivariate outliers for compositional data. <i>Computers and Geosciences</i> , 2012, 39, 77-85.	2.0	89

#	ARTICLE	IF	CITATIONS
19	Correlation Between Compositional Parts Based on Symmetric Balances. <i>Mathematical Geosciences</i> , 2017, 49, 777-796.	1.4	87
20	Geochemical background in polluted river sediments: How to separate the effects of sediment provenance and grain size with statistical rigour?. <i>Catena</i> , 2015, 135, 240-253.	2.2	83
21	PLS-DA for compositional data with application to metabolomics. <i>Journal of Chemometrics</i> , 2015, 29, 21-28.	0.7	79
22	On the Interpretation of Orthonormal Coordinates for Compositional Data. <i>Mathematical Geosciences</i> , 2011, 43, 455-468.	1.4	76
23	The single component geochemical map: Fact or fiction?. <i>Journal of Geochemical Exploration</i> , 2016, 162, 16-28.	1.5	73
24	Coffee aroma—Statistical analysis of compositional data. <i>Talanta</i> , 2009, 80, 710-715.	2.9	61
25	Simplicial principal component analysis for density functions in Bayes spaces. <i>Computational Statistics and Data Analysis</i> , 2016, 94, 330-350.	0.7	61
26	Statistical and Machine Learning Techniques in Human Microbiome Studies: Contemporary Challenges and Solutions. <i>Frontiers in Microbiology</i> , 2021, 12, 635781.	1.5	51
27	Targeted metabolomic analysis of plasma samples for the diagnosis of inherited metabolic disorders. <i>Journal of Chromatography A</i> , 2012, 1226, 11-17.	1.8	48
28	Weighted Pivot Coordinates for Compositional Data and Their Application to Geochemical Mapping. <i>Mathematical Geosciences</i> , 2017, 49, 797-814.	1.4	46
29	Discriminant analysis for compositional data and robust parameter estimation. <i>Computational Statistics</i> , 2012, 27, 585-604.	0.8	40
30	Cox regression survival analysis with compositional covariates: Application to modelling mortality risk from 24-h physical activity patterns. <i>Statistical Methods in Medical Research</i> , 2020, 29, 1447-1465.	0.7	39
31	Variation in wild pea (<i>Pisum sativum</i> subsp. <i>elatius</i>) seed dormancy and its relationship to the environment and seed coat traits. <i>PeerJ</i> , 2019, 7, e6263.	0.9	38
32	Interpretation of Compositional Regression with Application to Time Budget Analysis. <i>Austrian Journal of Statistics</i> , 2018, 47, 3-19.	0.2	32
33	Imputation of rounded zeros for high-dimensional compositional data. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2016, 155, 183-190.	1.8	30
34	Compositional regression with functional response. <i>Computational Statistics and Data Analysis</i> , 2018, 123, 66-85.	0.7	30
35	Modeling Compositional Time Series with Vector Autoregressive Models. <i>Journal of Forecasting</i> , 2015, 34, 303-314.	1.6	29
36	Compositional biplots including external non-compositional variables. <i>Statistics</i> , 2016, 50, 1132-1148.	0.3	29

#	ARTICLE	IF	CITATIONS
37	Are longitudinal reallocations of time between movement behaviours associated with adiposity among elderly women? A compositional isotemporal substitution analysis. <i>International Journal of Obesity</i> , 2020, 44, 857-864.	1.6	29
38	Sedentary behavior patterns and adiposity in children: a study based on compositional data analysis. <i>BMC Pediatrics</i> , 2020, 20, 147.	0.7	28
39	Robust Compositional Analysis of Physical Activity and Sedentary Behaviour Data. <i>International Journal of Environmental Research and Public Health</i> , 2018, 15, 2248.	1.2	26
40	A comparison of seed germination coefficients using functional regression. <i>Applications in Plant Sciences</i> , 2020, 8, e11366.	0.8	26
41	Changes in sedentary behavior patterns during the transition from childhood to adolescence and their association with adiposity: a prospective study based on compositional data analysis. <i>Archives of Public Health</i> , 2022, 80, 1.	1.0	25
42	Independence in Contingency Tables Using Simplicial Geometry. <i>Communications in Statistics - Theory and Methods</i> , 2015, 44, 3978-3996.	0.6	23
43	Classical and Robust Regression Analysis with Compositional Data. <i>Mathematical Geosciences</i> , 2021, 53, 823-858.	1.4	23
44	How do short sleepers use extra waking hours? A compositional analysis of 24-h time-use patterns among children and adolescents. <i>International Journal of Behavioral Nutrition and Physical Activity</i> , 2020, 17, 104.	2.0	22
45	Error Propagation in Isometric Log-ratio Coordinates for Compositional Data: Theoretical and Practical Considerations. <i>Mathematical Geosciences</i> , 2016, 48, 941-961.	1.4	21
46	Changes in the geochemistry of fluvial sediments after dam construction (the Chrudimka River, the Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.4	21
47	Advanced liquid chromatography/mass spectrometry profiling of anthocyanins in relation to set of red wine varieties certified in Czech Republic. <i>Journal of Chromatography A</i> , 2011, 1218, 7581-7591.	1.8	20
48	Preprocessing of centred logratio transformed density functions using smoothing splines. <i>Journal of Applied Statistics</i> , 2016, 43, 1419-1435.	0.6	20
49	Dam reservoirs as an efficient trap for historical pollution: the passage of Hg and Pb through the Ohá™e River, Czech Republic. <i>Environmental Earth Sciences</i> , 2018, 77, 1.	1.3	17
50	Robust biomarker identification in a two-class problem based on pairwise log-ratios. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2017, 171, 277-285.	1.8	16
51	Replacing school and out-of-school sedentary behaviors with physical activity and its associations with adiposity in children and adolescents: a compositional isotemporal substitution analysis. <i>Environmental Health and Preventive Medicine</i> , 2021, 26, 16.	1.4	16
52	Untargeted metabolomic analysis of urine samples in the diagnosis of some inherited metabolic disorders. <i>Biomedical Papers of the Medical Faculty of the University Palacký&#x0301;, Olomouc, Czechoslovakia</i> , 2015, 159, 582-585.	0.2	16
53	Statistical analysis of wines using a robust compositional biplot. <i>Talanta</i> , 2012, 90, 46-50.	2.9	15
54	Sparse principal balances. <i>Statistical Modelling</i> , 2015, 15, 159-174.	0.5	15

#	ARTICLE	IF	CITATIONS
55	Normalization techniques for PARAFAC modeling of urine metabolomic data. <i>Metabolomics</i> , 2016, 12, 1.	1.4	15
56	Separation of geochemical signals in fluvial sediments: New approaches to grain-size control and anthropogenic contamination. <i>Applied Geochemistry</i> , 2020, 123, 104791.	1.4	15
57	Physical Dormancy Release in <i>Medicago truncatula</i> Seeds Is Related to Environmental Variations. <i>Plants</i> , 2020, 9, 503.	1.6	15
58	Analysing Pairwise Logratios Revisited. <i>Mathematical Geosciences</i> , 2021, 53, 1643-1666.	1.4	15
59	Element chemostratigraphy of the Devonian/Carboniferous boundary—A compositional approach. <i>Applied Geochemistry</i> , 2016, 75, 211-221.	1.4	14
60	Data Normalization and Scaling: Consequences for the Analysis in Omics Sciences. <i>Comprehensive Analytical Chemistry</i> , 2018, 82, 165-196.	0.7	14
61	Compositional Tables Analysis in Coordinates. <i>Scandinavian Journal of Statistics</i> , 2016, 43, 962-977.	0.9	13
62	Exploratory tools for outlier detection in compositional data with structural zeros. <i>Journal of Applied Statistics</i> , 2017, 44, 734-752.	0.6	13
63	Weighting the domain of probability densities in functional data analysis. <i>Stat</i> , 2020, 9, e283.	0.3	13
64	Total least squares solution for compositional data using linear models. <i>Journal of Applied Statistics</i> , 2010, 37, 1137-1152.	0.6	12
65	Regression imputation with Q-mode clustering for rounded zero replacement in high-dimensional compositional data. <i>Journal of Applied Statistics</i> , 2018, 45, 2067-2080.	0.6	10
66	Compositional splines for representation of density functions. <i>Computational Statistics</i> , 2021, 36, 1031-1064.	0.8	10
67	Statistical properties of the total variation estimator for compositional data. <i>Metrika</i> , 2011, 74, 221-230.	0.5	9
68	General approach to coordinate representation of compositional tables. <i>Scandinavian Journal of Statistics</i> , 2018, 45, 879-899.	0.9	9
69	A robust Parafac model for compositional data. <i>Journal of Applied Statistics</i> , 2018, 45, 1347-1369.	0.6	9
70	Covariance-Based Variable Selection for Compositional Data. <i>Mathematical Geosciences</i> , 2013, 45, 487-498.	1.4	8
71	Logratio approach to statistical analysis of 2 ^k –2 compositional tables. <i>Journal of Applied Statistics</i> , 2014, 41, 944-958.	0.6	8
72	Weighted Symmetric Pivot Coordinates for Compositional Data with Geochemical Applications. <i>Mathematical Geosciences</i> , 2021, 53, 655-674.	1.4	8

#	ARTICLE	IF	CITATIONS
73	Compositional Scalar-on-Function Regression with Application to Sediment Particle Size Distributions. <i>Mathematical Geosciences</i> , 2021, 53, 1667-1695.	1.4	8
74	Classical and robust orthogonal regression between parts of compositional data. <i>Statistics</i> , 2016, 50, 1261-1275.	0.3	7
75	Quantitative allochem compositional analysis of Lochkovian-Pragian boundary sections in the Prague Basin (Czech Republic). <i>Sedimentary Geology</i> , 2017, 354, 43-59.	1.0	7
76	Weighted pivot coordinates for partial least squares-based marker discovery in high-throughput compositional data. <i>Statistical Analysis and Data Mining</i> , 2021, 14, 315-330.	1.4	7
77	Adiposity and changes in movement-related behaviors in older adult women in the context of the built environment: a protocol for a prospective cohort study. <i>BMC Public Health</i> , 2019, 19, 1522.	1.2	6
78	Weighting of Parts in Compositional Data Analysis: Advances and Applications. <i>Mathematical Geosciences</i> , 2022, 54, 71-93.	1.4	6
79	Robustness for Compositional Data. , 2013, , 117-131.		6
80	Practical Aspects of Log-ratio Coordinate Representations in Regression with Compositional Response. <i>Measurement Science Review</i> , 2016, 16, 235-243.	0.6	6
81	Estimation of a proportion in survey sampling using the logratio approach. <i>Metrika</i> , 2013, 76, 799-818.	0.5	5
82	Exploratory data analysis for interval compositional data. <i>Advances in Data Analysis and Classification</i> , 2017, 11, 223-241.	0.9	5
83	Anthropogenic records in a fluvial depositional system: The Odra River along The Czech-Polish border. <i>Anthropocene</i> , 2021, 34, 100286.	1.6	5
84	Day-to-day pattern of work and leisure time physical behaviours: are low socioeconomic status adults couch potatoes or work warriors?. <i>BMC Public Health</i> , 2021, 21, 1342.	1.2	5
85	Robust principal component analysis for compositional tables. <i>Journal of Applied Statistics</i> , 2021, 48, 214-233.	0.6	5
86	Comments on: Compositional data: the sample space and its structure. <i>Test</i> , 2019, 28, 639-643.	0.7	4
87	Bayesian multiple hypotheses testing in compositional analysis of untargeted metabolomic data. <i>Analytica Chimica Acta</i> , 2020, 1097, 49-61.	2.6	3
88	Partial least squares regression with compositional response variables and covariates. <i>Journal of Applied Statistics</i> , 2020, , 1-20.	0.6	3
89	Robust regression with compositional covariates including cellwise outliers. <i>Advances in Data Analysis and Classification</i> , 2021, 15, 869-909.	0.9	3
90	A study on prospective associations between adiposity and 7-year changes in movement behaviors among older women based on compositional data analysis. <i>BMC Geriatrics</i> , 2021, 21, 203.	1.1	3

#	ARTICLE	IF	CITATIONS
91	Statistical Inference in Orthogonal Regression for Three-Part Compositional Data Using a Linear Model with Type-II Constraints. <i>Communications in Statistics - Theory and Methods</i> , 2012, 41, 2367-2385.	0.6	2
92	Analyzing Compositional Data Using R. <i>Springer Series in Statistics</i> , 2018, , 17-34.	0.9	2
93	Geometrical Properties of Compositional Data. <i>Springer Series in Statistics</i> , 2018, , 35-68.	0.9	2
94	Exploring Compositional Data with the Robust Compositional Biplot. <i>Studies in Theoretical and Applied Statistics, Selected Papers of the Statistical Societies</i> , 2014, , 219-226.	0.2	1
95	Log-ratio approach in curve fitting for concentration-response experiments. <i>Environmental and Ecological Statistics</i> , 2015, 22, 275-295.	1.9	1
96	Calibration of compositional measurements. <i>Communications in Statistics - Theory and Methods</i> , 2016, 45, 6773-6788.	0.6	1
97	Methods for High-Dimensional Compositional Data. <i>Springer Series in Statistics</i> , 2018, , 207-225.	0.9	1
98	Exploratory Data Analysis and Visualization. <i>Springer Series in Statistics</i> , 2018, , 69-83.	0.9	1
99	Correlation Analysis. <i>Springer Series in Statistics</i> , 2018, , 149-162.	0.9	1
100	A comparison of generalised linear models and compositional models for ordered categorical data. <i>Statistical Modelling</i> , 2020, 20, 249-273.	0.5	1
101	Elements of Robust Regression for Data with Absolute and Relative Information. <i>Advances in Intelligent and Soft Computing</i> , 2010, , 329-335.	0.2	1
102	Robust Methods for Compositional Data. , 2010, , 79-88.		1
103	On one twoepoch linear model with the nuisance parameters. <i>Mathematica Slovaca</i> , 2008, 58, 115.	0.3	0
104	First Steps for a Statistical Analysis. <i>Springer Series in Statistics</i> , 2018, , 85-106.	0.9	0
105	Compositional Data Analysis in Chemometrics. , 2020, , 641-662.		0
106	Logratio Approach to Distributional Modeling. , 2021, , 451-470.		0
107	Separating provenance and palaeoclimatic signals from particle size and geochemistry of loess-palaeosol sequences using log-ratio transformation: Central European loess belt, Czech Republic. <i>Sedimentary Geology</i> , 2021, 419, 105907.	1.0	0