Karel Hron

List of Publications by Year
in descending order

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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	Weighting of Parts in Compositional Data Analysis: Advances and Applications. Mathematical Geosciences, 2022, 54, 71-93.	1.4	6
2	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. Archives of Public Health, 2022, 80, 1.	1.0	25
3	Weighted Symmetric Pivot Coordinates for Compositional Data with Geochemical Applications. Mathematical Geosciences, 2021, 53, 655-674.	1.4	8
4	Classical and Robust Regression Analysis with Compositional Data. Mathematical Geosciences, 2021, 53, 823-858.	1.4	23
5	Compositional splines for representation of density functions. Computational Statistics, 2021, 36, 1031-1064.	0.8	10
6	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. Environmental Health and Preventive Medicine, 2021, 26, 16.	1.4	16
7	Logratio Approach to Distributional Modeling. , 2021, , 451-470.		0
8	Statistical and Machine Learning Techniques in Human Microbiome Studies: Contemporary Challenges and Solutions. Frontiers in Microbiology, 2021, 12, 635781.	1.5	51
9	Applications of Machine Learning in Human Microbiome Studies: A Review on Feature Selection, Biomarker Identification, Disease Prediction and Treatment. Frontiers in Microbiology, 2021, 12, 634511.	1.5	157
10	Robust regression with compositional covariates including cellwise outliers. Advances in Data Analysis and Classification, 2021, 15, 869-909.	0.9	3
11	A study on prospective associations between adiposity and 7-year changes in movement behaviors among older women based on compositional data analysis. BMC Geriatrics, 2021, 21, 203.	1.1	3
12	Compositional Scalar-on-Function Regression with Application to Sediment Particle Size Distributions. Mathematical Geosciences, 2021, 53, 1667-1695.	1.4	8
13	Analysing Pairwise Logratios Revisited. Mathematical Geosciences, 2021, 53, 1643-1666.	1.4	15
14	Weighted pivot coordinates for partial least squaresâ€based marker discovery in highâ€throughput compositional data. Statistical Analysis and Data Mining, 2021, 14, 315-330.	1.4	7
15	Anthropogenic records in a fluvial depositional system: The Odra River along The Czech-Polish border. Anthropocene, 2021, 34, 100286.	1.6	5
16	Separating provenance and palaeoclimatic signals from particle size and geochemistry of loess-palaeosol sequences using log-ratio transformation: Central European loess belt, Czech Republic. Sedimentary Geology, 2021, 419, 105907.	1.0	0
17	Day-to-day pattern of work and leisure time physical behaviours: are low socioeconomic status adults couch potatoes or work warriors?. BMC Public Health, 2021, 21, 1342.	1.2	5
18	Robust principal component analysis for compositional tables. Journal of Applied Statistics, 2021, 48, 214-233.	0.6	5

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19	A comparison of generalised linear models and compositional models for ordered categorical data. Statistical Modelling, 2020, 20, 249-273.	0.5	1
20	Cox regression survival analysis with compositional covariates: Application to modelling mortality risk from 24-h physical activity patterns. Statistical Methods in Medical Research, 2020, 29, 1447-1465.	0.7	39
21	Bayesian multiple hypotheses testing in compositional analysis of untargeted metabolomic data. Analytica Chimica Acta, 2020, 1097, 49-61.	2.6	3
22	A comparison of seed germination coefficients using functional regression. Applications in Plant Sciences, 2020, 8, e11366.	0.8	26
23	Partial least squares regression with compositional response variables and covariates. Journal of Applied Statistics, 2020, , 1-20.	0.6	3
24	Separation of geochemical signals in fluvial sediments: New approaches to grain-size control and anthropogenic contamination. Applied Geochemistry, 2020, 123, 104791.	1.4	15
25	How do short sleepers use extra waking hours? A compositional analysis of 24-h time-use patterns among children and adolescents. International Journal of Behavioral Nutrition and Physical Activity, 2020, 17, 104.	2.0	22
26	Compositional Data Analysis in Chemometrics. , 2020, , 641-662.		0
27	Weighting the domain of probability densities in functional data analysis. Stat, 2020, 9, e283.	0.3	13
28	Are longitudinal reallocations of time between movement behaviours associated with adiposity among elderly women? A compositional isotemporal substitution analysis. International Journal of Obesity, 2020, 44, 857-864.	1.6	29
29	Compositional Data Analysis in Time-Use Epidemiology: What, Why, How. International Journal of Environmental Research and Public Health, 2020, 17, 2220.	1.2	123
30	Physical Dormancy Release in Medicago truncatula Seeds Is Related to Environmental Variations. Plants, 2020, 9, 503.	1.6	15
31	Sedentary behavior patterns and adiposity in children: a study based on compositional data analysis. BMC Pediatrics, 2020, 20, 147.	0.7	28
32	Comments on: Compositional data: the sample space and its structure. Test, 2019, 28, 639-643.	0.7	4
33	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. BMC Public Health, 2019, 19, 1522.	1.2	6
34	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. Statistical Methods in Medical Research, 2019, 28, 846-857.	0.7	169
35	Variation in wild pea (Pisum sativumsubsp.elatius) seed dormancy and its relationship to the environment and seed coat traits. PeerJ, 2019, 7, e6263.	0.9	38
36	Compositional regression with functional response. Computational Statistics and Data Analysis, 2018, 123, 66-85.	0.7	30

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37	General approach to coordinate representation of compositional tables. Scandinavian Journal of Statistics, 2018, 45, 879-899.	0.9	9
38	Regression imputation with Q-mode clustering for rounded zero replacement in high-dimensional compositional data. Journal of Applied Statistics, 2018, 45, 2067-2080.	0.6	10
39	Compositional data analysis for physical activity, sedentary time and sleep research. Statistical Methods in Medical Research, 2018, 27, 3726-3738.	0.7	273
40	A robust Parafac model for compositional data. Journal of Applied Statistics, 2018, 45, 1347-1369.	0.6	9
41	Analyzing Compositional Data Using R. Springer Series in Statistics, 2018, , 17-34.	0.9	2
42	Methods for High-Dimensional Compositional Data. Springer Series in Statistics, 2018, , 207-225.	0.9	1
43	Geometrical Properties of Compositional Data. Springer Series in Statistics, 2018, , 35-68.	0.9	2
44	Exploratory Data Analysis and Visualization. Springer Series in Statistics, 2018, , 69-83.	0.9	1
45	First Steps for a Statistical Analysis. Springer Series in Statistics, 2018, , 85-106.	0.9	0
46	Correlation Analysis. Springer Series in Statistics, 2018, , 149-162.	0.9	1
47	Applied Compositional Data Analysis. Springer Series in Statistics, 2018, , .	0.9	150
48	Robust Compositional Analysis of Physical Activity and Sedentary Behaviour Data. International Journal of Environmental Research and Public Health, 2018, 15, 2248.	1.2	26
49	Changes in the geochemistry of fluvial sediments after dam construction (the Chrudimka River, the) Tj ETQq1 1 0.784314 rgBT /Overl	1.4	21
50	Data Normalization and Scaling: Consequences for the Analysis in Omics Sciences. Comprehensive Analytical Chemistry, 2018, 82, 165-196.	0.7	14
51	Dam reservoirs as an efficient trap for historical pollution: the passage of Hg and Pb through the OhÅ™e River, Czech Republic. Environmental Earth Sciences, 2018, 77, 1.	1.3	17
52	Interpretation of Compositional Regression with Application to Time Budget Analysis. Austrian Journal of Statistics, 2018, 47, 3-19.	0.2	32
53	Exploratory tools for outlier detection in compositional data with structural zeros. Journal of Applied Statistics, 2017, 44, 734-752.	0.6	13
54	Exploratory data analysis for interval compositional data. Advances in Data Analysis and Classification, 2017, 11, 223-241.	0.9	5

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55	Correlation Between Compositional Parts Based on Symmetric Balances. Mathematical Geosciences, 2017, 49, 777-796.	1.4	87
56	Quantitative allochem compositional analysis of Lochkovian-Pragian boundary sections in the Prague Basin (Czech Republic). Sedimentary Geology, 2017, 354, 43-59.	1.0	7
57	Weighted Pivot Coordinates for Compositional Data and Their Application to Geochemical Mapping. Mathematical Geosciences, 2017, 49, 797-814.	1.4	46
58	Robust biomarker identification in a two-class problem based on pairwise log-ratios. Chemometrics and Intelligent Laboratory Systems, 2017, 171, 277-285.	1.8	16
59	A new method for correlation analysis of compositional (environmental) data â€“ a worked example. Science of the Total Environment, 2017, 607-608, 965-971.	3.9	99
60	Compositional Tables Analysis in Coordinates. Scandinavian Journal of Statistics, 2016, 43, 962-977.	0.9	13
61	Calibration of compositional measurements. Communications in Statistics - Theory and Methods, 2016, 45, 6773-6788.	0.6	1
62	Preprocessing of centred logratio transformed density functions using smoothing splines. Journal of Applied Statistics, 2016, 43, 1419-1435.	0.6	20
63	Element chemostratigraphy of the Devonian/Carboniferous boundaryÂâ€“ A compositional approach. Applied Geochemistry, 2016, 75, 211-221.	1.4	14
64	Error Propagation in Isometric Log-ratio Coordinates for Compositional Data: Theoretical and Practical Considerations. Mathematical Geosciences, 2016, 48, 941-961.	1.4	21
65	Classical and robust orthogonal regression between parts of compositional data. Statistics, 2016, 50, 1261-1275.	0.3	7
66	Normalization techniques for PARAFAC modeling of urine metabolomic data. Metabolomics, 2016, 12, 1.	1.4	15
67	Imputation of rounded zeros for high-dimensional compositional data. Chemometrics and Intelligent Laboratory Systems, 2016, 155, 183-190.	1.8	30
68	The single component geochemical map: Fact or fiction?. Journal of Geochemical Exploration, 2016, 162, 16-28.	1.5	73
69	Compositional biplots including external non-compositional variables. Statistics, 2016, 50, 1132-1148.	0.3	29
70	Simplicial principal component analysis for density functions in Bayes spaces. Computational Statistics and Data Analysis, 2016, 94, 330-350.	0.7	61
71	Practical Aspects of Log-ratio Coordinate Representations in Regression with Compositional Response. Measurement Science Review, 2016, 16, 235-243.	0.6	6
72	Modeling Compositional Time Series with Vector Autoregressive Models. Journal of Forecasting, 2015, 34, 303-314.	1.6	29

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73	Independence in Contingency Tables Using Simplicial Geometry. Communications in Statistics - Theory and Methods, 2015, 44, 3978-3996.	0.6	23
74	Sparse principal balances. Statistical Modelling, 2015, 15, 159-174.	0.5	15
75	Bayesian-multiplicative treatment of count zeros in compositional data sets. Statistical Modelling, 2015, 15, 134-158.	0.5	175
76	Geochemical background in polluted river sediments: How to separate the effects of sediment provenance and grain size with statistical rigour?. Catena, 2015, 135, 240-253.	2.2	83
77	Log-ratio approach in curve fitting for concentration-response experiments. Environmental and Ecological Statistics, 2015, 22, 275-295.	1.9	1
78	PLSâ€DA for compositional data with application to metabolomics. Journal of Chemometrics, 2015, 29, 21-28.	0.7	79
79	Untargeted metabolomic analysis of urine samples in the diagnosis of some inherited metabolic disorders. Biomedical Papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia, 2015, 159, 582-585.	0.2	16
80	Logratio approach to statistical analysis of 2Ã—2 compositional tables. Journal of Applied Statistics, 2014, 41, 944-958.	0.6	8
81	Exploring Compositional Data with the Robust Compositional Biplot. Studies in Theoretical and Applied Statistics, Selected Papers of the Statistical Societies, 2014, , 219-226.	0.2	1
82	Estimation of a proportion in survey sampling using the logratio approach. Metrika, 2013, 76, 799-818.	0.5	5
83	Covariance-Based Variable Selection for Compositional Data. Mathematical Geosciences, 2013, 45, 487-498.	1.4	8
84	Robustness for Compositional Data. , 2013, , 117-131.		6
85	Statistical Inference in Orthogonal Regression for Three-Part Compositional Data Using a Linear Model with Type-II Constraints. Communications in Statistics - Theory and Methods, 2012, 41, 2367-2385.	0.6	2
86	Linear regression with compositional explanatory variables. Journal of Applied Statistics, 2012, 39, 1115-1128.	0.6	132
87	Statistical analysis of wines using a robust compositional biplot. Talanta, 2012, 90, 46-50.	2.9	15
88	Discriminant analysis for compositional data and robust parameter estimation. Computational Statistics, 2012, 27, 585-604.	0.8	40
89	Interpretation of multivariate outliers for compositional data. Computers and Geosciences, 2012, 39, 77-85.	2.0	89
90	Targeted metabolomic analysis of plasma samples for the diagnosis of inherited metabolic disorders. Journal of Chromatography A, 2012, 1226, 11-17.	1.8	48

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91	Model-based replacement of rounded zeros in compositional data: Classical and robust approaches. Computational Statistics and Data Analysis, 2012, 56, 2688-2704.	0.7	118
92	The concept of compositional data analysis in practice â€" Total major element concentrations in agricultural and grazing land soils of Europe. Science of the Total Environment, 2012, 426, 196-210.	3.9	211
93	Advanced liquid chromatography/mass spectrometry profiling of anthocyanins in relation to set of red wine varieties certified in Czech Republic. Journal of Chromatography A, 2011, 1218, 7581-7591.	1.8	20
94	On the Interpretation of Orthonormal Coordinates for Compositional Data. Mathematical Geosciences, 2011, 43, 455-468.	1.4	76
95	Statistical properties of the total variation estimator for compositional data. Metrika, 2011, 74, 221-230.	0.5	9
96	The bivariate statistical analysis of environmental (compositional) data. Science of the Total Environment, 2010, 408, 4230-4238.	3.9	160
97	Imputation of missing values for compositional data using classical and robust methods. Computational Statistics and Data Analysis, 2010, 54, 3095-3107.	0.7	216
98	Total least squares solution for compositional data using linear models. Journal of Applied Statistics, 2010, 37, 1137-1152.	0.6	12
99	Elements of Robust Regression for Data with Absolute and Relative Information. Advances in Intelligent and Soft Computing, 2010, , 329-335.	0.2	1
100	Robust Methods for Compositional Data. , 2010, , 79-88.		1
101	Univariate statistical analysis of environmental (compositional) data: Problems and possibilities. Science of the Total Environment, 2009, 407, 6100-6108.	3.9	354
102	Robust factor analysis for compositional data. Computers and Geosciences, 2009, 35, 1854-1861.	2.0	116
103	Principal component analysis for compositional data with outliers. Environmetrics, 2009, 20, 621-632.	0.6	376
104	Correlation Analysis for Compositional Data. Mathematical Geosciences, 2009, 41, 905-919.	1.4	99
105	Coffee aromaâ€"Statistical analysis of compositional data. Talanta, 2009, 80, 710-715.	2.9	61
106	Outlier Detection for Compositional Data Using Robust Methods. Mathematical Geosciences, 2008, 40, 233-248.	1.4	178
107	On one twoepoch linear model with the nuisance parameters. Mathematica Slovaca, 2008, 58, 115.	0.3	0