

References

- [1] Abbasbandy, S., Amirfakhrian, M.: The nearest trapezoidal form of a generalized left right fuzzy number. *International Journal of Approximate Reasoning* 43(2), 166–178 (2006)
- [2] Abbasbandy, S., Hajjari, T.: Weighted trapezoidal approximation – Preserving cores of a fuzzy number. *Computers & Mathematics with Applications* 59(9), 3066–3077 (2010)
- [3] Abellanas, M., Claverol, M., Hurtado, F.: Point set stratification and Delaunay depth. *Computational Statistics & Data Analysis* 51, 2513–2530 (2007)
- [4] Abelson, H., Sussman, G., Sussman, J.: *Struktura i interpretacja programów komputerowych*. WNT, Warszawa (2002)
- [5] Abramovitz, M., Stegun, I.A.: *Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables*. National Bureau of Standards Applied Mathematics Series (1972)
- [6] Abramowitz, M., Stegun, I.A.: *Handbook of mathematical functions*. Dover, New York (1972), http://www.iopb.res.in/~somen/abramowitz_and_stegun/
- [7] Abreu, J., Rico-Juan, J.: A new iterative algorithm for computing a quality approximate median of strings based on edit operations. *Pattern Recognition Letters* 36, 74–80 (2014)
- [8] Achiezer, N.: *Teoria aproksymacji*. PWN, Warszawa (1957)
- [9] Aczel, A.: *Complete Business Statistics*. Irvin (1996)
- [10] Aczél, J.: On mean values. *Bulletin of the American Mathematical Society* 54(4), 392–400 (1948)
- [11] Afsari, B.: Riemannian l^p center of mass: Existence, uniqueness, and convexity. *Proceedings of the American Mathematical Society* 139, 655–673 (2011)
- [12] Afsari, B., Tron, R., Vidal, R.: On the convergence of gradient descent for finding the Riemannian center of mass. *SIAM Journal of Control and Optimization* 51(3), 2230–2260 (2013)
- [13] Aftab, K., Hartley, R., Trumpf, J.: Generalized Weiszfeld algorithms for Lq optimization. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 37(4), 728–745 (2015)
- [14] Aggarwal, C.C., Hinneburg, A., Keim, D.A.: On the surprising behavior of distance metrics in high dimensional space. *Lecture Notes in Computer Science* 1973, 420–434 (2001)
- [15] Aggarwal, C.C., Hinneburg, A., Keim, D.A.: On the surprising behavior of distance metric in high-dimensional space. *Lecture Notes in Computer Science* 1973, 420–434 (2001)
- [16] Ahn, B.S.: Preference relation approach for obtaining OWA operators weights. *International Journal of Approximate Reasoning* 47(2), 166–178 (2008)
- [17] Ahn, B.S.: Parameterized OWA operator weights: An extreme point approach. *International Journal of Approximate Reasoning* 51(7), 820–831 (2010)
- [18] Aho, A., Garey, M., Ullman, J.: The transitive reduction of a directed graph. *SIAM Journal on Computing* 1(2), 131–137 (1972)
- [19] Aho, A., Sethi, R., Ullman, J.: *Kompilatory. Reguły, metody i narzędzia*. WNT, Warszawa (2002)
- [20] Alatalo, R.: Problems in the measurement of evenness in ecology. *Oikos* 37, 199–204 (1981)
- [21] Alonso, S., Cabrerizo, F.J., Herrera-Viedma, E., Herrera, F.: h -index: A review focused on its variants, computation and standardization for different scientific fields. *Journal of Informetrics* 3, 273–289 (2009)
- [22] Alonso, S., Cabrerizo, F.J., Herrera-Viedma, E., Herrera, F.: hg -index: A new index to characterize the scientific output of researchers based on the h - and g -indices. *Scientometrics* 82(2), 391–400 (2010)
- [23] Aloupis, G.: Geometric measures of data depth. In: *DIMACS Series in Discrete Mathematics and Theoretical Computer Science*, pp. 147–158 (2006)

- [24] Aloupis, G., Cortés, C., Gómez, F., Soss, M., Toussaint, G.: Lower bounds for computing statistical depth. *Computational Statistics & Data Analysis* 40, 223–229 (2002)
- [25] Aloupis, G., Langerman, S., Soss, M., Toussaint, G.: Algorithms for bivariate medians and a Fermat-Torricelli problem for lines. *Computational Geometry: Theory and Applications* 26(1), 69–79 (2003)
- [26] Aloupis, G., McLeish, E.: A lower bound for computing Oja depth. *Information Processing Letters* 96, 151–153 (2005)
- [27] Altman, A.: The axiomatic approach to ranking systems. Ph.D. thesis, Israel Institute of Technology, Haifa, Izrael (2007)
- [28] Altman, A., Tennenholtz, M.: Ranking systems: The PageRank axioms. In: *Proc. 6th ACM Conf. on Electronic Commerce* (2005)
- [29] Anderson, D., Keller, J., Havens, T.: Learning fuzzy-valued fuzzy measures for the fuzzy-valued Sugeno fuzzy integral. *Lecture Notes in Artificial Intelligence* 6178, 502–511 (2010)
- [30] Anderson, E., et al.: *LAPACK Users' Guide* (1999), sIAM. Available on-line at http://www.netlib.org/lapack/lug/lapack_lug.html
- [31] Anderson, T.R., Hankin, R.K.S., Killworth, P.D.: Beyond the Durfee square: Enhancing the h -index to score total publication output. *Scientometrics* 69(3), 577–588 (2008)
- [32] Angelov, P., Yager, R.R.: Density-based averaging – A new operator for data fusion. *Information Sciences* 222, 163–174 (2013)
- [33] Aristondo, O., García-Lapresta, J., Lasso de la Vega, C., Marques Pereira, R.: Classical inequality indices, welfare and illfare functions, and the dual decomposition. *Fuzzy Sets and Systems* 228, 114–136 (2013)
- [34] Arnold, B.C.: Pareto and generalized pareto distributions. In: *Economic Studies in Equality, Social Exclusion and Well-Being*, pp. 119–145. Springer (2008)
- [35] Arrow, K.J.: A difficulty in the concept of social welfare. *Journal of Political Economy* 58(4), 328–346 (1950)
- [36] Arrow, K.J.: *Social Choice and Individual Values*. Yale University Press, New Haven (1963)
- [37] Arunachalam, S.: Citation analysis: Do we need a thoeory? *Scientometrics* 43(1), 141–142 (1998)
- [38] Atanassov, K.T.: Intuitionistic fuzzy sets. *Fuzzy Sets and Systems* 20, 87–96 (1986)
- [39] Atanassov, K.: *Intuitionistic Fuzzy Sets*. Physica-Verlag, Heidelberg, New York (1999)
- [40] Băăth, R.: The state of naming conventions in R. *The R Journal* 4(2), 74–75 (2012)
- [41] Baczyński, M., Jayaram, B.: *Fuzzy implications*. Springer-Verlag, Berlin (2008)
- [42] Baczyński, M., Jayaram, B.: (S, N)- and R-implications: A state-of-the-art survey. *Fuzzy Sets and Systems* 159(14), 1836–1859 (2008)
- [43] Bahlmann, C.: Directional features in online handwriting recognition. *Pattern Recognition* 39(1), 115–125 (2006)
- [44] Ball, P.: Index aims for fair ranking of scientists. *Nature* 436, 900 (2005)
- [45] Ban, A., Brândaş, A., Coroianu, L., Negruțiu, C., Nica, O.: Approximations of fuzzy numbers by trapezoidal fuzzy numbers preserving the ambiguity and value. *Computers & Mathematics with Applications* 61(5), 1379–1401 (2011)
- [46] Ban, A.I.: Approximation of fuzzy numbers by trapezoidal fuzzy numbers preserving the expected interval. *Fuzzy Sets and Systems* 159, 1327–1344 (2008)
- [47] Ban, A.I.: On the nearest parametric approximation of a fuzzy number – revisited. *Fuzzy Sets and Systems* 160, 3027–3047 (2009)
- [48] Ban, A.I.: Triangular and parametric approximations of fuzzy numbers – Inadvertences and corrections. *Fuzzy Sets and Systems* 160(21), 3048–3058 (2009)

- [49] Ban, A.I., Ban, O.I.: Optimization and extensions of a fuzzy multicriteria decision making method and applications to selection of touristic destinations. *Expert Systems with Applications* 39(8), 7216–7225 (2012)
- [50] Ban, A.I., Coroianu, L.: Nearest interval, triangular and trapezoidal approximation of a fuzzy number preserving ambiguity. *International Journal of Approximate Reasoning* 53(5), 805–836 (2012)
- [51] Ban, A.I., Coroianu, L.: Simplifying the search for effective ranking of fuzzy numbers. *IEEE Transactions on Fuzzy Systems* 23, 327–339 (2015)
- [52] Ban, A.I., Coroianu, L., Grzegorzewski, P.: Trapezoidal approximation and aggregation. *Fuzzy Sets and Systems* 177(1), 45–59 (2011)
- [53] Ban, A.I., Coroianu, L., Grzegorzewski, P.: A fixed-shape fuzzy median of a fuzzy sample. In: *Proc. EUSFLAT’13*. pp. 215–222. Atlantis Press (2013)
- [54] Ban, A.I., Coroianu, L., Khastan, A.: Conditioned weighted L–R approximations of fuzzy numbers. *Fuzzy Sets and Systems* 283, 56–82 (2016)
- [55] Baneyx, A.: *Publish or Perish* as citation metrics used to analyze scientific output in the humanities: International case studies in economics, geography, social sciences, philosophy, and history. *Archivum Immunologiae et Therapia Experimentalis* 56, 363–371 (2008)
- [56] Banks, M.G.: An extension of the Hirsch index: Indexing scientific topics and compounds. *Scientometrics* 69(1), 161–168 (2006)
- [57] Bar-Ilan, J.: H-index for price medalists revisited. *ISSI Newsletter* 2(1), 3–5 (2006)
- [58] Bar-Ilan, J.: Informetrics at the beginning of the 21st century — A review. *Journal of Informetrics* 2, 1–52 (2008)
- [59] Barabási, A., Newman, M., Watts, D.: *The Structure and Dynamics of Networks*. Princeton University Press (2006)
- [60] Barcza, K., Telcs, A.: Paretian publication patterns imply Paretian Hirsch index. *Scientometrics* 81(2), 513–519 (2009)
- [61] Bargiela, A., Pedrycz, W.: *Granular Computing: An Introduction*. Kluwer Academic Publishers, Boston, MA (2003)
- [62] Barnett, G.A., Fink, E.L., Debus, M.B.: Mathematical model of academic citation age. *Communication research* 4(16), 510–531 (1989)
- [63] Barra, J.: *Matematyczne podstawy statystyki*. PWN, Warszawa (1982)
- [64] Bartłomiejczyk, L., Drewniak, J.: A characterization of sets and operations invariant under bijections. *Æquationes Mathematicæ* 68, 1–9 (2004)
- [65] Bartneck, C., Kokkelmans, S.: Detecting h-index manipulation through self-citation analysis. *Scientometrics* 87, 85–98 (2011)
- [66] Bartoszek, M., Beliakov, G., Gagolewski, M., James, S.: Fitting aggregation functions to data: Part I – Linearization and regularization. In: Carvalho, J., et al. (eds.) *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II, Communications in Computer and Information Science*, vol. 611, pp. 767–779. Springer (2016)
- [67] Bartoszek, M., Beliakov, G., Gagolewski, M., James, S.: Fitting aggregation functions to data: Part II – Idempotization. In: Carvalho, J., et al. (eds.) *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II, Communications in Computer and Information Science*, vol. 611, pp. 780–789. Springer (2016)
- [68] Bartoszek, M., Gagolewski, M.: A fuzzy R code similarity detection algorithm. In: Laurent, A., et al. (eds.) *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part III, Communications in Computer and Information Science*, vol. 444, pp. 21–30. Springer (2014)
- [69] Bartoszek, M., Gagolewski, M.: Detecting similarity of R functions via a fusion of multiple heuristic methods. In: Alonso, J., Bustince, H., Reformat, M. (eds.) *Proc. IFSA/EUSFLAT’15*, pp. 419–426. Atlantis Press (2015)

- [70] Bartoszek, M., Gagolewski, M.: Binary aggregation functions in software plagiarism detection. In: Proc. FUZZ-IEEE'17. IEEE (2017), in press, doi:10.1109/FUZZ-IEEE.2017.8015582
- [71] Bassett, Jr., G.W.: Equivariant, monotonic, 50% breakdown estimators. *The American Statistician* 45(2), 135–137 (1991)
- [72] Basu, A.: A note on the connection between the Hirsch index and the Random Hierarchical model. *ISSI Newsletter* 3(2), 24–27 (2007)
- [73] Batista, P.D., Campitelli, M.G., Kinouchi, O., Martinez, A.S.: Is it possible to compare researchers with different scientific interests? *Scientometrics* 68(1), 179–189 (2006)
- [74] Becker, R., Chambers, J., Wilks, A.: *The New S Language*. Chapman & Hall (1998), „*The Blue Book*”
- [75] Beckman, R., Cook, R.: Outlier.....s. *Technometrics* 25(2), 119–149 (1983)
- [76] Bedall, F.K., Zimmermann, H.: Algorithm AS 143: The Mediancentre. *Journal of the Royal Statistical Society. Series C (Applied Statistics)* 28(3), 325–328 (1979)
- [77] Bednarek, A.: An extension of Light’s associativity test. *American Mathematical Monthly* 75(5), 531–532 (1968)
- [78] Beirlant, J., Glänzel, W., Carbonez, A., Leemans, H.: Scoring research output using statistical quantile plotting. *Journal of Informetrics* 1, 185–192 (2007)
- [79] Beliakov, G.: Shape preserving approximation using least squares splines. *Approximation Theory and its Applications* 16(4), 80–98 (2000)
- [80] Beliakov, G.: Monotone approximation of aggregation operators using least squares splines. *International Journal of Uncertainty, Fuzziness and Knowledge-based Systems* 10, 659–676 (2002)
- [81] Beliakov, G.: How to build aggregation operators from data. *International Journal of Intelligent Systems* 18, 903–923 (2003)
- [82] Beliakov, G.: Learning weights in the generalized OWA operators. *Fuzzy Optimization and Decision Making* 4, 119–130 (2005)
- [83] Beliakov, G.: Monotonicity preserving approximation of multivariate scattered data. *BIT Numerical Mathematics* 45, 653–677 (2005)
- [84] Beliakov, G.: Construction of aggregation operators for automated decision making via optimal interpolation and global optimization. *Journal of Industrial and Management Optimization* 3(2), 193–208 (2007)
- [85] Beliakov, G.: Construction of aggregation functions from data using linear programming. *Fuzzy Sets and Systems* 160, 65–75 (2009)
- [86] Beliakov, G.: Fast computation of trimmed means. *Journal of Statistical Software* 39, Code snippet 2 (2011)
- [87] Beliakov, G., Bustince, H., Calvo, T.: *A Practical Guide to Averaging Functions*. Springer (2016)
- [88] Beliakov, G., Bustince, H., James, S., Calvo, T., Fernandez, J.: Aggregation for Atanassov’s intuitionistic and interval valued fuzzy sets: The median operator. *IEEE Transactions on Fuzzy Systems* 20, 487–498 (2011)
- [89] Beliakov, G., Calvo, T., James, S.: On penalty-based aggregation functions and consensus. In: Herrera-Viedma, E., et al. (eds.) *Consensual Processes, STUDFUZZ* 267, pp. 23–40 (2011)
- [90] Beliakov, G., Calvo, T., James, S.: Aggregating fuzzy implications to measure group consensus. In: Proc. Joint IFSA World Congress and NAFIPS Annual Meeting’13, pp. 1016–1021. Edmonton, Canada (2013)
- [91] Beliakov, G., Calvo, T., James, S.: Consensus measures constructed from aggregation functions and fuzzy implications. *Knowledge-Based Systems* 55, 1–8 (2014)
- [92] Beliakov, G., Calvo, T., Wilkin, T.: Three types of monotonicity of averaging functions. *Knowledge-Based Systems* 72, 114–122 (2014)

- [93] Beliakov, G., Calvo, T., Wilkin, T.: On the weak monotonicity of Gini means and other mixture functions. *Information Sciences* 300, 70–84 (2015)
- [94] Beliakov, G., Gagolewski, M., James, S.: Penalty-based and other representations of economic inequality. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems* 24(Suppl.1), 1–23 (2016)
- [95] Beliakov, G., Gagolewski, M., James, S., Pace, S., Pastorello, N., Thilliez, E., Vasa, R.: Measuring traffic congestion: An approach based on learning weighted inequality, spread and aggregation indices from comparison data. *Applied Soft Computing* (2017), in press, doi:10.1016/j.asoc.2017.07.014
- [96] Beliakov, G., James, S.: Using Choquet integrals for kNN approximation and classification. In: *Proc. FUZZ-IEEE'08*, pp. 1311–1317 (2008)
- [97] Beliakov, G., James, S.: Citation-based journal ranks: The use of fuzzy measures. *Fuzzy Sets and Systems* 167, 101–119 (2011)
- [98] Beliakov, G., James, S.: Using linear programming for weights identification of generalized Bonferroni means in R. *Lecture Notes in Computer Science* 7647, 35–44 (2012)
- [99] Beliakov, G., James, S.: Stability of weighted penalty-based aggregation functions. *Fuzzy Sets and Systems* 226(1), 1–18 (2013)
- [100] Beliakov, G., James, S.: A penalty-based aggregation operator for non-convex intervals. *Knowledge-Based Systems* 70, 335–344 (2014)
- [101] Beliakov, G., James, S.: Unifying approaches to consensus across different preference representations. *Applied Soft Computing* 35, 888–897 (2015)
- [102] Beliakov, G., James, S., Nimmo, D.: Can indices of ecological evenness be used to measure consensus? In: *Proc. IEEE Intl. Conf. Fuzzy Systems'15*, pp. 1–8. Beijing, China (2014)
- [103] Beliakov, G., James, S., Nimmo, D.: Using aggregation functions to model human judgments of species diversity. *Information Sciences* 306, 21–33 (2015)
- [104] Beliakov, G., James, S., Smith, L.: Single-preference consensus measures based on models of ecological evenness. *Lecture Notes in Artificial Intelligence* 8825, 50–59 (2014)
- [105] Beliakov, G., Pradera, A., Calvo, T.: *Aggregation functions: A guide for practitioners*. Springer-Verlag (2007)
- [106] Beliakov, G., Warren, J.: Appropriate choice of aggregation operators in fuzzy decision support systems. *IEEE Transactions on fuzzy systems* 9(6), 773–784 (2001)
- [107] Beliakov, G., Wilkin, T.: On some properties of weighted averaging with variable weights. *Information Sciences* 281, 1–7 (2014)
- [108] Bellosta, C.J.G.: **ADGofTest**: Anderson-Darling GoF test (2009), <http://CRAN.R-project.org/package=ADGofTest>, R package version 0.1
- [109] Benjamini, Y., Hochberg, Y.: Controlling False Discovery Rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society. Series B* 57(1), 289–300 (1995)
- [110] Bermudez, P.Z., Kotz, S.: Parameter estimation of the Generalized Pareto Distribution. Part II. *Journal of Statistical Planning and Inference* 140(6), 1374–1388 (2010)
- [111] Bernasconi, M., Choirat, C., Seri, R.: Empirical properties of group preference aggregation methods employed in AHP: Theory and evidence. *European Journal of Operational Research* 232, 584–592 (2014)
- [112] Berntsen, J., Espelid, T., Genz, A.: An adaptive algorithm for the approximate calculation of multiple integrals. *ACM Transactions on Mathematical Software* 17(4), 437–451 (1991)
- [113] Berson, T.A.: Differential cryptanalysis mod 2^{32} with applications to MD5. *Lecture Notes in Computer Science* 658, 71–80 (1993)
- [114] Bertoluzza, C., Corral, N., Salas, A.: On a new class of distances between fuzzy numbers. *Mathware and Soft Computing* 2, 71–84 (1995)
- [115] Beyer, K., Goldstein, J., Ramakrishnan, R., Shaft, U.: When is nearest neighbor meaningful? In: Beeri, C., Buneman, P. (eds.) *Proc. ICDT*, pp. 217–235. Springer-Verlag (1998)

- [116] Bezdek, J.C.: Pattern Recognition with Fuzzy Objective Function Algorithms. Springer (1981)
- [117] Bezdek, J.C., Spillman, B., Spillman, R.: Fuzzy relation spaces for group decision theory: An application. *Fuzzy Sets and Systems* 2, 5–14 (1979)
- [118] Bickel, P., Doksum, K.: Mathematical Statistics: Basic Ideas and Selected Topics. Holden-Day (1977)
- [119] Bickel, P., Lehmann, E.: Descriptive statistics for nonparametric models. I. Introduction. II. Location. *The Annals of Statistics* 3, 1039–1069 (1975)
- [120] Bickel, P., Lehmann, E.: Descriptive statistics for nonparametric models. III. Dispersion. *The Annals of Statistics* 4(6), 1139–1158 (1975)
- [121] Bickel, P., Lehmann, E.: Descriptive statistics for nonparametric models. IV. Spread. In: Jureckova, A. (ed.) *Contributions to Statistics*, pp. 33–40. Academia, Prague (1975)
- [122] Biecek, P.: *Przewodnik po pakiecie R. GiS*, Wrocław (2011)
- [123] Biecek, P.: *Analiza danych z programem R. Modele liniowe z efektami stałymi, losowymi i mieszanymi*. PWN, Warszawa (2012)
- [124] Bilenko, M., Mooney, R., Cohen, W., Ravikumar, P., Fienberg, S.: Adaptive name matching in information integration. *IEEE Intelligent Systems* 18(5), 16–23 (2003)
- [125] Billard, L., Diday, E.: From the statistics of data to the statistics of knowledge: Symbolic data analysis. *Journal of the American Statistical Association* 98(462), 470–486 (2003)
- [126] Bille, P.: A survey on tree edit distance and related problems. *Theoretical Computer Science* 337(1–3), 217–239 (2005)
- [127] Billingsley, P.: *Probability and Measure*. Wiley (1979)
- [128] Billingsley, P.: *Prawdopodobieństwo i miara*. PWN, Warszawa (2009)
- [129] Birkhoff, G.: *Lattice Theory*. American Mathematical Society, Providence, RI (1967)
- [130] Bisschop, J., et al.: *AIMMS Optimization Modeling*. Paragon Decision Technology (2012)
- [131] B.J. Oommen, R.L.: Pattern recognition of strings with substitutions, insertions, deletions and generalized transpositions. *Pattern Recognition* 30, 789–800 (1997)
- [132] Blizard, W.D.: Multiset theory. *Notre Dame Journal of Formal Logic* 30(1), 36–66 (1989)
- [133] Bloch, I.: Information combination operators for data fusion: A comparative review with classification. *IEEE Transactions on Systems, Man, and Cybernetics – Part A: Systems and Humans* 26(1), 52–67 (1996)
- [134] Bloomfield, P., Steiger, W.L.: *Least Absolute Deviations. Theory, applications, and algorithms*. Birkhäuser, Boston, Basel, Stuttgart (1983)
- [135] Blum, M., Floyd, R.W., Pratt, V., Rives, R.L., Tarjan, R.E.: Time bounds for selection. *Journal of Computer and System Sciences* 7(4), 448–460 (1973)
- [136] Bock, H.H.: Origins and extensions of the k -means algorithm in cluster analysis. *Electronic Journal for History of Probability and Statistics* 4(2), 1–18 (2008)
- [137] Bock, H.H., Diday, E.: *Analysis of Symbolic Data*. Springer (2000)
- [138] Bodenhofer, U., de Baets, B., Fodor, J.: A compendium of fuzzy weak orders: Representations and constructions. *Fuzzy Sets and Systems* 158, 811–829 (2007)
- [139] Bodenhofer, U.: A similarity-based generalization of fuzzy orderings. Ph.D. thesis, Johannes Kepler University, Linz, Austria (1999)
- [140] Bodjanova, S.: Median value and median interval of a fuzzy number. *Information Sciences* 172, 73–89 (2005)
- [141] Boell, S.K., Wilson, C.S.: Journal Impact Factors for evaluation scientific performance: Use of h -like indicators. *Scientometrics* 82, 613–626 (2010)

- [142] Bollen, J., Rodriguez, M.A., van de Sompel, H.: Journal status. *Scientometrics* 69(3), 669–687 (2006)
- [143] Bonferroni, C.: *Elementi di statistica generale*. Libreria Seber, Firenze (1930)
- [144] Bonitz, M.: Ten years of Matthew effect for countries. *Scientometrics* 64(3), 375–379 (2005)
- [145] Bonnett, X., Shine, R., Lourdais, O.: Taxonomic chauvinism. *TRENDS in Ecology and Evolution* 21(4), 1–3 (2002)
- [146] Bookstein, A.: Implications of ambiguity for scientometric measurement. *Journal of the American Society for Information Science and Technology* 52(1), 74–79 (2001)
- [147] Boomsma, W., Mardia, K., Taylor, C., Ferkinghoff-Borg, J., Krogh, A., Hamelryck, T.: A generative, probabilistic model of local protein structure. *Proceedings of the National Academy of Sciences* 105(26), 8932–8937 (2008)
- [148] Bornmann, L., Daniel, H.D.: Convergent validation of peer review decisions using the h index. Extent of and reasons for type I and type II errors. *Journal of Informetrics* 1, 204–213 (2007)
- [149] Bornmann, L., Daniel, H.D.: What do we know about the h index? *Journal of the American Society for Information Science and Technology* 58(9), 1381–1385 (2007)
- [150] Bornmann, L., Daniel, H.D.: What do citation counts measure? A review of studies on citing behavior. *Journal of Documentation* 64(1), 45–80 (2008)
- [151] Bornmann, L., Daniel, H.D.: The state of h index research. *EMBO Reports* 10(1), 2–5 (2009)
- [152] Bornmann, L., Mutz, R., Daniel, H.D.: The b index as a measure of scientific excellence. A promising supplement to the h index. *Cybermetrics* 11(1) (2007)
- [153] Bornmann, L., Mutz, R., Daniel, H.D.: Latent Markov modeling applied to grant peer review. *Journal of Informetrics* 2(3), 217–228 (2008)
- [154] Borovskikh, Y.V.: Nonuniform estimation of rate of convergence for L-statistics. *Ukrainian Mathematical Journal* 33(2), 127–132 (1981)
- [155] Borovskikh, Y.V., Weber, N.C.: Asymptotic distributions for a class of generalized L-statistics. *Bernoulli* 16(4), 1177–1190 (2010)
- [156] Borsik, J., Doboš, J.: On a product of metric spaces. *Mathematica Slovaca* 31, 193–205 (1981)
- [157] Bortot, S., Marques Pereira, R.A.: The binomial Gini inequality indices and the binomial decomposition of welfare functions. *Fuzzy Sets and Systems* 255, 92–114 (2014)
- [158] Bortot, S., Marques Pereira, R.: On a new poverty measure constructed from the exponential mean. In: *Proc. IFSA/EUSFLAT’15*, pp. 333–340. Atlantis Press (2015)
- [159] Bottema, O.: Het begrip “merkwaardig” met betrekking tot punten in de driehoeksmetkunde. *Nieuw Tijdschr. Wisk.* 69, 2–7 (1981)
- [160] Boucher, C., Ma, B.: Closest string with outliers. *BMC Bioinformatics* 12, S55 (2011)
- [161] Boussou, D., Perny, P.: Ranking methods for valued preference relations: A characterization of a method based on leaving and entering flows. *European Journal of Operational Research* 61(1–2), 186–194 (1992)
- [162] Bouyssou, D.: Ranking methods based on valued preference relations: A characterization of the net flow method. *European Journal of Operational Research* 60(1), 61–67 (1992)
- [163] Bouyssou, D., Marchant, T.: Consistent bibliometric rankings of authors and of journals. *Journal of Informetrics* 4, 365–378 (2010)
- [164] Bouyssou, D., Marchant, T.: Bibliometric rankings of journals based on Impact Factors: An axiomatic approach. *Journal of Informetrics* 5, 75–86 (2011)
- [165] Bouyssou, D., Marchant, T.: Ranking scientists and departments in a consistent manner. *Journal of the American Society for Information Science and Technology* 62(9), 1761–1769 (2011)
- [166] Boyack, K.W., Klavans, R., Börner, K.: Mapping the backbone of science. *Scientometrics* 64(3), 351–374 (2005)

- [167] Boyd, S., Vandenberghe, L.: Convex Optimization. Cambridge University Press (2009)
- [168] Boytsov, L.: Indexing methods for approximate dictionary searching: Comparative analyses. *ACM Journal of Experimental Algorithmics* 16, 1–86 (2011)
- [169] Bras-Amorós, M., Domingo-Ferrer, J., Torra, V.: A bibliometric index based on the collaboration distance between cited and citing authors. *Journal of Informetrics* 5(2), 248–264 (2011)
- [170] Braun, T., Glänzel, W., Schubert, A.: A Hirsch-type index for journals. *Scientometrics* 69(1), 169–173 (2006)
- [171] Bravington, M.: Debugging without (too many) tears. *R News* 3(3), 29–32 (2003)
- [172] Breiman, L.: Random forests. *Machine Learning* 45, 5–32 (2001)
- [173] Bremner, D., Chen, D., Iacono, J., Langerman, S., Morin, P.: Output-sensitive algorithms for Tukey depth and related problems. *Statistics and Computing* 18(3), 259–266 (2008)
- [174] Brent, R.: Algorithms for minimization without derivatives. Prentice-Hall (1973)
- [175] Brezis, H.: Functional analysis, Sobolev spaces and partial differential equations. Springer (2010)
- [176] Brimberg, J.: The Fermat-Weber location problem revisited. *Mathematical Programming* 71, 71–76 (1995)
- [177] Brimberg, J., Love, R.F.: Global convergence of a generalized iterative procedure for the minisum location problem with l_p distances. *Operations Research* 41(6), 1153–1163 (1993)
- [178] Brin, S.: Near neighbor search in large metric spaces. In: *Proc. Intl. Conf. Very Large Data Bases*, pp. 574–584. Morgan Kaufmann (1995)
- [179] Brin, S.: Near neighbor search in large metric spaces. In: *In Proceedings of the 21th International Conference on Very Large Data Bases*, pp. 574–584. Morgan Kaufmann Publishers (1995)
- [180] Broadus, R.N.: Early approaches to bibliometrics. *Journal of the American Society for Information Science* 38(2), 127–129 (1987)
- [181] Brönnimann, H., Melquiond, G., Pionc, S.: The design of the Boost interval arithmetic library. *Theoretical Computer Science* 351(1), 111–118 (2006)
- [182] Bronselaer, A., De Tré, G.: Aspects of object merging. In: *Proc. NAFIPS’10*, pp. 1–6. IEEE, Toronto, ON (2010)
- [183] Bronselaer, A., Szymczak, M., Zadrozny, S., De Tré, G.: Dynamical order construction in data fusion. *Information Fusion* 27, 1–18 (2016)
- [184] Brown, B.: Statistical uses of the spatial median. *Journal of the Royal Statistical Society. Series B (Methodological)* 45(1), 25–30 (1983)
- [185] Brumback, R.A.: Impact Factor Wars: Episode V — The Empire strikes back. *Journal of Child Neurology* 24(3), 260–262 (2009)
- [186] Brunelli, M., Mezei, J.: How different are ranking methods for fuzzy numbers? a numerical study. *International Journal of Approximate Reasoning* 54, 627–639 (2013)
- [187] Buchholz, K.: Criteria for the analysis of scientific quality. *Scientometrics* 32(2), 195–218 (1995)
- [188] Bulla, L.: An index of evenness and its associated diversity measure. *Oikos* 70, 167–171 (1994)
- [189] Bullen, P.: Handbook of means and their inequalities. Springer Science+Business Media, Dordrecht (2003)
- [190] Bunke, H.: On a relation between graph edit distance and maximum common subgraph. *Pattern Recognition Letters* 18(8), 689–694 (1997)
- [191] Bunke, H., Riesen, K.: Recent advances in graph-based pattern recognition with applications in document analysis. *Pattern Recognition* 44(5), 1057–1067 (2011)
- [192] Bunke, H., Shearer, K.: A graph distance metric based on the maximal common subgraph. *Pattern Recognition Letters* 19(3–4), 255–259 (1998)

- [193] Burrell, Q.L.: A simple linear model for linked informetric processes. *Information Processing & Management* 28(5), 637–645 (1992)
- [194] Burrell, Q.L.: The Kolmogorov-Smirnov test and rank-frequency distributions. *Journal of the American Society for Information Science* 45(1), 59 (1994)
- [195] Burrell, Q.L.: Stochastic modelling of the first-citation distribution. *Scientometrics* 52(1), 3–12 (2001)
- [196] Burrell, Q.L.: Predicting future citation behavior. *Journal of the American Society for Information Science and Technology* 54(5), 372–378 (2003)
- [197] Burrell, Q.L.: Are “sleeping beauties” to be expected? *Scientometrics* 65(3), 381–389 (2005)
- [198] Burrell, Q.L.: The use of Lotka functions and systematic sampling. *Scientometrics* 67(2), 323–325 (2006)
- [199] Burrell, Q.L.: Hirsch index of Hirsch rate? Some thoughts arising from Liang’s data. *Scientometrics* 73(1), 19–28 (2007)
- [200] Burrell, Q.L.: Hirsch’s h -index: A stochastic model. *Journal of Informetrics* 1, 16–25 (2007)
- [201] Burrell, Q.L.: On the h -index, the size of the Hirsch core and Jin’s A -index. *Journal of Informetrics* 1, 170–177 (2007)
- [202] Burrell, Q.L.: Extending Lotkaian informetrics. *Information Processing & Management* 44, 1794–1807 (2008)
- [203] Burrell, Q.L.: The publication/citation process at the micro level: A case study. In: Kretschmer, H., Havemann, F. (eds.) *Proc. WIS 2008, 4th Intl. Conf. Webometrics, Informetrics and Scientometrics & 9th COLLNET Meeting*. Berlin (2008)
- [204] Burrell, Q.L.: Some comments on “The estimation of lost multi-copy documents: A new type of informetrics theory” by Egghe and Proot. *Journal of Informetrics* 2, 101–105 (2008)
- [205] Burrell, Q.L.: On Hirsch’s h , Egghe’s g and Kosmulski’s $h(2)$. *Scientometrics* 79(1), 323–325 (2009)
- [206] Bustince, H., Barrenechea, E., Pagola, M.: Relationship between restricted dissimilarity functions, restricted equivalence functions and normal e_N -functions: Image thresholding invariant. *Pattern Recognition Letters* 29(4), 525–536 (2008)
- [207] Bustince, H., Barrenechea, E., Calvo, T., James, S., Beliakov, G.: Consensus in multi-expert decision making problems using penalty functions defined over a cartesian product of lattices. *Information Fusion* 17, 56–64 (2014)
- [208] Bustince, H., Beliakov, G., Dimuro, G.P., Bedregal, B., Mesiar, R.: On the definition of penalty functions in data aggregation. *Fuzzy Sets and Systems* 323, 1–18 (2017)
- [209] Bustince, H., Fernandez, J., Kolesárová, A., Mesiar, R.: Fusion functions and directional monotonicity. *Communications in Computer and Information Science* 444, 262–268 (2014)
- [210] Bustince, H., Fernandez, J., Kolesárová, A., Mesiar, R.: Directional monotonicity of fusion functions. *European Journal of Operational Research* 244(1), 300–308 (2015)
- [211] Bustince, H., Fernandez, J., Mesiar, R., Pradera, A., Beliakov, G.: Restricted dissimilarity functions and penalty functions. In: Galichet, S., et al. (eds.) *Proc. Eusflat/LFA’11*, pp. 79–85 (2011)
- [212] Byrd, R.H., Nocedal, J., Schnabel, R.B.: Representations of quasi-Newton matrices and their use in limited memory methods. *Mathematical Programming* 63(4), 129–156 (1994)
- [213] Byrd, R., Lu, P., Nocedal, J.: A limited memory algorithm for bound constrained optimization. *SIAM Journal on Scientific and Statistical Computing* 16, 1190–1208 (1995)
- [214] Báez-Sánchez, A., Moretti, A., Rojas-Medar, M.: On polygonal fuzzy sets and numbers. *Fuzzy Sets and Systems* 209, 54–65 (2012)
- [215] Cabrerizo, F., Alonso, S., I.J.Pérez, Herrera-Viedma, E.: On consensus measures in fuzzy group decision making. *Lecture Notes in Artificial Intelligence* 5285, 86–97 (2008)
- [216] Calvo, T., Beliakov, G.: Aggregation functions based on penalties. *Fuzzy Sets and Systems* 161, 1420–1436 (2010)

- [217] Calvo, T., Kolesárová, A., Komorníková, M., Mesiar, R.: Aggregation operators: Properties, classes and construction methods. In: Calvo et al. [219], pp. 3–104
- [218] Calvo, T., Mayor, G.: Remarks on two types of extended aggregation functions. *Tatra Mountains Mathematical Publications* 16, 235–253 (1999)
- [219] Calvo, T., Mayor, G., Mesiar, R. (eds.): Aggregation operators. New trends and applications, *Studies in Fuzziness and Soft Computing*, vol. 97. Physica-Verlag, New York (2002)
- [220] Calvo, T., Mayor, G., Torrens, J., Suner, J., Mas, M., Carbonell, M.: Generation of weighting triangles associated with aggregation functions. *International Journal of Uncertainty, Fuzziness and Knowledge-based Systems* 8(4), 417–451 (2000)
- [221] Calvo, T., Mesiar, R., Yager, R.R.: Quantitative weights and aggregation. *IEEE Transactions on Fuzzy Systems* 12(1), 62–69 (2004)
- [222] Camargo, J.: Must dominance increase with the number of subordinate species in competitive interactions? *Journal of Theoretical Biology* 161(4), 537–542 (1993)
- [223] Carbonell, M., Mas, M., Mayor, G.: On a class of monotonic extended owa operators. In: *Proc. 6th IEEE International Conference on Fuzzy Systems (FUZZ-IEEE'97)*, vol. 3, pp. 1695–1700. IEEE, Barcelona, Spain (1997)
- [224] Cardin, M.: Aggregation functionals on complete lattices. In: Galichet, S., et al. (eds.) *Proc. Eusflat/LFA'11*, pp. 86–89 (2011)
- [225] Cardin, M., Couceiro, M.: Invariant functionals on completely distributive lattices. *Fuzzy Sets and Systems* 167(1), 45–56 (2011)
- [226] Carlsson, C., Fullér, R., Majlender, P.: Additions of completely correlated fuzzy numbers. In: *Proc. FUZZ-IEEE'04*, pp. 535–539. IEEE, Budapest, Hungary (2004)
- [227] Carlsson, C., Fullér, R.: On possibilistic mean value and variance of fuzzy numbers. *Fuzzy Sets and Systems* 122, 315–326 (2001)
- [228] Castagnoli, G., Bräuer, S., Herrmann, M.: Optimization of cyclic redundancy-check codes with 24 and 32 parity bits. *IEEE Transactions on Communications* 41(6), 883–892 (1993)
- [229] Cena, A., Gagolewski, M.: OM3: Ordered maxitive, minitive, and modular aggregation operators – Part I: Axiomatic analysis under arity-dependence. In: Bustince, H., et al. (eds.) *Aggregation Functions in Theory and in Practice*, *Advances in Intelligent Systems and Computing*, vol. 228, pp. 93–103. Springer (2013)
- [230] Cena, A., Gagolewski, M.: OM3: Ordered maxitive, minitive, and modular aggregation operators – Part II: A simulation study. In: Bustince, H., et al. (eds.) *Aggregation Functions in Theory and in Practice*, *Advances in Intelligent Systems and Computing*, vol. 228, pp. 105–115. Springer (2013)
- [231] Cena, A., Gagolewski, M.: Aggregation and soft clustering of informetric data. In: Baczynski, M., De Baets, B., Mesiar, R. (eds.) *Proc. 8th International Summer School on Aggregation Operators (AGOP 2015)*, pp. 79–84. University of Silesia, Katowice, Poland (2015)
- [232] Cena, A., Gagolewski, M.: Clustering and aggregation of informetric data sets. In: *Computational methods in data analysis (Proc. ITRIA'15 vol. 1)*, pp. 5–26. Institute of Computer Science, Polish Academy of Sciences (2015)
- [233] Cena, A., Gagolewski, M.: A K-means-like algorithm for informetric data clustering. In: Alonso, J., Bustince, H., Reformat, M. (eds.) *Proc. IFSA/EUSFLAT'15*, pp. 536–543. Atlantis Press (2015)
- [234] Cena, A., Gagolewski, M.: OM3: Ordered maxitive, minitive, and modular aggregation operators – Axiomatic and probabilistic properties in an arity-monotonic setting. *Fuzzy Sets and Systems* 264, 138–159 (2015)
- [235] Cena, A., Gagolewski, M.: Fuzzy k -minpen clustering and k -nearest-minpen classification procedures incorporating generic distance-based penalty minimizers. In: Carvalho, J., et al. (eds.) *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II, Communications in Computer and Information Science*, vol. 611, pp. 445–456. Springer (2016)

- [236] Cena, A., Gagolewski, M.: OWA-based linkage and the Genie correction for hierarchical clustering. In: Proc. FUZZ-IEEE'17. IEEE (2017), in press, doi:10.1109/FUZZ-IEEE.2017.8015652
- [237] Cena, A., Gagolewski, M., Mesiar, R.: Problems and challenges of information resources producers' clustering. *Journal of Informetrics* 9(2) (2015)
- [238] Cervone, D.P., et al.: Voting with rubber bands, weights, and strings. *Mathematical Social Sciences* 64, 11–27 (2012)
- [239] Chakerian, G., Ghandehari, M.: The Fermat problem in Minkowski spaces. *Geometriae Dedicata* 17, 227–238 (1985)
- [240] Chakraborty, B., Chaudhuri, P.: On a transformation and re-transformation technique for constructing an affine equivariant multivariate median. *Proceedings of the American Mathematical Society* 124(8), 2539–2547 (1996)
- [241] Chakravarty, S.: *Ethical Social Index Numbers*. Springer-Verlag, New York (1990)
- [242] Chambers, J.: *Programming with Data*. Springer-Verlag (1998), „*The Green Book*”
- [243] Chambers, J.: *Software for Data Analysis. Programming with R*. Springer-Verlag (2008)
- [244] Chambers, J., Hastie, T.: *Statistical Models in S*. Chapman & Hall (1992), „*The White Book*”
- [245] Chan, T.M.: Optimal output-sensitive convex hull algorithms in two and three dimensions. *Discrete and Computational Geometry* 16, 361–368 (1996)
- [246] Chan, T.M.: An optimal randomized algorithm for maximum Tukey depth. In: Proc. 15th ACM-SIAM Symp. Discrete Algorithms (SODA), pp. 430–436 (2004)
- [247] Chanas, S.: On the interval approximation of a fuzzy number. *Fuzzy Sets and Systems* 122, 353–356 (2001)
- [248] Chandrasekaran, R., Tamir, A.: Open questions concerning Weiszfeld's algorithm for the Fermat-Weber location problem. *Mathematical Programming* 44, 293–295 (1989)
- [249] Chang, H., Yeung, D.: Robust path-based spectral clustering. *Pattern Recognition* 41(1), 191–203 (2008)
- [250] Chaudhuri, P., Sengupta, D.: Sign tests in multidimension: Inference based on the geometry of the data cloud. *Journal of the American Statistical Association* 88(424), 1363–1370 (1993)
- [251] Chavent, M., Saracco, J.: Central tendency and dispersion measures for intervals and hypercubes. *Communications in Statistics – Theory and methods* 37, 1471–1482 (2008)
- [252] Chavez, E., Navarro, G., Baeza-Yates, R., Marroquin, J.L.: Searching in metric spaces. *ACM Computing Surveys* 33(3), 273–321 (2001)
- [253] Chazelle, B.: An optimal convex hull algorithm in any fixed dimension. *Discrete and Computational Geometry* 10(1), 377–409 (1993)
- [254] Chen, C.T.: Extensions of the TOPSIS for group decision-making under fuzzy environment. *Fuzzy Sets and Systems* 114(1), 1–9 (2000)
- [255] Chen, S.J., Hwang, C.L.: *Fuzzy Multiple Attribute Decision Making: Methods and Applications*. Springer, Berlin, Heidelberg (1992)
- [256] Chen, Y.S., Leimkuhler, F.F.: A relationship between Lotka's law, Bradford's law, and Zipf's law. *Journal of the American Society for Information Science* 37(5), 307–314 (1986)
- [257] Chen, Y.L., Cheng, L.C.: Mining maximum consensus sequences from group ranking data. *European Journal of Operational Research* 198, 241–251 (2009)
- [258] Chen, Z.Z., Wang, L.: Fast exact algorithms for the closest string and substring problems with application to the planted (l, d) motif model. *IEEE/ACM Transactions on Computational Biology and Bioinformatics* 8(5), 1400–1410 (2011)
- [259] Cheney, E.: *Introduction to Approximation Theory*. McGraw-Hill (1966)
- [260] Cheng, Y., Liu, N.C.: A first approach to the classification of the top 500 world universities by their disciplinary characteristics using scientometrics. *Scientometrics* 68(1), 135–150 (2006)

- [261] Chenouri, S., Small, C.G.: A nonparametric multivariate multisample test based on data depth. *Electronic Journal of Statistics* 6, 760–782 (2012)
- [262] Chiclana, F., Tapia García, J., del Moral, M., Herrera-Viedma, E.: A statistical comparative study of different similarity measures of consensus in group decision making. *Information Sciences* 221, 110–123 (2013)
- [263] Chimani, M., Woste, M., Böcker, S.: A closer look at the closest string and closest substring problem. In: *Proc. 13th Workshop Algorithm Engineering and Experiments (ALENEX'2011)*, pp. 13–24 (2011)
- [264] Chin, F.Y., Deng, X., Fang, Q., Zhu, S.: Approximate and dynamic rank aggregation. *Theoretical Computer Science* 325(3), 409–424 (2004)
- [265] Choquet, G.: Theory of capacities. *Annales de l'institut Fourier* 5, 131–295 (1954)
- [266] Choulakian, V., Stephens, M.A.: Goodness-of-fit tests for the Generalized Pareto Distribution. *Technometrics* 43(4), 478–484 (2001)
- [267] Chwałkowski, R.: *Typografia typowej książki*. Helion, Gliwice (2001)
- [268] Clarkson, J.A.: Uniformly convex spaces. *Transactions of the American Mathematical Society* 40, 396–414 (1936)
- [269] Clopper, C., Pearson, E.: The use of confidence or fiducial limits illustrated in the case of the binomial. *Biometrika* 26, 404–413 (1934)
- [270] Colomer, J.M. (ed.): *Handbook of Electoral System Choice*. Palgrave Macmillan, London (2004)
- [271] Contini, S., Steinfeld, R., Pieprzyk, J., , Matusiewicz, K.: A critical look at cryptographic hash function literature. In: *ECRYPT Hash Workshop, 2007* (2007)
- [272] Conway, J.H., Sloane, N.J.A.: *Sphere Packings, Lattices and Groups*. Springer-Verlag, New York (1998)
- [273] Coppersmith, D., Fleischer, L., Rudra, A.: Ordering by weighted number of wins gives a good ranking for weighted tournaments. In: *Proc. 17th Annual ACM-SIAM Symp. Discrete Algorithms (SODA'06)*, pp. 776–782 (2006)
- [274] Coroianu, L.: Best Lipschitz constant of the trapezoidal approximation operator preserving the expected interval. *Fuzzy Sets and Systems* 165(1), 81–97 (2011)
- [275] Coroianu, L.: Lipschitz functions and fuzzy number approximations. *Fuzzy Sets and Systems* 200, 116–135 (2012)
- [276] Coroianu, L.: *Fuzzy Approximation Operators*. Ph.D. thesis, Babeş-Bolyai University, Cluj-Napoca, Romania (2013)
- [277] Coroianu, L.: Necessary and sufficient conditions for the equality of the interactive and non-interactive sums of two fuzzy numbers. *Fuzzy Sets and Systems* 283, 40–55 (2016)
- [278] Coroianu, L., Fullér, R.: On multiplication of interactive fuzzy numbers. In: *Proc. IEEE Intl. Symp. Intelligent Systems and Informatics (SISY'13)*. pp. 181–185 (2013)
- [279] Coroianu, L., Gagolewski, M., Grzegorzewski, P.: Nearest piecewise linear approximation of fuzzy numbers. *Fuzzy Sets and Systems* 233, 26–51 (2013)
- [280] Coroianu, L., Gagolewski, M., Grzegorzewski, P., Adabitar Firozja, M., Houliari, T.: Piecewise linear approximation of fuzzy numbers preserving the support and core. In: Laurent, A., et al. (eds.) *Information Processing and Management of Uncertainty in Knowledge-Based Systems, Part II, Communications in Computer and Information Science*, vol. 443, pp. 244–254. Springer (2014)
- [281] Coroianu, L., Gal, S.G., Bede, B.: Approximation of fuzzy numbers by max-product Bernstein operators. *Fuzzy Sets and Systems* 257, 41–66 (2014)
- [282] Costas, R., van Leeuwen, T., Bordons, M.: A bibliometric classificatory approach for the study and assessment of research performance at the individual level: The effects of age on productivity and impact. *Journal of the American Society for Information Science and Technology* 61, 1564–1581 (2010)
- [283] Costas, R., Bordons, M.: The h -index: Advantages, limitations and its relation with other bibliometric indicators at the micro level. *Journal of Informetrics* 1, 193–203 (2007)

- [284] Costas, R., Bordons, M.: Is g -index better than h -index? An exploratory study at the individual level. *Scientometrics* 77(2), 267–288 (2008)
- [285] Couceiro, M., Marichal, J.L.: Characterizations of discrete Sugeno integrals as polynomial functions over distributive lattices. *Fuzzy Sets and Systems* 161, 694–707 (2010)
- [286] Craig, A.T., Hogg, R.V.: *Intorudtion to Mathematical Statistics*. Macmillan Publishing Co., Inc., New York (1978)
- [287] Cramér, H.: *Mathematical methods of statistics*. Princeton University Press, Princeton (1946)
- [288] Crawley, M.: *Statistics: An Introduction Using R*. John Wiley & Sons (2005)
- [289] Crawley, M.: *The R Book*. John Wiley & Sons (2007)
- [290] Cronin, B.: Metatheorizing citation. *Scientometrics* 43(1), 45–55 (1998)
- [291] Ćwik, J., Mielniczuk, J.: *Statystyczne systemy uczące się. Ćwiczenia w oparciu o pakiet R*. OW Politechniki Warszawskiej, Warszawa (2009)
- [292] Czogała, E., Drewniak, J.: Associative monotonic operations in fuzzy set theory. *Fuzzy Sets and Systems* 12, 249–269 (1984)
- [293] Dalgaard, P.: *Introductory Statistics with R*. Springer-Verlag (2008)
- [294] Damerau, F.J.: A technique for computer detection and correction of spelling errors. *Communications of the ACM* 7(3), 171–176 (1964)
- [295] d’Angelo, C.A., Giuffrida, C., Abramo, G.: A heuristic approach to author name disambiguation in bibliometric databases for large-scale research assessments. *Journal of the American Society for Information Science and Technology* 62(2), 257–269 (2011)
- [296] Dantzig, G.: *Linear Programming and Extensions*. Princeton University Press, Princeton (1963)
- [297] DasGupta, A.: *Asymptotic theory of statistics and probability*. Springer-Verlag, New York (2008)
- [298] Dasgupta, M., Deb, R.: Transitivity and fuzzy preferences. *Social Choice and Welfare* 13, 305–318 (1996)
- [299] David, H.A., Nagaraja, H.N.: *Order statistics*. Wiley (2003)
- [300] Davis, M., Whistler, K., Scherer, M.: Unicode Technical Standard #10, Unicode Collation Algorithm (revision 30) (2014), <http://www.unicode.org/reports/tr10/tr10-30.html>
- [301] Davis, P.M.: Reward or persuasion? The battle to define the meaning of a citation. *Learned Publishing* 21, 5–11 (2009)
- [302] De Baets, B.: Aggregation 2.0 (2013), plenary lecture slides, 7th International Summer School on Aggregation Operators (AGOP’13), Pamplona, Spain, July 16, 2013.
- [303] De Baets, B.: A monometric-based approach to data aggregation (2017), plenary lecture slides, 9th International Summer School on Aggregation Operators (AGOP’17), Skövde, Sweden, June 2017.
- [304] De Baets, B., Mesiar, R.: Triangular norms on product lattices. *Fuzzy Sets and Systems* 104, 61–75 (1999)
- [305] De Cooman, G., Kerre, E.: Order norms on bounded partially ordered sets. *Journal of Fuzzy Mathematics* 2, 281–310 (1994)
- [306] de Finetti, B.: Sul significato soggettivo della probabilità. *Fundamenta Mathematicæ* 17, 298–329 (1931)
- [307] Dean, J., Ghemawat, S.: Mapreduce: Simplified data processing on large clusters. In: *Proc. Operating System Design and Implementation (OSDI)*. pp. 137–150. San Francisco, CA (2004)
- [308] Decký, M., Mesiar, R., Stupňanová, A.: Deviation-based aggregation functions. *Fuzzy Sets and Systems* (2017), in press, doi:10.1016/j.fss.2017.03.016
- [309] Deineko, V.G., Woeginger, G.J.: A new family of scientific impact measures: The generalized Kosmulski indices. *Scientometrics* 80(3), 819–826 (2009)

- [310] del Amo, A., Montero, J., Molina, E.: Representation of recursive rules. *European Journal of Operational Research* 130, 29–53 (2001)
- [311] del Castillo, J., Daoudi, J.: Estimation of the Generalized Pareto Distribution. *Statistics and Probability Letters* 79, 684–688 (2009)
- [312] Delgado, M., Verdegay, J., Vila, M.: On aggregation operations of linguistic labels. *International Journal of Intelligent Systems* 8(3), 351–370 (1993)
- [313] Delgado, M., Vila, M., Voxman, W.: On a canonical representation of a fuzzy number. *Fuzzy Sets and Systems* 93, 125–135 (1998)
- [314] Dementiev, R., Kettner, L., Sanders, P.: STXXL: Standard Template Library for XXL data sets. Tech. Rep. 2005/18, Fakultät für Informatik, Universität Karlsruhe (2005)
- [315] Demirci, M.: Aggregation operators on partially ordered sets and their categorical foundations. *Kybernetika* 42, 261–277 (2006)
- [316] Deschrijver, G.: Quasi-arithmetic means and OWA functions in interval-valued and Atanassov’s intuitionistic fuzzy set theory. In: Galichet, S., et al. (eds.) *Proc. Eusflat/LFA’11*, pp. 506–513 (2011)
- [317] Deschrijver, G., Kerre, E.E.: On the relationship between some extensions of fuzzy set theory. *Fuzzy Sets and Systems* 133(2), 227–235 (2003)
- [318] Destercke, S., Dubois, D., Chojnacki, E.: Unifying practical uncertainty representations. I: Generalized p-boxes. *International Journal of Approximate Reasoning* 49(3), 649–664 (2008)
- [319] Destercke, S., Dubois, D., Chojnacki, E.: Unifying practical uncertainty representations. II: Clouds. *International Journal of Approximate Reasoning* 49(3), 664–677 (2008)
- [320] Desu, M.M., Rodine, R.H.: Estimation of the population median. *Skandinavisk Aktuarietidskrift* 28, 67–70 (1969)
- [321] Deza, M.M., Deza, E.: *Encyclopedia of Distances*. Springer (2014)
- [322] Diaconis, P., Graham, R.: Spearman’s footrule as a measure of disarray. *Journal of the Royal Statistical Society, Series B (Methodological)* 39(2), 262–268 (1977)
- [323] Diaconis, P., Shahshahani, M.: The subgroup algorithm for generating uniform random variables. *Probability In Engineering And Information Sciences* 1, 15–32 (1987)
- [324] Diamond, P., Kloeden, P.: *Metric spaces of fuzzy sets. Theory and applications*. World Scientific, Singapore (1994)
- [325] Didehvar, F., Eslahchi, C.: An algorithm for rank aggregation problem. *Applied Mathematics and Computation* 189(2), 1847–1858 (2007)
- [326] Dinu, L.P.: On the classification and aggregation of hierarchies with different constitutive elements. *Fundamenta Informaticæ* 55(1), 39–50 (2003)
- [327] Dinu, L.P., Ionescu, R.T.: Clustering methods based on closest string via rank distance. In: *14th Intl. Symp. Symbolic and Numeric Algorithms for Scientific Computing*, pp. 207–213. IEEE (2012)
- [328] Dinu, L.P., Ionescu, R.T.: An efficient rank based approach for closest string and closest substring. *PLoS One* 7(6), e37576 (2012)
- [329] Dinu, L.P., Manea, F.: An efficient approach for the rank aggregation problem. *Theoretical Computer Science* 359(1–3), 455–461 (2006)
- [330] Dinu, L.P., Popa, A.: On the closest string via rank distance. *Lecture Notes in Computer Science* 7354, 413–426 (2012)
- [331] Domingo-Ferrer, J., Torra, V.: Disclosure risk assessment in statistical microdata protection via advanced record linkage. *Statistics and Computing* 13, 343–354 (2003)
- [332] Donoho, D.: Breakdown properties of multivariate location estimates. Ph.D. thesis, Department of Statistics, Harvard University (1982)

- [333] Donoho, D.L., Gasko, M.: Breakdown properties of location estimates based on halfspace depth and projected outlyingness. *The Annals of Statistics* 20(4), 1803–1827 (1992)
- [334] Dubois, D., Prade, H.: Operations on fuzzy numbers. *Int. J. Syst. Sci.* 9, 613–626 (1978)
- [335] Dubois, D., Prade, H.: Fuzzy numbers: An overview. In: *Analysis of Fuzzy Information. Mathematical Logic*, vol. I, pp. 3–39. CRC Press (1987)
- [336] Dubois, D., Prade, H.: The mean value of a fuzzy number. *Fuzzy Sets and Systems* 24, 279–300 (1987)
- [337] Dubois, D., Fargier, H., Prade, H.: Refinements of the maximin approach to decision-making in a fuzzy environment. *Fuzzy Sets and Systems* 81, 103–122 (1996)
- [338] Dubois, D., Fortemps, P., Pirlot, M., Prade, H.: Leximin optimality and fuzzy set theoretic operations. *European Journal of Operational Research* 130(1), 20–28 (2001)
- [339] Dubois, D., Kerre, E., Mesiar, R., Prade, H.: Fuzzy interval analysis. In: Dubois, D., Prade, H. (eds.) *Fundamentals of fuzzy sets*, pp. 483–581. Kluwer, Boston, Mass. (2000)
- [340] Dubois, D., Prade, H.: *Fuzzy sets and systems. Theory and applications*. Academic Press, New York (1980)
- [341] Dubois, D., Prade, H.: A review of fuzzy set aggregation connectives. *Information Sciences* 39, 85–121 (1985)
- [342] Dubois, D., Prade, H.: Semantics of quotient operators in fuzzy relational databases. *Fuzzy Sets and Systems* 78(1), 89–93 (1996)
- [343] Dubois, D., Prade, H.: Possibility theory, probability theory and multiple-valued logics: A clarification. *Annals of Mathematics and Artificial Intelligence* 32, 35–66 (2001)
- [344] Dubois, D., Prade, H.: On the use of aggregation operations in information fusion processes. *Fuzzy Sets and Systems* 142, 143–161 (2004)
- [345] Dubois, D., Prade, H.: Formal representations of uncertainty. In: Bouyssou, D., Dubois, D., Pirlot, M., Prade, H. (eds.) *Decision-making process*, chap. 3. ISTE, London, UK (2009)
- [346] Dubois, D., Prade, H., Smets, P.: A definition of subjective possibility. *International Journal of Approximate Reasoning* 48(2), 352–364 (2008)
- [347] Dubois, D., Prade, H., Testemale, C.: Weighted fuzzy pattern matching. *Fuzzy Sets and Systems* 28, 313–331 (1988)
- [348] Dujmović, J.J.: Two integrals related to means. *Publikacije Elektrotehničkog Fakulteta Univerziteta u Beogradu* 412–460(457), 231–232 (1974)
- [349] Dujmović, J.J.: Weighted conjunctive and disjunctive means and their application in system evaluation. *Publikacije Elektrotehničkog Fakulteta Univerziteta u Beogradu* 461–497(483), 147–158 (1974)
- [350] Dukhovny, A.: Lattice polynomials of random variables. *Statistics and Probability Letters* 77, 989–994 (2007)
- [351] Durante, F., Mesiar, R., Papini, P.L., Sempi, C.: 2-increasing binary aggregation operators. *Information Sciences* 177, 111–129 (2007)
- [352] Durier, R.: The Fermat–Weber problem and inner-product spaces. *Journal of Approximation Theory* 78(2), 161–173 (1994)
- [353] Durier, R.: Optimal locations and inner products. *Journal of Mathematical Analysis and Applications* 207, 220–239 (1997)
- [354] Durier, R., Michelot, C.: Geometrical properties of the Fermat–Weber problem. *European Journal of Operational Research* 20, 332–343 (1985)
- [355] Durocher, S., Fraser, R., Leblanc, A., Morrison, J., Skala, M.: On combinatorial depth measures. In: *Proc. 26th Canadian Conf. Computational Geometry*, pp. 206–211 (2014)
- [356] Dutta, B.: Inequality, poverty and welfare. In: Arrow, K., Sen, A., Suzumura, K. (eds.) *Handbook of Social Choice and Welfare*, pp. 597–633. Elsevier (2002)

- [357] Dwork, C., Kumar, R., Naor, M., Sivakumar, D.: Rank aggregation methods for the web. In: Proceedings of the 10th International Conference on World Wide Web, pp. 613–622. ACM (2001)
- [358] Dyckerhoff, R., Koshevoy, G., Mosler, K.: Zonoid data depth: Theory and computation. In: Prat, A., et al. (eds.) Proc. COMPSTAT 1996, pp. 235–240. Physica-Verlag, Heidelberg (1996)
- [359] Eaton, M.L.: Multivariate Statistics. Wiley, New York (1983)
- [360] Eckhardt, U.: Weber’s problem and Weiszfeld’s algorithm in general spaces. Mathematical Programming 18, 186–196 (1980)
- [361] Eddelbuettel, D.: Seamless R and C++ Integration with Rcpp. Springer, New York (2013)
- [362] Eddelbuettel, D., François, R.: Rcpp: Seamless R and C++ integration. Journal of Statistical Software 40(8), 1–18 (2011)
- [363] Eddy, W.: Convex hull peeling. In: Proc. COMPSTAT’82, pp. 42–47. Physica-Verlag, Vienna (1982)
- [364] Edelsbrunner, H.: Algorithms in Combinatorial Geometry. Springer-Verlag, Heidelberg (1987)
- [365] Egghe, L.: Pratt’s measure for some bibliometric distributions and its relation with the 80/20 rule. Journal of the American Society for Information Science 38(4), 288–297 (1987)
- [366] Egghe, L.: Mathematical theories of citation. Scientometrics 43(1), 57–62 (1998)
- [367] Egghe, L.: Relations between the continuous and the discrete Lotka power function. Journal of the American Society for Information Science and Technology 56(7), 664–668 (2005)
- [368] Egghe, L.: An improvement of the h -index: the g -index. ISSI Newsletter 2(1), 8–9 (2006)
- [369] Egghe, L.: Theory and practise of the g -index. Scientometrics 69(1), 131–152 (2006)
- [370] Egghe, L.: Item-time-dependent Lotkaian informetrics and applications to the calculation of the time-dependent h -index and g -index. Mathematical and Computer Modelling 45, 864–872 (2007)
- [371] Egghe, L.: Examples of simple transformations of the h -index: Qualitative and quantitative conclusions and consequences for other indices. Journal of Informetrics 2, 136–148 (2008)
- [372] Egghe, L.: The influence of merging on h -type indices. Journal of Informetrics 2(3), 252–262 (2008)
- [373] Egghe, L.: Modelling successive h -indices. Scientometrics 77(3), 377–387 (2008)
- [374] Egghe, L.: Mathematical study of h -index sequences. Information Processing and Management 45(2), 288–297 (2009)
- [375] Egghe, L.: Performance and its relation with productivity in Lotkaian systems. Scientometrics 81(2), 567–585 (2009)
- [376] Egghe, L.: Time-dependent Lotkaian informetrics incorporating growth of sources and items. Mathematical and Computer Modelling 49(1–2), 31–37 (2009)
- [377] Egghe, L.: The Hirsch index and related impact measures. Annual Review of Information Science and Technology 44, 65–114 (2010)
- [378] Egghe, L.: Influence of adding or deleting items and sources on the h -index. Journal of the American Society for Information Science and Technology 61(2), 370–373 (2010)
- [379] Egghe, L., Rousseau, R.: An informetric model for the Hirsch-index. Scientometrics 69(1), 121–129 (2006)
- [380] Ehrenfeucht, A., Haussler, D.: A new distance metric on strings computable in linear time. Discrete Applied Mathematics 20, 191–203 (1988)
- [381] Elbassioni, K., Tiwary, H.R.: Complexity of approximating the vertex centroid of a polyhedron. Lecture Notes in Computer Science 5878, 413–422 (2009)
- [382] Elbassioni, K., Tiwary, H.R.: Complexity of approximating the vertex centroid of a polyhedron. Theoretical Computer Science 421, 56–61 (2012)

- [383] Eto, H.: Scientometric definition of science: In what respect is the humanities more scientific than mathematical and social sciences? *Scientometrics* 76(1), 23–42 (2008)
- [384] Even, Y., Lehrer, E.: Decomposition-integral: Unifying Choquet and the concave integrals. *Economic Theory* 56(1), 33–58 (2014)
- [385] Everitt, B., Hothorn, T.: *A Handbook of Statistical Analyses Using R*. Chapman & Hall (2006)
- [386] Eysenck, H., Eysenck, M.: *Podpatrywanie umysłu*. GWP, Gdańsk (2003)
- [387] Facchinetti, G., Ricci, R.G.: A characterization of a general class of ranking functions on triangular fuzzy numbers. *Fuzzy Sets and Systems* 146(2), 297–312 (2004)
- [388] Fan, K.: Entfernung zweier zufälligen Größen und die Konvergenz nach Wahrscheinlichkeit. *Mathematische Zeitschrift* 49, 681–683 (1943)
- [389] Fernández, M.L., Valiente, G.: A graph distance metric combining maximum common subgraph and minimum common supergraph. *Pattern Recognition Letters* 22(6–7), 753–758 (2001)
- [390] Fernández Salido, J., Murakami, S.: Extending Yager’s orness concept for the OWA aggregators to other mean operators. *Fuzzy Sets and Systems* 139(3), 515–542 (2003)
- [391] Ferraro, M.B., Giordani, P., Vantaggi, B., Gagolewski, M., Gil, M.A., Grzegorzewski, P., Hryniewicz, O.: *Soft Methods for Data Science, Advances in Intelligent Systems and Computing*, vol. 456. Springer (2017)
- [392] Fiala, D., Rousselot, F., Jezek, K.: PageRank for bibliographic networks. *Scientometrics* 76(1), 135–158 (2008)
- [393] Field, C., Ronchetti, E.: *Small sample asymptotics*. Institute of Mathematical Statistics, Hayward, CA (1990)
- [394] Filev, D., Yager, R.R.: On the issue of obtaining OWA operator weights. *Fuzzy Sets and Systems* 94, 157–169 (1998)
- [395] Fischer, K., Gärtner, B., Kutz, M.: Fast smallest-enclosing-ball computation in high dimensions. In: *Proc. 11th European Symposium on Algorithms (ESA)*, pp. 630–641 (2003)
- [396] Fishburn, P.: Condorcet social choice functions. *SIAM Journal on Applied Mathematics* 33(3), 469–489 (1977)
- [397] Fishburn, P.C.: Lexicographic orders, utilities and decision rules: A survey. *Management Science* 20(11), 1442–1471 (1974)
- [398] Fisher, N.: *Statistical Analysis of Circular Data*. Cambridge University Press (1993)
- [399] Fisher, R.: On the mathematical foundations of theoretical statistics. *Philosophical Transactions of the Royal Society A* 222, 309–368 (1922)
- [400] Fisher, R.: The correlation between relatives on the supposition of Mendelian inheritance. *Philosophical Transactions of the Royal Society of Edinburgh* 52, 399–433 (1918)
- [401] Fisher, R.A., Yates, F.: *Statistical tables for biological, agricultural and medical research*. Oliver & Boyd, London (1938)
- [402] Floyd, R., Rivest, R.: Expected time bounds for selection. *Communications of the ACM* 18(3), 165–172 (1975)
- [403] Fodor, J., de Baets, B.: Fuzzy preference modelling: Fundamentals and recent advances. In: Bustince, H., et al. (eds.) *Fuzzy Sets and Their Extensions: Representation, Aggregation and Models*. pp. 207–217. Springer-Verlag (2008)
- [404] Fodor, J., Marichal, J.L., Roubens, M.: Characterization of the Ordered Weighted Averaging operators. *IEEE Transactions on Fuzzy Systems* 3(2), 236–240 (1995)
- [405] Fodor, J., Roubens, M.: *Fuzzy Preference Modelling and Multicriteria Decision Support*. Springer (1994)
- [406] Fodor, J.C., Marichal, J.L.: On nonstrict means. *Æquationes Mathematicæ* 54(3), 308–327 (1997)

- [407] Fodor, J.: An extension of Fung-Fu's theorem. *International Journal of Uncertainty, Fuzziness and Knowledge-based Systems* 4(3), 235–243 (1996)
- [408] Foley, J., van Dam, A., Feiner, S., Hughes, J., Phillips, R.: *Wprowadzenie do grafiki komputerowej*. WNT, Warszawa (2001)
- [409] Forgy, E.: Cluster analysis of multivariate data: efficiency versus interpretability of classifications. *Biometrics* 21, 768–769 (1965)
- [410] Frances, M., Litman, A.: On covering problems of codes. *Theory of Computing Systems* 30(2), 113–119 (1997)
- [411] Franceschet, M.: A comparison of bibliometric indicators for computer science scholars and journals on *Web of Science* and *Google Scholar*. *Scientometrics* 83(1), 243–258 (2010)
- [412] Franceschini, F., Maisano, D.A.: The Hirsch index in manufacturing and quality engineering. *Quality and Reliability Engineering International* 25, 987–995 (2009)
- [413] Franceschini, F., Maisano, D.A.: Analysis of the Hirsch index's operational properties. *European Journal of Operational Research* 203(2), 494–504 (2010)
- [414] Franceschini, F., Maisano, D.A.: Structured evaluation of the scientific output of academic research groups by recent h -based indicators. *Journal of Informetrics* 5, 64–74 (2011)
- [415] Frank, A., Asuncion, A.: UCI machine learning repository (2013), archive.ics.uci.edu/ml
- [416] Frank, M.: On the simultaneous associativity of $f(x, y)$ and $x + y - f(x, y)$. *Aequationes Mathematicae* 121–144, 19 (1979)
- [417] Fraser, A.: Simulation of genetic systems by automatic digital computers. I. Introduction. *Australian Journal of Biological Sciences* 10, 484–491 (1957)
- [418] Fraser, A., Burnell, D.: *Computer Models in Genetics*. McGraw-Hill, New York (1970)
- [419] Friedl, J.: *Wyrażenia regularne*. Helion, Gliwice (2001)
- [420] Fränti, P., Virtajoki, O.: Iterative shrinking method for clustering problems. *Pattern Recognition* 39(5), 761–765 (2006)
- [421] Fu, L., Medico, E.: FLAME, a novel fuzzy clustering method for the analysis of DNA microarray data. *BMC bioinformatics* 8, 3 (2007)
- [422] Fullér, R., Majlender, P.: On interactive fuzzy numbers. *Fuzzy Sets and Systems* 143, 355–369 (2003)
- [423] Gagolewski, M.: A remark on limit properties of generalized h - and g - indices. *Journal of Informetrics* 3(4), 367–368 (2009)
- [424] Gagolewski, M.: Aggregation operators and their application in a formal model for quality evaluation system of scientific research (Wybrane operatory agregacji i ich zastosowanie w modelu formalnym systemu jakości w nauce). Ph.D. thesis, Systems Research Institute, Polish Academy of Sciences (2011), (In Polish)
- [425] Gagolewski, M.: Bibliometric impact assessment with R and the CITAN package. *Journal of Informetrics* 5(4), 678–692 (2011)
- [426] Gagolewski, M.: On the relation between effort-dominating and symmetric minitive aggregation operators. In: Greco, S., et al. (eds.) *Advances in Computational Intelligence, Part III, Communications in Computer and Information Science*, vol. 299, pp. 276–285. Springer (2012)
- [427] Gagolewski, M.: On the relationship between symmetric maxitive, minitive, and modular aggregation operators. *Information Sciences* 221, 170–180 (2013)
- [428] Gagolewski, M.: Scientific impact assessment cannot be fair. *Journal of Informetrics* 7(4), 792–802 (2013)
- [429] Gagolewski, M.: Statistical hypothesis test for the difference between Hirsch indices of two Pareto-distributed random samples. In: Kruse, R., et al. (eds.) *Synergies of Soft Computing and Statistics for Intelligent Data Analysis, Advances in Intelligent Systems and Computing*, vol. 190, pp. 359–367. Springer (2013)

- [430] Gagolewski, M.: CITAN: CITation ANalysis toolpack (2014), <http://CRAN.R-project.org/package=CITAN>
- [431] Gagolewski, M.: Programowanie w języku R. Analiza danych, obliczenia, symulacje. Wydawnictwo Naukowe PWN, Warszawa (2014)
- [432] Gagolewski, M.: Data Fusion: Theory, Methods, and Applications. Institute of Computer Science, Polish Academy of Sciences, Warsaw, Poland (2015)
- [433] Gagolewski, M.: Normalized WD_p WAM and WD_p OWA spread measures. In: Alonso, J., Bustince, H., Reformat, M. (eds.) Proc. IFSA/EUSFLAT'15, pp. 210–216. Atlantis Press (2015)
- [434] Gagolewski, M.: Some issues in aggregation of multidimensional data. In: Baczynski, M., De Baets, B., Mesiar, R. (eds.) Proc. 8th International Summer School on Aggregation Operators (AGOP 2015), pp. 127–132. University of Silesia, Katowice, Poland (2015)
- [435] Gagolewski, M.: Spread measures and their relation to aggregation functions. European Journal of Operational Research 241(2), 469–477 (2015)
- [436] Gagolewski, M.: Sugeno integral-based confidence intervals for the theoretical h-index. In: Grzegorzewski, P., et al. (eds.) Strengthening Links Between Data Analysis and Soft Computing, Advances in Intelligent Systems and Computing, vol. 315, pp. 233–240. Springer (2015)
- [437] Gagolewski, M.: Programowanie w języku R. Analiza danych, obliczenia, symulacje. Wydawnictwo Naukowe PWN, Warszawa (2016)
- [438] Gagolewski, M.: Penalty-based aggregation of multidimensional data. Fuzzy Sets and Systems 325, 4–20 (2017)
- [439] Gagolewski, M., Bartoszek, M., Cena, A.: Genie: A new, fast, and outlier-resistant hierarchical clustering algorithm. Information Sciences 363, 8–23 (2016)
- [440] Gagolewski, M., Bartoszek, M., Cena, A.: Przetwarzanie i analiza danych w języku Python. Wydawnictwo Naukowe PWN, Warszawa (2016)
- [441] Gagolewski, M., Caha, J.: FuzzyNumbers: Tools to deal with fuzzy numbers in R (2017), <http://cran.r-project.org/package=FuzzyNumbers>, doi:10.5281/zenodo.15677
- [442] Gagolewski, M., Cena, A.: agop: Aggregation operators and preordered sets in R (2014), <http://agop.rexamine.com>
- [443] Gagolewski, M., Cena, A., Bartoszek, M.: Hierarchical clustering via penalty-based aggregation and the Genie approach. In: Torra, V., et al. (eds.) Modeling Decisions for Artificial Intelligence, Lecture Notes in Artificial Intelligence, vol. 9880, pp. 191–202. Springer (2016)
- [444] Gagolewski, M., Dębski, M., Nowakiewicz, M.: Efficient algorithm for computing certain graph-based monotone integrals: The l_p -indices. In: Mesiar, R., Bacigal, T. (eds.) Proc. Uncertainty Modeling, pp. 17–23. STU Bratislava (2013)
- [445] Gagolewski, M., Grzegorzewski, P.: A geometric approach to the construction of scientific impact indices. Scientometrics 81(3), 617–634 (2009)
- [446] Gagolewski, M., Grzegorzewski, P.: Possible and necessary h -indices. In: Carvalho, J.P., et al. (eds.) Proc. IFSA/EUSFLAT'09, pp. 1691–1695. IFSA (2009)
- [447] Gagolewski, M., Grzegorzewski, P.: Arity-monotonic extended aggregation operators. In: Hüllermeier, E., et al. (eds.) Information Processing and Management of Uncertainty in Knowledge-Based Systems, Communications in Computer and Information Science, vol. 80, pp. 693–702. Springer (2010)
- [448] Gagolewski, M., Grzegorzewski, P.: Metody i problemy naukometrii. In: Rowiński, T., Tadeusiewicz, R. (eds.) Psychologia i informatyka. Synergia i kontradycje, pp. 103–125. Wyd. UKSW, Warszawa (2010)
- [449] Gagolewski, M., Grzegorzewski, P.: S-statistics and their basic properties. In: Borgelt, C., et al. (eds.) Combining Soft Computing and Statistical Methods in Data Analysis, Advances in Intelligent and Soft Computing, vol. 77, pp. 281–288. Springer (2010)
- [450] Gagolewski, M., Grzegorzewski, P.: Axiomatic characterizations of (quasi-) L-statistics and S-statistics and the Producer Assessment Problem. In: Galichet, S., et al. (eds.) Proc. EUSFLAT/LFA'11, pp. 53–58. Atlantis Press (2011)

- [451] Gagolewski, M., Grzegorzewski, P.: Possibilistic analysis of arity-monotonic aggregation operators and its relation to bibliometric impact assessment of individuals. *International Journal of Approximate Reasoning* 52(9), 1312–1324 (2011)
- [452] Gagolewski, M., James, S.: Fitting symmetric fuzzy measures for discrete Sugeno integration. In: Kacprzyk, J., et al. (eds.) *Advances in Fuzzy Logic and Technology 2017, Advances in Intelligent Systems and Computing*, vol. 642, pp. 104–116. Springer (2018)
- [453] Gagolewski, M., Lasek, J.: Learning experts’ preferences from informetric data. In: Alonso, J., Bustince, H., Reformat, M. (eds.) *Proc. IFSA/EUSFLAT’15*, pp. 484–491. Atlantis Press (2015)
- [454] Gagolewski, M., Lasek, J.: The use of fuzzy relations in the assessment of information resources producers’ performance. In: *Proc. 7th IEEE International Conference Intelligent Systems IS’2014, Vol. 2: Tools, Architectures, Systems, Applications, Advances in Intelligent Systems and Computing*, vol. 323, pp. 289–300. Springer (2015)
- [455] Gagolewski, M., Mesiar, R.: Aggregating different paper quality measures with a generalized h -index. *Journal of Informetrics* 6(4), 566–579 (2012)
- [456] Gagolewski, M., Mesiar, R.: Monotone measures and universal integrals in a uniform framework for the scientific impact assessment problem. *Information Sciences* 263, 166–174 (2014)
- [457] Gagolewski, M., Tartanus, B.: R package stringi: Character string processing facilities (2015), <http://stringi.rexamine.com/>, doi:10.5281/zenodo.12594
- [458] Gao, X., Xiao, B., Tao, D., Li, X.: A survey of graph edit distance. *Pattern Analysis and Applications* 13(1), 113–129 (2010)
- [459] García-Lapresta, J.L., Pérez-Román, D.: Consensus-based hierarchical agglomerative clustering in the context of weak orders. In: *Proc. IFSA World Congress*, pp. 1010–1015. Edmonton, Canada (2013)
- [460] García-Lapresta, J., Lasso de la Vega, C., Marques Pereira, R., Urrutia, A.: A new class of fuzzy poverty measures. In: *Proc. of IFSA/EUSFLAT’15*, pp. 1140–1146. Atlantis Press (2015)
- [461] García-Lapresta, J., Pérez-Román, D.: Some measures of consensus generated by distances on weak orders. In: *Proc. XIV Congreso Español sobre Tecnologías y Lógica fuzzy*, pp. 477–483. Cuencas Mineras (2008)
- [462] Garcia-Perez, M.: A multidimensional extension to Hirsch’s h -index. *Scientometrics* 81(3), 779–785 (2009)
- [463] Garfield, E.: Citation indexes for science. *Science* 122(3159), 108–111 (1955)
- [464] Garfield, E.: Can citation indexing be automated? In: Stevens, M.E., Giuliano, V.E., Heilprin, L.B. (eds.) *Proc. Statistical Association Methods for Mechanized Documentation*. pp. 189–192. Washington (1964)
- [465] Garfield, E.: Random thoughts on citationology. Its theory and practice. *Scientometrics* 43(1), 69–76 (1998)
- [466] Garfield, E.: The history and meaning of the Journal Impact Factor. *Journal of American Medical Association* 295(1), 90–93 (2006)
- [467] Garfield, E., Pudovkin, A.I., Istomin, V.S.: Why do we need algorithmic historiography? *Journal of the American Society for Information Science and Technology* 54(5), 400–412 (2003)
- [468] Gärtner, B.: Fast and robust smallest enclosing balls. *Lecture Notes in Computer Science* 1643, 325–338 (1999)
- [469] Gärtner, B., Schönherr, S.: An efficient, exact, and generic quadratic programming solver for geometric optimization. In: *Proc. 16th ACM Symposium on Computational Geometry*, pp. 110–118 (2000)
- [470] Gentle, J.: *Random Number Generation and Monte Carlo Methods*. Springer-Verlag (2003)
- [471] Gentle, J.: *Matrix Algebra*. Springer-Verlag (2007)
- [472] Gentle, J.: *Computational Statistics*. Springer-Verlag (2009)

- [473] Gentleman, R.C., Carey, V.J., Bates, D.M., et al.: Bioconductor: Open software development for computational biology and bioinformatics. *Genome Biology* 5, R80 (2004)
- [474] Genz, A., Malik, A.: An adaptive algorithm for numeric integration over an n -dimensional rectangular region. *Journal of Computational and Applied Mathematics* 6(4), 295–302 (1980)
- [475] Ghiselli Ricci, R.: Finitely and absolutely non idempotent aggregation operators. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems* 12(2), 201–217 (2004)
- [476] Ghiselli Ricci, R.: Asymptotically idempotent aggregation operators. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems* 17(5), 611–631 (2009)
- [477] Ghiselli Ricci, R., Mesiar, R.: Multi-attribute aggregation operators. *Fuzzy Sets and Systems* 181(1), 1–13 (2011)
- [478] Ghosh, A., Chattopadhyay, N., Chakrabarti, B.: Inequality in societies, academic institutions and science journals: Gini and k -indices. *Physica A* 410, 30–34 (2014)
- [479] Gini, C.: Variabilità e mutabilità. C. Cuppini, Bologna (1912)
- [480] Gionis, A., Mannila, H., Tsaparas, P.: Clustering aggregation. *ACM Transactions on Knowledge Discovery from Data* 1(1), 4 (2007)
- [481] Glänzel, W.: On the h -index — A mathematical approach to a new measure of publication activity and citation impact. *Scientometrics* 67(2), 315–321 (2006)
- [482] Glänzel, W.: On the opportunities and limitations of the H-index. *Science Focus* 1(1), 10–11 (2006)
- [483] Glänzel, W.: Some new applications of the h -index. *ISSI Newsletter* 3(2), 28–31 (2007)
- [484] Glänzel, W.: H-index concatenation. *Scientometrics* 77(2), 369–372 (2008)
- [485] Glänzel, W.: On some new bibliometric applications of statistics related to the h -index. *Scientometrics* 77(1), 187–196 (2008)
- [486] Glänzel, W.: Seven myths in bibliometrics. About facts and fiction in quantitative science studies. *COLLNET Journal of Scientometrics and Information Management* 2(1), 9–17 (2008)
- [487] Glänzel, W., Persson, O.: H-index for price medalists. *ISSI Newsletter* 1(4), 15–18 (2005)
- [488] Godo, L., Torra, V.: On aggregation operators for ordinal qualitative information. *IEEE Transactions on Fuzzy Systems* 8(2), 143–154 (2000)
- [489] Goldberg, D.: What every computer scientist should know about floating-point arithmetic. *ACM Computing Surveys* 21(1), 5–48 (1991)
- [490] Goldfarb, D., Idnani, A.: A numerically stable dual method for solving strictly convex quadratic programs. *Mathematical Programming* 27, 1–33 (1983)
- [491] Golub, T., et al.: Molecular classification of cancer: Class discovery and class prediction by gene expression monitoring. *Science* 286, 531–537 (1999)
- [492] Gonzalez-Pereira, B., Guerrero-Bote, V.P., de Moya-Anegón, F.: A new approach to the metric of journals’ scientific prestige: The SJR indicator. *Journal of Informetrics* 4(3), 379–391 (2010)
- [493] Gosselin, F.: Lorenz partial order: The best known logical framework to define evenness indices. *Community Ecology* 2(2), 197–207 (2001)
- [494] Gower, J.C.: Algorithm AS 78: The Mediancentre. *Journal of the Royal Statistical Society. Series C (Applied Statistics)* 23(3), 466–470 (1974)
- [495] Gower, J.: A comparison of some methods of cluster analysis. *Biometrics* 23(4), 623–637 (1967)
- [496] Grabisch, M.: k -order additive discrete fuzzy measures and their representation. *Fuzzy Sets and Systems* 92, 167–189 (1997)
- [497] Grabisch, M.: k -order additive discrete fuzzy measures and their representation. *Fuzzy Sets and Systems* 92(167–189) (1997)

- [498] Grabisch, M.: A graphical interpretation of the Choquet integral. *IEEE Transactions on Fuzzy Systems* 8(5), 627–631 (2000)
- [499] Grabisch, M.: The symmetric Sugeno integral. *Fuzzy Sets and Systems* 139, 473–490 (2003)
- [500] Grabisch, M.: How to score alternatives when criteria are scored on an ordinal scale. *Journal of Multi-Criteria Decision Analysis* 15, 31–44 (2008)
- [501] Grabisch, M., Marichal, J.L., Mesiar, R., Pap, E.: *Aggregation functions*. Cambridge University Press (2009)
- [502] Grabisch, M., Marichal, J.L., Mesiar, R., Pap, E.: Aggregation functions: Construction methods, conjunctive, disjunctive and mixed classes. *Information Sciences* 181, 23–43 (2011)
- [503] Grabisch, M., Marichal, J.L., Mesiar, R., Pap, E.: Aggregation functions: Means. *Information Sciences* 181, 1–22 (2011)
- [504] Graham, R.L.: An efficient algorithm for determining the convex hull of a finite planar set. *Information Processing Letters* 1, 132–133 (1972)
- [505] Gramm, J., Niedermeier, R., Rossmanith, P.: Fixed-parameter algorithms for closest string and related problems. *Algorithmica* 37, 25–42 (2003)
- [506] Greco, S., Mesiar, R., Rindone, F.: Two new characterizations of universal integrals on the scale $[0, 1]$. *Information Sciences* 267, 217–224 (2014)
- [507] Green, P.: Peeling bivariate data. In: Barnett, V. (ed.) *Interpreting multivariate data*. Wiley, New York (1981)
- [508] Groes, E., Jacobsen, H.J., Sloth, B., Tranæs, T.: Axiomatic characterizations of the Choquet integral. *Economic Theory* 12, 441–448 (1998)
- [509] Gross, P.L.K., Gross, E.M.: College libraries and chemical education. *Science* 66(1713), 385–389 (1927)
- [510] Grübel, R.: Orthogonalization of multivariate location estimators: The orthomedian. *The Annals of Statistics* 24(4), 1457–1473 (1996)
- [511] Grzegorzewski, P.: Metrics and orders in space of fuzzy numbers. *Fuzzy Sets and Systems* 97, 83–94 (1998)
- [512] Grzegorzewski, P.: Algorithms for trapezoidal approximations of fuzzy numbers preserving the expected interval. In: et al, B.M.B. (ed.) *Foundations of Reasoning Under Uncertainty*. pp. 85–98. Springer (2010)
- [513] Grzegorzewski, P., Pasternak-Winiarska, K.: Trapezoidal approximations of fuzzy numbers with restrictions on the support and core. In: *Proc. EUSFLAT/LFA 2011*. pp. 749–756. Atlantis Press (2011)
- [514] Grzegorzewski, P.: Distances between intuitionistic fuzzy sets and/or interval-valued fuzzy sets based on the Hausdorff metric. *Fuzzy Sets and Systems* 148(2), 319–328 (2004)
- [515] Grzegorzewski, P.: *Wspomaganie decyzji w warunkach niepewności. Metody statystyczne dla nieprecyzyjnych danych*. Exit, Warszawa (2006)
- [516] Grzegorzewski, P.: Granular regression. In: *Proc. IFSA/NAFIPS'13*, pp. 974–979. Edmonton, Canada (2013)
- [517] Grzegorzewski, P., Gagolewski, M., Bobeck-Wesołowska, K.: *Wnioskowanie statystyczne z wykorzystaniem środowiska R. Biuro ds. Projektu „Program Rozwojowy Politechniki Warszawskiej”*, Warszawa (2014)
- [518] Grzegorzewski, P., Gagolewski, M., Hryniewicz, O., Ángeles Gil, M.: *Strengthening Links Between Data Analysis and Soft Computing, Advances in Intelligent Systems and Computing*, vol. 315. Springer (2015)
- [519] Grzegorzewski, P., Mrówka, E.: Some notes on (Atanassov's) intuitionistic fuzzy sets. *Fuzzy Sets and Systems* 156, 492–495 (2005)
- [520] Grzegorzewski, P.: Nearest interval approximation of a fuzzy number. *Fuzzy Sets and Systems* 130(3), 321–330 (2002)

- [521] Grzegorzewski, P.: Trapezoidal approximations of fuzzy numbers preserving the expected interval – Algorithms and properties. *Fuzzy Sets and Systems* 159(11), 1354–1364 (2008)
- [522] Grzegorzewski, P., Mrówka, E.: Trapezoidal approximations of fuzzy numbers. *Fuzzy Sets and Systems* 153(1), 115–135 (2005)
- [523] Grzegorzewski, P., Mrówka, E.: Trapezoidal approximations of fuzzy numbers – Revisited. *Fuzzy Sets and Systems* 158(7), 757–768 (2007)
- [524] Guan, J.C., Gao, X.: Exploring the h -index at patent level. *Journal of the American Society for Information Science and Technology* 60(1), 35–40 (2009)
- [525] Guerrini, L.: An extension of Witzgall’s result on convex metrics. *Divulgaciones Matemáticas* 13(2), 83–89 (2005)
- [526] Güngör, Z., Ünler, A.: K-harmonic means data clustering with simulated annealing heuristic. *Applied Mathematics and Computation* 184, 199–209 (2007)
- [527] Guns, R., Rousseau, R.: Real and rational variants of the h -index and the g -index. *Journal of Informetrics* 3(1), 64–71 (2009)
- [528] Guns, R., Rousseau, R.: Simulating growth of the h -index. *Journal of the American Society for Information Science and Technology* 60(2), 410–417 (2009)
- [529] Gupta, B.M., Sharma, L., Karisiddappa, C.R.: Modelling the growth of papers in a scientific speciality. *Scientometrics* 33(2), 187–201 (1995)
- [530] Halmos, P.: *Measure Theory*. Van Nostrand, New York (1950)
- [531] Hamming, R.W.: Error detecting and error correcting codes. *Bell System Technical Journal* 29(2), 147–160 (1950)
- [532] Hansen, N.: The CMA evolution strategy: A comparing review. In: Lozano, J., Larranga, P., Inza, I., Bengoetxea, E. (eds.) *Towards a new evolutionary computation. Advances in estimation of distribution algorithms*. pp. 75–102. Springer (2006)
- [533] Hanss, M.: *Applied Fuzzy Arithmetic*. Springer (2005)
- [534] Harel, D.: *Rzecz o istocie informatyki*. WNT, Warszawa (2001)
- [535] Harzing, A.W.K., van der Wal, R.: Google *Scholar* as a new source for citation analysis? *Ethics in Science and Environmental Politics* 8(1), 62–71 (2008)
- [536] Harzing, A.W., von der Wall, R.: A Google Scholar h -index for journals: An alternative metric to measure journal impact in economics and business. *Journal of the American Society for Information Science and Technology* 60(1), 41–46 (2009)
- [537] Hastie, T., Tibshirani, R., Friedman, J.: *The Elements of Statistical Learning*. Springer (2013)
- [538] Hastie, T., Tibshirani, R., Friedman, J.: *The Elements of Statistical Learning: Data Mining, Inference, and Prediction*. Springer-Verlag (2017)
- [539] He, X., Shi, P.: Monotone b-spline smoothing. *Journal of the American Statistical Association* 93(442) (1998)
- [540] Heip, C.: A new index measuring evenness. *Journal of Marine Biological Association of the United Kingdom* 54(3), 555–557 (1974)
- [541] Heller, M.: *Jak być uczonym*. Znak, Kraków (2009)
- [542] Helmers, R., Ruymgaart, F.H.: Asymptotic normality of generalized L-statistics with unbounded scores. *Journal of Statistical Planning and Inference* 19, 43–53 (1988)
- [543] Herrera, F., Herrera-Viedma, E., Verdegay, J.: Direct approach processes in group decision making using linguistic OWA operators. *Fuzzy Sets and Systems* 79(2), 175–190 (1996)
- [544] Herrera, F., Herrera-Viedma, E., Verdegay, J.: A rational consensus model in group decision making using linguistic assessments. *Fuzzy Sets and Systems* 88(1), 31–49 (1997)

- [545] Hettmansperger, T.P., Randles, R.H.: A practical affine equivariant multivariate median. *Biometrika* 89(4), 851–860 (2002)
- [546] Higham, N.: *Accuracy and Stability of Numerical Algorithms*. SIAM, Philadelphia (2002)
- [547] Higham, N.J.: The accuracy of floating point summation. *SIAM Journal on Scientific Computing* 14(4), 783–799 (1993)
- [548] Hilbert, D.: Über die stetige Abbildung einer Linie auf ein Flächenstück. *Mathematische Annalen* 38, 459–460 (1891)
- [549] Hirota, K.: Concepts of probabilistic sets. *Fuzzy Sets and Systems* 5, 31–46 (1981)
- [550] Hirsch, J.E.: An index to quantify individual’s scientific research output. *Proceedings of the National Academy of Sciences* 102(46), 16569–16572 (2005)
- [551] Hirsch, J.E.: Does the h -index have predictive power? *Proceedings of the National Academy of Sciences* 104(49), 19193–19198 (2007)
- [552] Hoare, C.: Algorithm 65: Find. *Communications of the ACM* 4(7), 321–322 (1961)
- [553] Hoeffding, W.: Probability inequalities for sums of bounded random variables. *Journal of the American Statistical Association* 58(301), 13–30 (1963)
- [554] Hoerl, A., Kennard, R.: Ridge regression: Biased estimation for nonorthogonal problems. *Technometrics* 12(1), 55–67 (1970)
- [555] Hopcroft, J., Ullman, J.: *Wprowadzenie do teorii automatów, języków i obliczeń*. PWN, Warszawa (2003)
- [556] Hornik, K., Murdoch, D.: Watch your spelling! *The R Journal* 3(2), 22–28 (2011)
- [557] Hornowska, E.: *Testy psychologiczne. Teoria i praktyka*. Scholar, Warszawa (2007)
- [558] Hou, H., Kretschmer, H., Liu, Z.: The structure of scientific collaboration networks in *Scientometrics*. *Scientometrics* 75(2), 189–202 (2008)
- [559] Hovden, R.: Bibliometrics for internet media: Applying the h -index to YouTube. *Journal of the American Society for Information Science and Technology* 64(11), 2326–2331 (2013)
- [560] Hryniewicz, O.: Statistics with fuzzy data in statistical quality control. *Soft Computing* 12(3), 229–234 (2008)
- [561] Huang, Y.S., Chang, W.C., Lin, Z.L.: Aggregation of utility-based individual preferences for group decision-making. *European Journal of Operational Research* 229, 462–469 (2013)
- [562] Huang, Y.S., Liao, J.T., Lin, Z.L.: A study on aggregation of group decisions. *Systems Research and Behavioral Science* 26(4), 445–454 (2009)
- [563] Huber, J.C.: A new method for analyzing scientific productivity. *Journal of the American Society for Information Science and Technology* 52(13), 1089–1099 (2001)
- [564] Huber, J.C.: A new model that generates Lotka’s law. *Journal of the American Society for Information Science and Technology* 53(3), 209–219 (2002)
- [565] Huber, P.J.: The 1972 Wald lecture robust statistics: A review. *Annals of Mathematical Statistics* 42(4), 1041–1067 (1972)
- [566] Huber, P.J.: Projection pursuit. *The Annals of Statistics* 13(2), 435–475 (1985)
- [567] Hufsky, F., Kuchenbecker, L., Jahn, K., Stoye, J., Böcker, S.: Swiftly computing center strings. *BMC Bioinformatics* 12, 106 (2011)
- [568] Hwang, Y.A.: An axiomatization of the Hirsch-index without adopting monotonicity. *Applied Mathematics and Information Sciences* 7(4), 1317–1322 (2013)
- [569] Hyndman, R.J., Fan, Y.: Sample quantiles in statistical packages. *The American Statistician* 50(4), 361–365 (1996)
- [570] Hüllermeier, E.: Cho-k-NN: A method for combining interacting pieces of evidence in case-based learning. In: *Proc. IJCAI’05* (2005)

- [571] Ibáñez, A., Larrañaga, P., Bielza, C.: Cluster methods for assessing research performance: Exploring Spanish computer science. *Scientometrics* 97(3), 571–600 (2013)
- [572] Inoue, J.I., Ghosh, A., Chatterjee, A., Chakrabarti, B.: Measuring social inequality with quantitative methodology: Analytical estimates and empirical data analysis by gini and k indices. *Physica A* 429, 184–204 (2015)
- [573] Irpino, A., Verde, R.: Dynamic clustering of interval data using a wasserstein-based distance. *Pattern Recognition Letters* 29(11), 1648–1658 (2008)
- [574] Istrăţescu, V.I.: *Inner Product Structures: Theory and Applications*. D. Reidel Publishing Company, Boston (1987)
- [575] Ivancheva, L.: Scientometrics today: A methodological overview. In: Kretschmer, H., Havemann, F. (eds.) *Proc. WIS 2008, 4th Intl. Conf. Webometrics, Informetrics and Scientometrics & 9th COLLNET Meeting*. Berlin (2008)
- [576] Jacso, P.: The plausability of computing the h -index of scholarly productivity and impact using reference-enhanced databases. *Online Information Review* 32(2), 266–283 (2008)
- [577] Jain, A., Law, M.: Data clustering: A user’s dilemma. *Lecture Notes in Computer Science* 3776, 1–10 (2005)
- [578] Jakubowski, J., Sztencel, R.: *Wstęp do teorii prawdopodobieństwa*. Script, Warszawa (2010)
- [579] James, D.A.: *RSQLite: SQLite interface for R* (2010), <http://CRAN.R-project.org/package=RSQLite>, R package version 0.9-4
- [580] Jamison, B., Orey, S., Pruitt, W.: Convergence of weighted averages of independent random variables. *Zeitschrift für Wahrscheinlichkeitstheorie und Verwandte Gebiete* 4(1), 40–44 (1965)
- [581] Jammalamadaka, S.R., SenGupta, A.: *Topics in Circular Statistics*. World Scientific Press, Singapore (2001)
- [582] Janssens, F., Zhang, L., Glänzel, W.: Hybrid clustering for validation and improvement of subject-classification schemes. *Information Processing and Management* 45(6), 638–702 (2009)
- [583] Jaroszewicz, S., Korzeń, M.: Arithmetic operations on independent random variables: A numerical approach. *SIAM Journal on Scientific Computing* 34, A1241–A1265 (2012)
- [584] Jaworski, P., Durante, F., Härdle, W., Rychlik, T.: *Copula Theory and Its Applications*. Springer-Verlag (2010)
- [585] Jenei, S., De Baets, B.: On the direct decomposability of t -norms on product lattices. *Fuzzy Sets and Systems* 139(3), 699–707 (2003)
- [586] Jensen, P., Rouquier, J.B., Croissant, Y.: Testing bibliometric indicators by their prediction of scientific promotions. *Scientometrics* 78(3), 467–479 (2009)
- [587] Jiang, H., Yi, S., Li, J., Yang, F., Hu, X.: Ant clustering algorithm with K -harmonic means clustering. *Expert Systems with Applications* 37, 8679–8684 (2010)
- [588] Jiang, X., Wentker, J., Ferrer, M.: Generalized median string computation by means of string embedding in vector spaces. *Pattern Recognition Letters* 33, 842–852 (2012)
- [589] Jin, B., Liang, L., Rousseau, R., Egghe, L.: The R - and AR -indices: Complementing the h -index. *Chinese Science Bulletin* 52(6), 855–863 (2007)
- [590] Johnson, R.: *Modern Geometry: An Elementary Treatise on the Geometry of the Triangle and the Circle*. Houghton Mifflin, Boston, MA (1929)
- [591] Johnson, S.G.: *The NLOpt nonlinear-optimization package* (2017), <http://ab-initio.mit.edu/nlopt>
- [592] Jones, O., Maillardet, R., Robinson, A.: *Introduction to Scientific Programming and Simulation Using R*. Chapman & Hall/CRC (2009)
- [593] Juan, A., Vidal, E.: Fast median search in metric spaces. *Lecture Notes in Computer Science* 1451, 905–912 (1998)

- [594] Kacprzyk, J., Zadrozny, S.: Computing with words for text categorization. *Studies in Fuzziness and Soft Computing* 209, 339–362 (2007)
- [595] Kahan, W.: Further remarks on reducing truncation errors. *Communications of the ACM* 8(1), 40 (1965)
- [596] Karaçal, F., Mesiar, R.: Uninorms on bounded lattices. *Fuzzy Sets and Systems* 261, 33–43 (2015)
- [597] Kärkkäinen, T., Äyrämö, S.: On computation of spatial median for robust data mining. In: Schilling, R., et al. (eds.) *Proc. EUROGEN 2005*, pp. 1–14 (2005)
- [598] Kate, S., Bhapkar, H.: *Basic of Mathematics*. Technical Publication Pune (2010)
- [599] Katsaros, D., Akritidis, L., Bozanis, P.: Spam: it’s not just for inboxes and search engines! Making Hirsch h -index robust to scientospam. *arXiv:0801.0386v1 [cs.DL]* (2008)
- [600] Kelly, C.D., Jennions, M.D.: The h index and career assessment by numbers. *TRENDS in Ecology and Evolution* 21(4), 167–170 (2006)
- [601] Kemeny, J.G.: Mathematics without numbers. *Daedalus* 88(4), 577–591 (1959)
- [602] Kerns, G.: *Introduction to Probability and Statistics Using R* (2011), www.ipsur.org
- [603] Kerre, E.E.: A tribute to Zadeh’s extension principle. *Scientia Iranica* 18(3), 593–595 (2011)
- [604] Kierzek, R.: Polska nauka w indeksie Hirscha. *Biuletyn MNiSW* 137(6–7), 29–35 (2008)
- [605] Kierzek, R.: Jak porównać „apples and oranges”, czyli o różnych metodach analizy publikowalności i dorobku naukowego. *Biuletyn MNiSW* 143(2), 33–41 (2009)
- [606] Kim, W.J., Ko, J.H., Chung, M.J.: Uncertain robot environment modelling using fuzzy numbers. *Fuzzy Sets and Systems* 61(1), 53–62 (1994)
- [607] Kimberling, C.: Central points and central lines in the plane of a triangle. *Mathematics Magazine* 67(3), 163–187 (1994)
- [608] Kimberling, C.: Triangle centers and central triangles. *Congressus Numerantium* 129, 1–295 (1998)
- [609] Kitagawa, T.: On some class of weighted means. *Proceedings of the Physico-Mathematical Society of Japan* 16 (1934)
- [610] Kleene, S.C.: On the forms of the predicates in the theory of constructive ordinals. *American Journal of Mathematics* 77(3), 405–428 (1955)
- [611] Klement, E., Mesiar, R., Pap, E.: A universal integral as common frame for Choquet and Sugeno integral. *IEEE Transactions on Fuzzy Systems* 18, 178–187 (2010)
- [612] Klement, E.P., Mesiar, R.: Monotone measures-based integrals. In: Kacprzyk, J., Pedrycz, W. (eds.) *Handbook of Computational Intelligence*, pp. 61–74. Springer (2015)
- [613] Klement, E.P., Manzi, M., Mesiar, R.: Ultramodular aggregation functions. *Information Sciences* 181, 4101–4111 (2011)
- [614] Klement, E.P., Mesiar, R., Pap, E.: *Triangular norms*. Kluwer Academic Publishers (2000)
- [615] Klement, E.P., Mesiar, R., Pap, E.: Triangular norms. Position paper I: Basic analytical and algebraic properties. *Fuzzy Sets and Systems* 143, 5–26 (2004)
- [616] Klement, E.P., Mesiar, R., Pap, E.: Triangular norms. Position paper II: General constructions and parametrized families. *Fuzzy Sets and Systems* 145, 411–438 (2004)
- [617] Klement, E.P., Mesiar, R., Pap, E.: Triangular norms. Position paper III: Continuous t-norms. *Fuzzy Sets and Systems* 145, 439–454 (2004)
- [618] Klir, G.J., Yuan, B.: *Fuzzy sets and fuzzy logic. Theory and applications*. Prentice Hall PTR, New Jersey (1995)
- [619] Knuth, D.: *Literate Programming*. CSLI (1992)
- [620] Knuth, D.: *Sztuka programowania. Tom I. Algorytmy podstawowe*. WNT, Warszawa (2002)

- [621] Knuth, D.: Sztuka programowania. Tom II. Algorytmy seminumeryczne. WNT, Warszawa (2002)
- [622] Knuth, D.: Sztuka programowania. Tom III. Sortowanie i wyszukiwanie. WNT, Warszawa (2002)
- [623] Knuth, D.: TeX. Podręcznik użytkownika. WNT, Warszawa (2005)
- [624] Knuth, D.E.: The Art of Computer Programming. Volume 2. Seminumerical Algorithms. Addison Wesley, Reading, MA (1998)
- [625] Kobus, M.: Attribute decomposition of multidimensional inequality indices. *Economics Letters* 117(1), 189–191 (2012)
- [626] Kobus, M., Miłoś, P.: Inequality decomposition by population subgroups for ordinal data. *Journal of Health Economics* 31(1), 15–21 (2012)
- [627] Kohonen, T., Somervuo, P.J.: Self-organizing maps of symbol strings. *Neurocomputing* 21, 19–30 (1998)
- [628] Kojadinovic, I.: Unsupervised aggregation by the Choquet integral based on entropy functionals: Application to the evaluation of students. *Lecture Notes in Computer Science* 3131, 163–174 (2004)
- [629] Kojadinovic, I.: Unsupervised aggregation of commensurate correlated attributes by means of the Choquet integral and entropy functionals. *International Journal of Intelligent Systems* 23(2), 128–154 (2008)
- [630] Kojadinovic, I., Marichal, J.L.: On the moments and distribution of discrete Choquet integrals from continuous distributions. *Journal of Computational and Applied Mathematics* 230, 83–94 (2009)
- [631] Kołacz, A., Grzegorzewski, P.: Measures of dispersion for multidimensional data. *European Journal of Operational Research* 251(3), 930–937 (2016)
- [632] Kolesárová, A., Mayor, G., Mesiar, R.: Weighted ordinal means. *Information Sciences* 177, 3822–3830 (2007)
- [633] Kolesárová, A., Mesiar, R., Montero, J.: Sequential aggregation of bags. *Information Sciences* 294, 305–314 (2015)
- [634] Kolmogorov, A.: Sur la notion de la moyenne. *Atti della R. Accademia nazionale dei Lincei* 12, 388–391 (1930)
- [635] Komorníková, M., Mesiar, R.: Aggregation functions on bounded partially ordered sets and their classification. *Fuzzy Sets and Systems* 175, 48–56 (2011)
- [636] Kononen, T.: Median strings. *Pattern Recognition Letters* 3, 309–313 (1985)
- [637] Koppel, M., Schler, J., Argamon, S.: Computational methods in authorship attribution. *Journal of the American Society for Information Science and Technology* 60(1), 9–26 (2009)
- [638] Koronacki, J., Ćwik, J.: Statystyczne systemy uczące się. WNT, Warszawa (2005)
- [639] Koronacki, J., Mielniczuk, J.: Statystyka. WNT, Warszawa (2001)
- [640] Korzeń, M., Jaroszewicz, S.: PaCAL: A Python package for arithmetic computations with random variables. *Journal of Statistical Software* 57(10), 1–34 (2014)
- [641] Koshevoy, G., Mosler, K.: Zonoid trimming for multivariate distributions. *The Annals of Statistics* 25(5) (1997)
- [642] Kosmulski, M.: A new Hirsch-type index saves time and works equally well as the original h -index. *ISSI Newsletter* 2(3), 4–6 (2006)
- [643] Kosmulski, M.: MAXPROD — A new index for assessment of the scientific output of an individual, and a comparison with the h -index. *Cybermetrics* 11(1), 5 (2007)
- [644] Kostal, L., Lansky, P., Pokora, O.: Measures of statistical dispersion based on Shannon and Fisher information concepts. *Information Sciences* 235, 214–223 (2013)
- [645] Kostoff, R.N.: The use and misuse of citation analysis in research evaluation. *Scientometrics* 43(1), 27–43 (1998)
- [646] Krarup, J., Vajda, S.: On Torricelli’s geometrical solution to a problem of Fermat. *IMA Journal of Management Mathematics* 8, 215–223 (1997)

- [647] Krause, A., Olson, M.: The Basics of S-PLUS. Springer-Verlag (2005)
- [648] Krebs, C.: Ecological Methodology. Harper Collins, New York (1989)
- [649] Kruskal, J.B.: An overview of sequence comparison: Time warps, string edits, and macromolecules. SIAM Review 25(2), 201–237 (1983)
- [650] Kuhn, T.S.: Struktura rewolucji naukowych. Aletheia, Warszawa (2001)
- [651] Kuhn, T.S.: Przewrót kopernikański. Astronomia planetarna w dziejach myśli Zachodu. Prószyński i s-ka, Warszawa (2006)
- [652] Kulczycki, P., Kowalski, P.A.: Bayes classification of imprecise information of interval type. Control and Cybernetics 40(1), 101–123 (2011)
- [653] Kullback, S., Leibler, R.: On information and sufficiency. Annals of Mathematical Statistics 22(1), 79–86 (1951)
- [654] Kuś, M., Mankiewicz, L., Życzkowski, K.: Porównywanie indeksów Hirscha uczonych i instytucji naukowych. Biuletyn MNiSW 144(3), 30–33 (2009)
- [655] Kwakernaak, H.: Fuzzy random variables: I. Definitions and theorems. Information Sciences 15(1), 1–29 (1978)
- [656] Kärkkäinen, I., Fränti, P.: Dynamic local search algorithm for the clustering problem. In: Proc. 16th Intl. Conf. Pattern Recognition’02, vol. 2, pp. 240–243. IEEE (2002)
- [657] Lanctot, J.K., Li, M., Ma, B., Wang, S., Zhang, L.: Distinguishing string selection problems. Information and Computation 185, 41–55 (2003)
- [658] Land, A.H., Doig, A.G.: An automatic method of solving discrete programming problems. Econometrica 28(3), 497–520 (1960)
- [659] Lang, R.: A note on the measurability of convex sets. Arch. Math 47, 90–92 (1986)
- [660] Lange, K.: Numerical Analysis for Statisticians. Springer-Verlag (2010)
- [661] Langerman, S., Steiger, W.: Computing a maximal depth point in the plane. In: Proc. Japan Conf. Discrete and Computational Geometry, pp. 46–47 (2000)
- [662] Langerman, S., Steiger, W.: Computing a high depth point in the plane. In: Developments in Robust Statistics, pp. 228–234 (2003)
- [663] Lasek, J., Gagolewski, M.: Estimation of tournament metrics for association football league formats. In: Selected problems in information technologies (Proc. ITRIA’15 vol. 2), pp. 67–78. Institute of Computer Science, Polish Academy of Sciences (2015)
- [664] Lasek, J., Gagolewski, M.: The winning solution to the AAIA’15 Data Mining Competition: Tagging firefighter activities at a fire scene. In: Ganzha, M., Maciaszek, L., Paprzycki, M. (eds.) Proc. FedCSIS’15, pp. 375–380. IEEE (2015)
- [665] Lasek, J., Szlavik, Z., Gagolewski, M., Bhulai, S.: How to improve a team’s position in the FIFA ranking – A simulation study. Journal of Applied Statistics 43(7), 1349–1368 (2016)
- [666] Lavine, M.: Introduction to Statistical Thought (2010), www.math.umass.edu/~lavine/Book/book.html
- [667] Lawrence, M., Temple Lang, D.: RGtk2: A graphical user interface toolkit for R. Journal of Statistical Software 37(8), 1–52 (2010)
- [668] Lázaro, J., Calvo, T.: XAO operators – The interval universe. In: Proc. Eusflat/LFA’05, pp. 189–197 (2005)
- [669] Le Gall, F.: Powers of tensors and fast matrix multiplication. In: Proc. 39th Intl. Symp. Symbolic and Algebraic Computation (ISSAC’14), pp. 296–303. ACM, New York (2014)
- [670] Lee, E.: A simplified B-spline computation routine. Computing 29(4), 365–371 (1982)
- [671] Legendre, P., Legendre, L.: Numerical Ecology. Elsevier Science BV, Amsterdam (2003)
- [672] Lehmann, E.L.: Ordered families of distributions. Annals of Mathematical Statistics 26, 399–419 (1955)

- [673] Lehmann, E., Casella, G.: Theory of Point Estimation. Springer, New York (1988)
- [674] Lehmann, S., Jackson, A.D., Lautrup, B.E.: Measures for measures. *Nature* 444, 1003–1004 (2006)
- [675] Lehmann, S., Jackson, A.D., Lautrup, B.E.: A quantitative analysis of indicators of scientific performance. *Scientometrics* 76(2), 369–390 (2008)
- [676] Lehrer, E.: A new integral for capacities. *Economic Theory* 39(1), 157–176 (2009)
- [677] Lehtonen, E., Marichal, J.L., Teheux, B.: Associative string functions. *Asian-European Journal of Mathematics* 7, 1450059 (2014)
- [678] Leisch, F.: A toolbox for K-centroids cluster analysis. *Computational Statistics & Data Analysis* 51(2), 526–544 (2006)
- [679] Leisch, F., Grün, B.: Extending standard cluster algorithms to allow for group constraints. In: Rizzi, A., Vichi, M. (eds.) *Proc. Computational Statistics (Compstat’06)*, pp. 885–892. Physica Verlag, Heidelberg, Germany (2006)
- [680] Lenstra Jr., H.: Integer programming with a fixed number of variables. *Mathematics of Operations Research* 8(4), 538–548 (1983)
- [681] Lessmann, M., Würtz, R.P.: Fast nearest neighbor search in pseudosemimetric spaces. In: *Proc. VIS-APP’12*, pp. 667–674 (2012)
- [682] Levenshtein, V.I.: Binary codes capable of correcting deletions, insertions, or reversals. *Soviet Physics Doklady* 10(8), 707–710 (1966)
- [683] Ley, C., Sabbah, C., Verdebout, T.: A new concept of quantiles for directional data and the angular Mahalanobis depth. *Electronic Journal of Statistics* 8(1), 795–816 (2014)
- [684] Leydesdorff, L.: Various methods for the mapping of science. *Scientometrics* 11(5–6), 295–324 (1987)
- [685] Leydesdorff, L.: Theories of citation? *Scientometrics* 43(1), 5–25 (1998)
- [686] Leydesdorff, L.: The non-linear dynamics of meaning-processing in social systems. *Social Science Information* 48(1), 5–33 (2009)
- [687] Leydesdorff, L., Opthof, T.: Scopus’ source normalized impact per paper (snip) versus the journal impact factor based on fractional counting of citations. *Journal of the American Society for Information Science and Technology* 61(11), 2365–2396 (2010)
- [688] Li, J., Liu, R.Y.: New nonparametric tests of multivariate locations and scales using data depth. *Statistical Science* 19(4), 686–696 (2004)
- [689] Li, M., Ma, B., Wang, L.: On the closest string and substring problems. *Journal of the ACM* 49(2), 157–171 (2002)
- [690] Li, W.: Random texts exhibit Zipf’s-law-like word frequency distribution. *IEEE Transactions on Information Theory* 38(6), 1842–1845 (1992)
- [691] Lin, S.: Rank aggregation methods. *Wiley Interdisciplinary Reviews: Computational Statistics* 2(5), 555–570 (2010)
- [692] Lipschitz, R.O.S.: De explicatione per series trigonometricas instituenda functionum unius variabilis arbitrariarum, et praecipue earum, quae per variabilis spatium finitum valorum maximorum et minimorum numerum habent infinitum, disquisitio. *Journal für die reine und angewandte Mathematik* 63(2), 296–308 (1864)
- [693] Lisee, C., Larivière, V., Archambault, E.: Conference proceedings as a source of scientific information: A bibliometric analysis. *Journal of the American Society for Information Science and Technology* 59(11), 1776–1784 (2008)
- [694] Liu, R.Y.: On a notion of data depth based on random simplices. *Annals of Statistics* 18, 405–414 (1990)
- [695] Liu, R.Y., Parelius, J.M., Singh, K.: Multivariate analysis by data depth: Descriptive statistics, graphics and inference. *The Annals of Statistics* 27(3), 783–858 (1999)

- [696] Liu, R.Y., Singh, K.: Ordering directional data: Concepts of data depth on circles and spheres. *The Annals of Statistics* 20(3), 1468–1484 (1992)
- [697] Liu, Y., Rousseau, R.: Hirsch-type indices and library management: The case of Tongji University Library. In: Torres-Salinas, D., Moed, H.F. (eds.) *Proc. ISSI 2007*. pp. 514–522. CINDOC-CSIC, Madrid (2007)
- [698] Liu, Y., Rousseau, R.: Definitions of time series in citation analysis with special attention to the h -index. *Journal of Informetrics* 2(3), 202–210 (2008)
- [699] Lizasoain, I.: Quasi-OWA operators on complete lattices. In: Bustince, H., Fernandez, J., Mesiar, R., Calvo, T. (eds.) *Aggregation Functions in Theory and in Practice (AISC 228)*, pp. 521–532. Springer-Verlag (2013)
- [700] Lizasoain, I., Moreno, C.: OWA operators defined on complete lattices. *Fuzzy Sets and Systems* 224, 36–52 (2013)
- [701] Lopuhaä, H.P., Rousseeuw, P.J.: Breakdown points of affine equivariant estimators of multivariate location and covariance matrices. *The Annals of Statistics* 19(1), 229–248 (1991)
- [702] Lovisolo, L., da Silva, E.A.B.: Uniform distribution of points on a hyper-sphere with applications to vector bit-plane encoding. *IEE Proceedings on Vision, Image and Signal Processing* 148(3), 187–193 (2001)
- [703] Lowrance, R., Wagner, R.A.: An extension of the string-to-string correction problem. *Journal of the ACM* 22(2), 177–183 (1975)
- [704] Lucca, G., Sanz, J., Pereira Dimuro, G., Bedregal, B., Mesiar, R., Kolesárová, A., Bustince, H.: Pre-aggregation functions: construction and an application. *IEEE Transactions on Fuzzy Systems* (2015), in press, doi:10.1109/TFUZZ.2015.2453020
- [705] Lucchetti, R.: *Convexity and Well-Posed Problems*. CMS Books in Mathematics (2006)
- [706] Luceno, A.: Fitting the Generalized Pareto Distribution to data using maximum goodness-of-fit estimators. *Computational Statistics and Data Analysis* 1(2), 904–917 (2006)
- [707] Ma, N., Guan, J., Zhao, Y.: Bringing PageRank to the citation analysis. *Information Processing & Management* 44, 800–810 (2008)
- [708] MacQueen, J.B.: Some methods for classification and analysis of multivariate observations. In: *Proc. Fifth Berkeley Symp. on Math. Statist. and Prob.*, vol. 1, pp. 281–297. University of California Press, Berkeley (1967)
- [709] MacRoberts, M.H., MacRoberts, B.R.: Problems of citation analysis: A study of uncited and seldom-cited influences. *Journal of the American Society for Information Science and Technology* 61(1), 1–13 (2010)
- [710] Magiera, R.: *Modele i metody statystyki matematycznej. Część I. Rozkłady i symulacja stochastyczna*. GiS, Wrocław (2007)
- [711] Magiera, R.: *Modele i metody statystyki matematycznej. Część II. Wnioskowanie statystyczne*. GiS, Wrocław (2007)
- [712] Mahalanobis, P.: On the generalized distance in statistics. *Proceedings of the National Institute of Sciences of India* 12, 49–55 (1936)
- [713] Makino, J.: Productivity of research groups — Relation between citation analysis and reputation within research communities. *Scientometrics* 43(1), 87–93 (1998)
- [714] Mallig, N.: A relational database for bibliometric analysis. *Journal of Informetrics* 4(4), 564–580 (2010)
- [715] Marchant, T.: An axiomatic characterization of the ranking based on the h -index and some other bibliometric rankings of authors. *Scientometrics* 80(2), 325–342 (2009)
- [716] Marchant, T.: Score-based bibliometric rankings of authors. *Journal of the American Society for Information Science and Technology* 60(6), 1132–1137 (2009)
- [717] Mardia, K.: Statistics of directional data. *Journal of the Royal Statistical Society. Series B (Methodological)* 37(3), 349–393 (1975)

- [718] Mardia, K., Jupp, E.: Directional Statistics. Wiley (1999)
- [719] Marichal, J.L.: An axiomatic approach of the discrete Choquet integral as a tool to aggregate interacting criteria. *IEEE Transactions on Fuzzy Systems* 8(6), 800–807 (2000)
- [720] Marichal, J.L.: On an axiomatization of the quasi-arithmetic mean values without the symmetry axiom. *Æquationes Mathematicæ* 59(1–2), 74–83 (2000)
- [721] Marichal, J.L.: On Sugeno integral as an aggregation function. *Fuzzy Sets and Systems* 114, 347–365 (2000)
- [722] Marichal, J.L.: On the associativity functional equation. *Fuzzy Sets and Systems* 114(3), 381–389 (2000)
- [723] Marichal, J.L.: On order invariant synthesizing function. *Journal of Mathematical Psychology* 46(6), 661–676 (2002)
- [724] Marichal, J.L.: Cumulative distribution functions and moments of lattice polynomials. *Statistics and Probability Letters* 76, 1273–1279 (2006)
- [725] Marichal, J.L.: k -intolerant capacities and Choquet integrals. *European Journal of Operational Research* 177(3), 1453–1468 (2007)
- [726] Marichal, J.L.: Weighted lattice polynomials of independent random variables. *Discrete Applied Mathematics* 156, 685–694 (2008)
- [727] Marichal, J.L.: Weighted lattice polynomials. *Discrete Mathematics* 309, 814–820 (2009)
- [728] Marichal, J.L., Kojadinovic, I.: Distribution functions of linear combinations of lattice polynomials from the uniform distribution. *Statistics and Probability Letters* 78, 985–991 (2008)
- [729] Marichal, J.L., Mathonet, P.: On comparison meaningfulness of aggregation functions. *Journal of Mathematical Psychology* 45(2), 213–223 (2001)
- [730] Marichal, J.L., Mathonet, P., Tousset, E.: Characterization of some aggregation functions stable for positive linear transformations. *Fuzzy Sets and Systems* 102, 293–314 (1997)
- [731] Marichal, J.L., Mesiar, R.: Aggregation on finite ordinal scales by scale independent functions. *Order* 21(2), 155–180 (2004)
- [732] Marichal, J.L., Mesiar, R., Rückschlossova, T.: A complete description of comparison meaningful functions. *Æquationes Mathematicæ* 69, 309–320 (2005)
- [733] Marichal, J.L., Rubens, M.: Characterization of some stable aggregation functions. In: *Proc. 1st Conf. Industrial Engineering and Production Management (IEPM'93)*, pp. 187–196 (1993)
- [734] Marichal, J.L., Teheux, B.: Preassociative aggregation functions. *Fuzzy Sets and Systems* 268, 15–26 (2015)
- [735] Marsaglia, G.: Choosing a point from the surface of a sphere. *Annals of Mathematical Statistics* 43, 645–646 (1972)
- [736] Marsaglia, G., Marsaglia, J.: Evaluating the Anderson-Darling distribution. *Journal of Statistical Software* 9(2) (2004)
- [737] Martín, J., Mayor, G., Suñer, J.: On dispersion measures. *Mathware & Soft Computing* 8, 227–237 (2001)
- [738] Martin, J., Mayor, G.: Aggregating pairwise distance values. In: *Proc. EUROFUSE'09*, pp. 147–152 (2009)
- [739] Martin, J., Mayor, G.: How separated Palma, Inca and Manacor are? In: *Proc. AGOP 2009*, pp. 195–200 (2009)
- [740] Martin, J., Mayor, G.: Some properties of multi-argument distances and Fermat multidistance. In: Hüllermeier, E., et al. (eds.) *Information Processing and Management of Uncertainty in Knowledge-Based Systems*, vol. 80, pp. 703–711. Springer-Verlag (2010)
- [741] Martin, J., Mayor, G.: Multi-argument distances. *Fuzzy Sets and Systems* 167, 92–100 (2011)

- [742] Martín, J., Mayor, G.: Dispersion measures and multidistances on \mathbb{R}^k . In: Ferraro, M.B., et al. (eds.) *Soft Methods for Data Science*, pp. 347–354. Springer (2017)
- [743] Martin, J., Mayor, G., Valero, O.: A fixed point theorem for asymmetric distances via aggregation functions. In: *Proc. 6th Intl. Summer School on Aggregation Operators (AGOP 2011)*, pp. 217–222. Benevento, Italy (2011)
- [744] Martin, J., Mayor, G., Valero, O.: Functionally expressible multidistances. In: Galichet, S., et al. (eds.) *Proc. Eusflat/LFA’11*, pp. 41–46 (2011)
- [745] Martínez-Hinarejos, C., Juan, A., Casacuberta, F.: Median strings for k -nearest neighbour classification. *Pattern Recognition Letters* pp. 173–181 (2003)
- [746] Martínez-Panero, M., García-Lapresta, J.L., Meneses, L.C.: Multidistances and dispersion measures. *Studies in Fuzziness and Soft Computing* 339, 123–134 (2016)
- [747] Marzal, A., Vidal, E.: Computation of normalized edit distance and applications. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 15(9), 926–932 (1993)
- [748] Masek, W.J., Pateson, M.S.: A faster algorithm computing string edit distances. *Journal of Computer and System Sciences* 20, 18–31 (1980)
- [749] Massé, J.C.: Multivariate trimmed means based on the Tukey depth. *Journal of Statistical Planning and Interference* 139, 366–384 (2009)
- [750] Massé, J.C., Plante, J.F.: A Monte Carlo study of the accuracy and robustness of ten bivariate location estimators. *Computational Statistics & Data Analysis* 42, 1–26 (2003)
- [751] Matloff, N., Salzman, P.: *The Art of Debugging with GDB, DDD, and Eclipse*. No Starch Press (2008)
- [752] Matloff, N.: *The Art of R Programming: A Tour of Statistical Software Design*. No Starch Press (2011)
- [753] Matsumoto, M., Nishimura, T.: Mersenne twister: A 623-dimensionally equidistributed uniform pseudo-random number generator. *ACM Transactions on Modeling and Computer Simulation* 8(1), 3–30 (1998)
- [754] May, K.O.: A set of independent necessary and sufficient conditions for simple majority decision. *Econometrica* 20(4), 680–684 (1952)
- [755] May, K.O.: A note of the complete independence of the conditions for simple majority decision. *Econometrica* 21(1), 172–173 (1953)
- [756] Mayor, G., Calvo, T.: On extended aggregation functions. In: *Proc. IFSA 1997*, vol. 1, pp. 281–285. Academia, Prague (1997)
- [757] Mays, E., Damerau, F.J., Mercer, R.L.: Context based spelling correction. *Information Processing & Management* 27(2), 517–522 (1991)
- [758] Mazumdar, A., Polyanskiy, Y., Saha, B.: On Chebyshev radius of a set in Hamming space and the closest string problem. In: *Proc. IEEE Intl. Symp. Information Theory*, pp. 1401–1405. IEEE (2013)
- [759] Meho, L.I., Rogers, Y.: Citation counting, citation ranking, and h -index of human-computer interaction researchers: A comparison between *Scopus* and *Web of Science*. *Journal of the American Society for Information Science and Technology* 59(11), 1711–1726 (2008)
- [760] Meho, L.I., Sugimoto, C.R.: Assessing the scholarly impact of information studies: A tale of two citation databases — *Scopus* and *Web of Science*. *Journal of the American Society for Information Science and Technology* 60(12), 2499–2508 (2009)
- [761] Mendel, F., Nad, T., Schläffer, M.: Improving local collisions: New attacks on reduced SHA-256. *Lecture Notes in Computer Science* 7881, 262–278 (2013)
- [762] Meneses, C.N., Lu, Z., Oliveira, C.A.S., Pardalos, P.M.: Optimal solutions for the closest-string problem via integer programming. *INFORMS Journal on Computing* 16(4), 419–429 (2004)
- [763] Merigó, J.M., Casanovas, M., Yang, J.B.: Group decision making with expertons and uncertain generalized probabilistic weighted aggregation operators. *European Journal of Operational Research* 235, 215–224 (2014)

- [764] Mesiar, R.: Integration based on decomposition, seminar tutorial slides, Warsaw, Poland, December 11, 2014.
- [765] Mesiar, R.: Fuzzy set approach to the utility, preference relations, and aggregation operators. *European Journal of Operational Research* 176, 414–422 (2007)
- [766] Mesiar, R., Gagolewski, M.: H-index and other Sugeno integrals: Some defects and their compensation. *IEEE Transactions on Fuzzy Systems* 24(6), 1668–1672 (2016)
- [767] Mesiar, R., Kolesárová, A., Komorníková, M.: Aggregation functions on $[0, 1]$. In: Kacprzyk, J., Pedrycz, W. (eds.) *Handbook of Computational Intelligence*, pp. 61–74. Springer (2015)
- [768] Mesiar, R., Mesiarová-Zemánková, A.: The ordered modular averages. *IEEE Transactions on Fuzzy Systems* 19(1), 42–50 (2011)
- [769] Mesiar, R., Pap, E.: Aggregation of infinite sequences. *Information Sciences* 178, 3557–3564 (2008)
- [770] Mesiar, R., Rückschlossova, T.: Characterization of invariant aggregation operators. *Fuzzy Sets and Systems* 142, 63–73 (2004)
- [771] Mesiar, R., Stupňanová, A.: Decomposition integrals. *International Journal of Approximate Reasoning* 54(8), 1252–1259 (2013)
- [772] Meyer, D., Hornik, K.: *relations: Data Structures and Algorithms for Relations* (2013), <http://CRAN.R-project.org/package=relations>, r package version 0.6-2
- [773] Micó, L., Oncina, J.: An approximate median search algorithm in non-metric spaces. *Pattern Recognition Letters* 22, 1145–1151 (2001)
- [774] Milasevic, P., Ducharme, G.: Uniqueness of the spatial median. *The Annals of Statistics* 15(3), 1332–1333 (1987)
- [775] Milligan, G.W.: Ultrametric hierarchical clustering algorithms. *Psychometrika* 44(3), 343–346 (1979)
- [776] Mingers, J., Lipkins, E.A.: Counting the citations: A comparison of *Web of Science* and *Google Scholar* in the field of business and management. *Scientometrics* 85, 613–625 (2010)
- [777] Miroiu, A.: Axiomatizing the hirsch index: Quantity and quality disjointed. *Journal of Informetrics* 7, 10–15 (2013)
- [778] Mittal, H.: *R Graphs Cookbook*. Packt Publishing (2011)
- [779] Miyamoto, S.: Application of rough sets to information retrieval. *Journal of the American Society for Information Science* 49(3), 195–205 (1998)
- [780] Moed, H.F.: Measuring contextual citation impact of scientific journals. *Journal of Informetrics* 4(3), 265–277 (2010)
- [781] Molinari, J.: A calibrated index for the measurement of evenness. *Oikos* 56, 319–326 (1989)
- [782] Monahan, J.: *Numerical Methods of Statistics*. Oxford University Press (2001)
- [783] Moore, R.: Interval arithmetic and automatic error analysis in digital computing. Tech. Rep. 25 NR-0440211, Department of Mathematics, Stanford University, Stanford, California (1962)
- [784] Morgan, H.L.: Spelling correction in systems programs. *Journal of the ACM* 13(2), 90–94 (1970)
- [785] Mosteller, C.F., Tukey, J.W.: *Data analysis and regression*. Addison-Wesley, Reading, Mass. (1977)
- [786] Möttönen, J., Nordhausen, K., Oja, H.: Asymptotic theory of the spatial median. *Nonparametrics and Robustness in Modern Statistical Inference and Time Series* 7, 182–193 (2010)
- [787] M.R. Garey, D.S. Johnson, H.W.: The complexity of the generalized Lloyd-Max problem. *IEEE Transactions on Information Theory* IT-28(2), 255–256 (1982)
- [788] Muenchen, R.: *R for SAS and SPSS Users*. Springer-Verlag (2011)
- [789] Muenchen, R., Hilbe, J.: *R for Stata Users*. Springer-Verlag (2010)

- [790] Müllner, D.: Modern hierarchical, agglomerative clustering algorithms. ArXiv:1109.2378 [stat.ML] (2011), <http://arxiv.org/abs/1109.2378>
- [791] Müllner, D.: fastcluster: Fast hierarchical, agglomerative clustering routines for R and Python. *Journal of Statistical Software* 53(9), 1–18 (2013)
- [792] Murrell, P.: *R Graphics*. Chapman & Hall/CRC (2006)
- [793] Murrell, P.: Raster images in R graphics. *The R Journal* 3(1), 48–54 (2011)
- [794] Nagumo, M.: Über eine Klasse der Mittelwerte. *Japanese Journal of Mathematics* 7, 71–79 (1930)
- [795] Nair, G.M., Turlach, B.A.: The stochastic h -index. *Journal of Informetrics* 6(1), 80–87 (2012)
- [796] Narukawa, Y., Torra, V.: Multidimensional generalized fuzzy integral. *Fuzzy Sets and Systems* 160, 802–815 (2009)
- [797] Nasibov, E., Kandemir-Cavas, C.: OWA-based linkage method in hierarchical clustering: Application on phylogenetic trees. *Expert Systems with Applications* 38, 12684–12690 (2011)
- [798] Nasibov, E.N., Peker, S.: On the nearest parametric approximation of a fuzzy number. *Fuzzy Sets and Systems* 159(11), 1365–1375 (2008)
- [799] Navarro, G.: A guided tour to approximate string matching. *ACM Computing Surveys* 33(1), 31–88 (2001)
- [800] Nee, S., Harvey, P., Cotgreave, P.: Population persistence and the natural relationship between body size and abundance. In: *Conservation of biodiversity for sustainable development*, pp. 124–136. Scandinavian University Press, Oslo (1992)
- [801] Needleman, S., Wunsch, C.D.: A general method applicable to the search of similarities in the amino acid sequence of two proteins. *Journal of Molecular Biology* 48, 443–453 (1970)
- [802] Nelder, J., Mead, R.: A simplex method for function minimization. *Computer Journal* 7, 308–313 (1965)
- [803] Nelsen, R.: *An Introduction to Copulas*. Springer-Verlag (1999)
- [804] Nicholls, P.T.: Estimation of Zipf parameters. *Journal of the American Society for Information Science* 38(6), 443–445 (1987)
- [805] Nicholls, P.T.: Bibliometric modeling processes and the empirical validity of Lotka’s law. *Journal of the American Society for Information Science* 40(6), 379–385 (1989)
- [806] Nicolas, F., Rivals, E.: Complexities of the centre and median string problems. *Lecture Notes in Computer Science* 2676, 315–327 (2003)
- [807] Nicolas, F., Rivals, E.: Hardness results for the center and median string problems under the weighted and unweighted edit distances. *Journal of Discrete Algorithms* 3(2–4), 390–415 (2005)
- [808] Nicolini, C., Vakula, S., Italo Balla, M., Gandini, E.: Can the assignment of university chairs be automated? *Scientometrics* 32(2), 93–107 (1995)
- [809] Nienkötter, A., Jiang, X.: Improved prototype embedding based generalized median computation by means of refined construction methods. *Lecture Notes in Computer Science* 10029, 107–117 (2016)
- [810] Niinimaa, A., Oja, H., Nyblom, J.: Algorithm AS 277: The Oja bivariate median. *Journal of the Royal Statistical Society. Series C (Applied Statistics)* 41(3), 611–633 (1992)
- [811] Niinimaa, A., Oja, H., Tableman, M.: The finite-sample breakdown point of the oja bivariate median and of the corresponding half-samples version. *Statistics & Probability Letters* 10, 325–328 (1990)
- [812] Nocedal, J., Wright, S.: *Numerical Optimization*. Springer-Verlag, New York (2006)
- [813] Noda, R., Sakai, T., Morimoto, M.: Generalized Fermat’s problem. *Canadian Mathematical Bulletin* 34, 96–104 (1991)
- [814] Norris, M., Oppenheim, C.: Peer review and the h -index: Two studies. *Journal of Informetrics* 4, 221–232 (2010)
- [815] Nowak, P.: *Bibliometria. Webometria. Podstawy. Wybrane zastosowania*. UAM, Poznań (2008)

- [816] Oetiker, T., Przechlewski, T., i in., R.K.: Nie za krótkie wprowadzenie do systemu L^AT_EX 2_ε (2007), <ftp.gust.org.pl/pub/CTAN/info/lshort/polish/lshort2e.pdf>
- [817] Ohki, M., Murofushi, T.: A ranking methodology using a new dispersion criterion on a group decision making. In: Proc. SCIS-ISIS 2012. pp. 1649–1653 (2012)
- [818] Oja, H.: Descriptive statistics for multivariate distributions. *Statistics & Probability Letters* 1, 327–332 (1983)
- [819] Olivares-Rodríguez, C., Oncina, J.: A stochastic approach to median string computation. *Lecture Notes in Computer Science* 5342, 431–440 (2008)
- [820] Olson, C.F.: Parallel algorithms for hierarchical clustering. *Parallel Computing* 21, 1313–1325 (1995)
- [821] Oommen, B.: Constrained string editing. *Information Sciences* 40, 267–284 (1986)
- [822] Orlov, A.I.: The connection between mean quantities and admissible transformations. *Mathematical Notes* 30(4), 774–778 (1981)
- [823] Ortega, J.L., López-Romero, E., Fernández, I.: Multivariate approach to classify research institutes according to their outputs: The case of the CSIC’s institutes. *Journal of Informetrics* 5, 323–332 (2011)
- [824] Otieno, B.S.: An Alternative Estimate of Preferred Direction for Circular Data. Ph.D. thesis, Virginia Polytechnic Institute and State University (2002)
- [825] Ovchinnikov, S.: Means on ordered sets. *Mathematical Social Sciences* 32, 39–56 (1996)
- [826] Ovchinnikov, S.: Invariant functions on simple orders. *Order* 14, 365–371 (1998)
- [827] Ovchinnikov, S., Dukhovny, A.: On order invariant aggregation functionals. *Journal of Mathematical Psychology* 46, 12–18 (2002)
- [828] Page, L., Brin, S., Motwani, R., Winograd, T.: The PageRank citation ranking: Bringing order to the Web. Tech. rep., Stanford University (1998)
- [829] Palacios-Huerta, I., Volij, O.: The measurement of intellectual influence. *Econometrica* 72(3), 963–977 (2004)
- [830] Panaretos, J., Malesios, C.: Assessing scientific research performance and impact with single indices. *Scientometrics* 81(3), 635–670 (2009)
- [831] Papadimitriou, C., Steiglitz, K.: *Combinatorial Optimization: Algorithms and Complexity*. Prentice Hall, Englewood Cliffs, NJ (1982)
- [832] Park, H.S., Jun, C.H.: A simple and fast algorithm for K-medoids clustering. *Expert Systems with Applications* 36, 3336–3341 (2009)
- [833] Pearson, K.: Contributions to the mathematical theory of evolution. *Philosophical Transactions of the Royal Society A* 185, 71–110 (1894)
- [834] Pedrycz, W.: Shadowed sets: Representing and processing fuzzy sets. *IEEE Transactions on Systems, Man, and Cybernetics* 28(1), 103–109 (1998)
- [835] Pedrycz, W., Skowron, A., Kreinovich, V. (eds.): *Handbook of Granular Computing*. John Wiley and Sons, Chichester (2008)
- [836] Peneva, V., Popchev, I.: Aggregation of fuzzy preference relations to multicriteria decision making. *Fuzzy Optimization and Decision Making* 6, 351–365 (2007)
- [837] Pérez-Fernández, R., Rademaker, M., De Baets, B.: Monometrics and their role in the rationalisation of ranking rules. *Information Fusion* 34, 16–27 (2017)
- [838] Peters, G.: Granular box regression. *IEEE Transactions on Fuzzy Systems* 19, 1141–1152 (2011)
- [839] Peters, G., Lacic, Z.: Tackling outliers in granular box regression. *Information Sciences* 212, 44–56 (2012)
- [840] Peterson, W., Brown, D.: Cyclic codes for error detection. *Proceedings of the IRE* 49(1), 228–235 (1961)
- [841] Pielou, E.: *An Introduction to Mathematical Ecology*. Wiley-Interscience, New York (1969)

- [842] Pielou, E.: Ecological Diversity. Wiley, New York (1975)
- [843] Pielou, E.: Mathematical Ecology. Wiley, New York (1977)
- [844] Pitman, E.: The estimation of the location and scale parameters of a continuous population of any given form. *Biometrika* 30, 391–421 (1939)
- [845] Podlubny, I.: Comparison of scientific impact expressed by the number of citations in different fields of science. *Scientometrics* 64(1), 95–99 (2005)
- [846] Powell, M.J.D.: A direct search optimization method that models the objective and constraint functions by linear interpolation. In: *Advances in Optimization and Numerical Analysis, Mathematics and Its Applications*, vol. 275, pp. 51–67 (1994)
- [847] Powell, M.J.D.: The BOBYQA algorithm for bound constrained optimization without derivatives. Tech. Rep. NA2009/06, Department of Applied Mathematics and Theoretical Physics, Cambridge England (2009)
- [848] Prade, H., Rico, A., Serrurier, M.: Elicitation of Sugeno integrals: A version space learning perspective. *Lecture Notes in Computer Science* 5722, 392–401 (2009)
- [849] Prange, E.: Cyclic error-correcting codes in two symbols. Tech. Rep. AFCRC-TN-57-103, Air Force Cambridge Research Center, Bedford, Mass. (1957)
- [850] Prathap, G.: Is there a place for a mock h -index? *Scientometrics* 84, 153–165 (2010)
- [851] Press, W., Teukolsky, S., Vetterling, W., Flannery, B.: *Numerical Recipes. The Art of Scientific Computing*. Cambridge University Press (2007)
- [852] Price, D.J.: Networks of scientific papers. *Science* 149(3683), 510–515 (1965)
- [853] Proń, A., Szatyłowicz, H.: Habilitacja dodaje „skrzydeł”? *Forum Akademickie* 3 (2006)
- [854] Prpić, K.: Science ethics: A study of eminent scientists’ professional values. *Scientometrics* 43(2), 269–298 (1998)
- [855] Puerta, C., Urrutia, A.: A dual decomposition of the single-parameter Gini social evaluation functions. In: *Proc. IFSA/EUSFLAT’15*, pp. 70–76. Atlantis Press (2015)
- [856] Puerto, J., Rodríguez-Chía, A.M.: Location of a moving service facility. *Mathematical Methods of Operations Research* 49(3), 373–393 (1999)
- [857] Puerto, J., Rodríguez-Chía, A.M.: New models for locating a moving service facility. *Mathematical Methods of Operations Research* 63(1), 31–51 (2006)
- [858] Puri, M.L., Ralescu, D.A.: Fuzzy random variables. *Journal of Mathematical Analysis and Applications* 114(2), 409–422 (1986)
- [859] Quesada, A.: Monotonicity and the Hirsch index. *Journal of Informetrics* 3(2), 158–160 (2009)
- [860] Quesada, A.: More axiomatics for the Hirsch index. *Scientometrics* 82, 413–418 (2010)
- [861] Quesada, A.: Axiomatics for the hirsch index and the egghe index. *Journal of Informetrics* 5(3), 476–480 (2011)
- [862] Quesada, A.: Further characterizations of the Hirsch index. *Scientometrics* 87, 107–114 (2011)
- [863] R Development Core Team: R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria (2017), <http://www.R-project.org>
- [864] Radavanovic, M., Nanopoulos, A., Ivanovic, M.: Hubs in space: Popular nearest neighbors in high-dimensional data. *Journal of Machine Learning Research* 11, 2487–2531 (2010)
- [865] Rademacher, L.: Approximating the centroid is hard. In: *Symposium on Computational Geometry*, pp. 302–305 (2007)
- [866] Rademaker, M., De Baets, B.: A threshold for majority in the context of aggregating partial order relations. In: *Proc. 19th IEEE International Conference on Fuzzy Systems (FUZZ-IEEE’10)*, pp. 1–4. IEEE, Barcelona, Spain (2010)

- [867] Rademaker, M., De Baets, B.: Aggregation of monotone reciprocal relations with application to group decision making. *Fuzzy Sets and Systems* 184(1), 29–51 (2011)
- [868] Rademaker, M., De Baets, B.: A ranking procedure based on a natural monotonicity constraint. *Information Fusion* 17(1), 74–82 (2014)
- [869] Rademaker, M., De Baets, B., De Meyer, H.: Optimal monotone relabelling of partially non-monotone ordinal data. *Optimization Methods and Software* 27(1), 17–31 (2012)
- [870] Rajagopalan, S., Schulman, L.J.: Verification of identities. *SIAM Journal on Computing* 29(4), 1155–1163 (2000)
- [871] Rao, C.R.: *Statistics and truth. Putting chance to work.* World Scientific Publishing (1999)
- [872] Rardin, R.: *Optimization in Operations Research.* Prentice Hall, Englewood Cliffs (1998)
- [873] Rasiowa, H.: *Wstęp do matematyki współczesnej.* PWN, Warszawa (2003)
- [874] Reiser, R.H., Bedregal, B., Baczyński, M.: Aggregating fuzzy implications. *Information Sciences* 253, 126–146 (2013)
- [875] Rényi, A.: On the dimension and entropy of probability distributions. *Acta Mathematica Hungarica* 10(1–2), 193–215 (1959)
- [876] Richardson, M., Domingos, P.: The intelligent surfer: Probabilistic combination of link and content information in PageRank. In: *Proc. Advances in Neural Information Processing Systems.* vol. 14, pp. 1441–1448. MIT Press, Cambridge, MA (2002)
- [877] Ricotta, C.: A recipe for unconventional evenness measures. *Acta Biotheoretica* 52, 95–104 (2004)
- [878] Ricotta, C., de Zuliani, E., Pacini, A., Avena, G.: On the mutual relatedness of evenness measures. *Community Ecology* 2(1), 51–56 (2001)
- [879] Rios, L.M., Sahinidis, N.V.: Derivative-free optimization: A review of algorithms and comparison of software implementations. *Journal of Global Optimization* 56, 1247–1293 (2013)
- [880] Ripley, B.: Internationalization features of R 2.1.0. *R News* 5(1), 2–7 (2005)
- [881] Ristad, E.S., Yianilos, P.N.: Learning string-edit distance. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 20(5), 522–532 (1998)
- [882] Robert, C., Casella, G.: *Monte Carlo Statistical Methods.* Springer-Verlag (2004)
- [883] Rockafellar, R.T.: *Convex Analysis.* Princeton University Press, New Jersey (1970)
- [884] Rojas, K., Gómez, D., Rodríguez, J.T., Montero, J.: Some properties of consistency in the families of aggregation operators. *Advances in Intelligent and Soft Computing* 107, 169–176 (2012)
- [885] Ronkainen, T., Oja, H., Orponen, P.: Coputation of the multivariate Oja median. In: *Proc. Intl. Conf. Robust Statistics*, pp. 344–359 (2003)
- [886] de la Rosa de Sáa, S., Gil, M.A., González-Rodríguez, G., López, M.T., Lubiano, M.A.: Fuzzy rating scale-based questionnaires and their statistical analysis. *IEEE Transactions on Fuzzy Systems* 23(1), 111–126 (2015)
- [887] Rothschild, M., Stiglitz, J.: Increasing risk: I. A definition. *Journal of Economic Theory* 2(3), 225–243 (1970)
- [888] Roubens, M., Vincke, P.: *Preference modeling.* Lecture Notes in Economics and Mathematical Systems 250, Springer-Verlag, Berlin (1985)
- [889] Rousseau, R.: Relations between continuous versions of bibliometric laws. *Journal of the American Society for Information Science* 41(3), 197–203 (1990)
- [890] Rousseau, R.: Citation analysis as a theory of friction or polluted air? *Scientometrics* 43(1), 63–67 (1998)
- [891] Rousseau, R.: The influence of missing publications on the Hirsch index. *Journal of Informetrics* 1(1), 2–7 (2007)

- [892] Rousseau, R.: Reflections on recent developments of the h -index and h -type indices. *COLLNET Journal of Scientometrics and Information Management* 2(1), 1–8 (2008)
- [893] Rousseau, R.: Woeginger’s axiomatisation of the h -index and its relation to the g -index, the $h(2)$ -index and the r^2 -index. *Journal of Informetrics* 2(4), 335–340 (2008)
- [894] Rousseeuw, P.J., Croux, C.: Alternatives to the median absolute deviation. *Journal of the American Statistical Association* 88(424), 1273–1283 (1993)
- [895] Rousseeuw, P.J., Hubert, M.: Regression depth. *Journal of the American Statistical Association* 94(446), 388–402 (1999)
- [896] Rousseeuw, P.J., Ruts, I.: Algorithm AS 307: Bivariate location depth. *Applied Statistics* 45, 516–526 (1996)
- [897] Rousseeuw, P.J., Ruts, I.: Constructing the bivariate Tukey median. *Statistica Sinica* 8, 827–839 (1998)
- [898] Rousseeuw, P.J., Ruts, I., Tukey, J.W.: The bagplot: A bivariate boxplot. *The American Statistician* 53(4), 382–387 (1999)
- [899] Rousseeuw, P.J., Struyf, A.: Computing location depth and regression depth in higher dimensions. *Statistics and Computing* 8, 193–203 (1998)
- [900] Rousseeuw, P.J., Struyf, A.: Computation of robust statistics: depth, median, and related measures. In: Goodman, J.E., O’Rourke, J. (eds.) *The Handbook of Discrete and Computational Geometry*, pp. 1279–1292. Chapman & Hall/CRC, Boca Raton (2004)
- [901] Rousseeuw, P.J., Van Aelst, S., Hubert, M.: Regression depth: Rejoinder. *Journal of the American Statistical Association* 94(446), 419–433 (1999)
- [902] Rousseeuw, P.J., Ruts, I.: The depth function of a population distribution. *Metrika* 49, 213–244 (1999)
- [903] Routledge, R.: Evenness indices: Are any admissible? *Oikos* 40, 149–151 (1983)
- [904] Rowan, T.: Functional Stability Analysis of Numerical Algorithms. Ph.D. thesis, Department of Computer Sciences, University of Texas, Austin (1990)
- [905] Rubin, D., Little, R.: *Statistical Analysis with Missing Data*. John Wiley & Sons (2002)
- [906] Ruts, I., Rousseeuw, P.J.: Computing depth contours of bivariate point clouds. *Computational Statistics & Data Analysis* 23, 153–168 (1996)
- [907] Rytgaard, M.: Estimation in the Pareto distribution. *ASTIN bulletin* 20(2), 201–216 (1990)
- [908] Rådström, H.: An embedding theorem for spaces of convex sets. *Proceedings of the American Mathematical Society* 3, 165–169 (1952)
- [909] Sáanchez, G., Lladós, J., Tombre, K.: A mean string algorithm to compute the average among a set of 2D shapes. *Pattern Recognition Letters* 23, 203–213 (2002)
- [910] Saaty, T.: *Fundamentals of decision making and priority theory with the analytic hierarchy process*. RWS Publications, Pittsburgh (1994)
- [911] Sanchez, D., Trillas, E.: Measures of fuzziness under different uses of fuzzy sets. In: Greco, S., et al. (eds.) *Proc. IPMU 2012 (CCIS 298)*. pp. 25–43. Springer-Verlag (2012)
- [912] Sarkar, D.: *Lattice: Multivariate Data Visualization with R*. Springer-Verlag (2008)
- [913] Schmidberger, M., Morgan, M., Eddelbuettel, D., Yu, H., Tierney, L., Mansmann, U.: State of the art in parallel computing with R. *Journal of Statistical Software* 31(1), 1–27 (2009)
- [914] Schön, J.H., et al.: Field-effect modulation of the conductance of single molecules. *Science* 2138(294) (2001), artykuł został wycofany z powodu fałszerstwa wyników (przykład do rozdz. 1).
- [915] Schönherr, S.: *Quadratic Programming in Geometric Optimization: Theory, Implementation, and Applications*. Ph.D. thesis, Swiss Federal Institute of Technology, Zurich, Switzerland (2002)
- [916] Schreiber, M.: How to modify the g -index for multi-authored manuscripts. *Journal of Informetrics* 4(1), 42–52 (2001)

- [917] Schreiber, M.: A case study of Hirsch index for 26 non-prominent physicists. *Annalen der Physik* 16(9), 640–652 (2007)
- [918] Schreiber, M.: A modification of the h -index: The h_m -index accounts for multi-authored manuscripts. *Journal of Informetrics* 2(3), 211–216 (2008)
- [919] Schreiber, M.: A case study of the modified Hirsch index h_m accounting for multiple coauthors. *Journal of the American Society for Information Science and Technology* 60(6), 1274–1282 (2009)
- [920] Schreiber, M.: Fractionalized counting of publications for the g -index. *Journal of the American Society for Information Science and Technology* 60(10), 2145–2150 (2009)
- [921] Schubert, A.: Using the h -index for assessing single publications. *Scientometrics* 78(3), 559–565 (2009)
- [922] Schubert, A., Glänzel, W.: A systematic analysis of Hirsch-type indices for journals. *Journal of Informetrics* 1, 179–184 (2007)
- [923] Schubert, A., Korn, A., Telcs, A.: Hirsch-type indices for characterizing networks. *Scientometrics* 78(2), 375–382 (2009)
- [924] Schumaker, L.: *Spline Functions: Basic Theory*. Cambridge University Press (2007)
- [925] Schutte, H.K., Svec, J.G.: Reaction of *Folia Phoniatica et Logopaedica* on the current trend of Impact Factor measures. *Folia Phoniatica et Logopaedica* 59, 281–285 (2007)
- [926] Schweizer, B., Sklar, A.: *Probabilistic Metric Spaces*. Elsevier, Amsterdam (1983)
- [927] of Science Editors, E.A.: EASE statement on inappropriate use of impact factors (1998), URL: http://www.ease.org.uk/statements/EASE_statement_on_impact_factors.shtml
- [928] Serfling, R.J.: *Approximation theorems of mathematical statistics*. John Wiley & Sons, New York (1980)
- [929] Shannon, C.: A mathematical theory of communications. *Bell System Technical Journal* 27(3), 379–423 (1948)
- [930] Shao, J.: *Mathematical Statistics*. Springer, New York (2007)
- [931] Shevtsova, I.G.: Sharpening of the upper bound of the absolute constant in the Berry-Esseen inequality. *Theory of Probability and its Applications* 51(3) (2007)
- [932] Shiganov, I.S.: Refinement of the upper bound of the constant in the central limit theorem. *Journal of Mathematical Sciences* 35(3), 2545–2550 (1986)
- [933] Shilkret, N.: Maxitive measure and integration. *Indagationes Mathematicæ* 33, 109–116 (1971)
- [934] Shumway, R., D.S., D.S.: *Time Series Analysis and Its Applications with R Examples*. Springer-Verlag (2011)
- [935] Sidiropoulos, A., Katsaros, D., Manolopoulos, Y.: Generalized h -index for disclosing latent facts in citation networks. *Scientometrics* 72(2), 253–280 (2007)
- [936] Silberschatz, A., Peterson, J., Gagne, G.: *Podstawy systemów operacyjnych*. WNT, Warszawa (2005)
- [937] Simkin, M.V., Roychowdhury, V.P.: Read before you cite! *Complex Syst.* 14, 269–274 (2003)
- [938] Simovici, D., Jaroszewicz, S.: An axiomatization of partition entropy. *IEEE Transactions on Information Theory* 48(7), 2138–2142 (2002)
- [939] Simpson, E.: Measurement of diversity. *Nature* 163, 688 (1949)
- [940] Sinova, B., Casals, M., Colubi, A., Ángeles Gil, M.: The median of a random interval. In: Borgelt, C., et al. (eds.) *Combining Soft Computing and Statistical Methods in Data Analysis*, pp. 575–583. Springer (2010)
- [941] Sinova, B., Ángeles Gil, M., Colubi, A., Van Aelst, S.: The median of a random fuzzy number. The 1-norm distance approach. *Fuzzy Sets and Systems* 200, 99–115 (2012)
- [942] Sinova, B., Gonzales-Rodriguez, G., Van Aelst, S.: An alternative approach to the median of a random interval using an l_2 metric. In: Kruse, R., et al. (eds.) *Synergies of Soft Computing and Statistics for Intelligent Data Analysis*, pp. 273–281. Springer (2013)

- [943] Sinova, B., Pérez-Fernández, S., Montenegro, M.: The Wabl/Ldev/Rdev median of a random fuzzy number and statistical properties. In: Grzegorzewski, P., et al. (eds.) *Strengthening Links between Data Analysis and Soft Computing*, pp. 143–150. Springer (2015)
- [944] Żogała Siudem, B., Siudem, G., Cena, A., Gagolewski, M.: Agent-based model for the bibliometric h-index – Exact solution. *European Physical Journal B* 89(21) (2016)
- [945] Sklar, A.: *Fonctions de répartition à n dimensions et leurs marges*. Publications de l’Institut de Statistique de L’Université de Paris 8 (1959)
- [946] Small, C.G.: Measures of centrality for multivariate and directional distributions. *Canadian Journal of Statistics* 15(1), 31–39 (1987)
- [947] Small, C.G.: A survey of multidimensional medians. *International Statistical Review* 58(3), 263–277 (1990)
- [948] Small, H.: Citations and consilience in science. *Scientometrics* 43(1), 143–148 (1998)
- [949] Small, H.: Paradigms, citations, and maps of science: A personal history. *Journal of the American Society for Information Science and Technology* 54(5), 394–399 (2003)
- [950] Smith, B., Wilson, J.: A consumer’s guide to evenness indices. *Oikos* 76, 70–82 (1996)
- [951] Soetaert, K., Petzoldt, T., Setzer, R.: Solving differential equations in R. *The R Journal* 2(2), 5–15 (2010)
- [952] Sokal, R., Michener, C.: A statistical method for evaluating systematic relationships. *University of Kansas Science Bulletin* 38, 1409–1438 (1958)
- [953] Soler, J.M.: A rational indicator of scientific creativity. *Journal of Informetrics* 1(2), 123–130 (2007)
- [954] Somervuo, P.J.: Online algorithm for the self-organizing map of symbol strings. *Neural Networks* 17, 1231–1239 (2004)
- [955] Spector, P.: *Data Manipulation with R*. Springer-Verlag (2008)
- [956] Springer, M.D.: *The Algebra of Random Variables*. John Wiley & Sons, New York (1979)
- [957] Stefanini, L., Sorini, L.: Fuzzy arithmetic with parametric LR fuzzy numbers. In: *Proc. IFSA/EUSFLAT 2009*. pp. 600–605 (2009)
- [958] Stefanini, L., Sorini, L.: Approximation of fuzzy numbers by F-transform. In: Greco, S., et al. (eds.) *Advances in Computational Intelligence, Part III, Communications in Computer and Information Science*, vol. 299, pp. 69–78. Springer (2012)
- [959] Stephens, M.: EDF statistics for goodness of fit and some comparisons. *Journal of the American Statistical Association* 69, 730–737 (1974)
- [960] Stevens, S.S.: On the theory of scales of measurement. *Science* 103(2684), 677–680 (1946)
- [961] Stewart, T.A.: *Intellectual capital — The new wealth of organizations*. Nicholas Brealey Publishing (1997)
- [962] Stigler, S.M.: Linear functions of order statistics. *The Annals of Mathematical Statistics* 40(3), 770–788 (1969)
- [963] Stoer, J., Bulirsch, R.: *Wstęp do analizy numerycznej*. PWN, Warszawa (1987)
- [964] Strotmann, A., Zhao, D.: Author name disambiguation: What difference does it make in author-based citation analysis? *Journal of the American Society for Information Science and Technology* 63, 1820–1933 (2012)
- [965] Struyf, A., Rousseuw, P.J.: High-dimensional computation of the deepest location. *Computational Statistics & Data Analysis* 34, 415–426 (2000)
- [966] Stubblebine, T.: *Wyrażenia regularne. Leksykon kieszonkowy*. Helion, Gliwice (2001)
- [967] Sugeno, M.: *Theory of fuzzy integrals and its applications*. Ph.D. thesis, Tokyo Institute of Technology (1974)

- [968] Sun, H., Wei, Y.: A note on the PageRank algorithm. *Applied Mathematics and Computation* 179, 799–806 (2006)
- [969] Sylvester, J.J.: A question in the geometry of situation. *Quarterly Journal of Pure and Applied Mathematics* 1, 79 (1857)
- [970] Szmidt, E., Kacprzyk, J.: Distances between intuitionistic fuzzy sets. *Fuzzy Sets and Systems* 114(3), 505–518 (2000)
- [971] Szmidt, E., Kacprzyk, J.: Analysis of consensus under intuitionistic fuzzy preferences. In: *Proc. Intl. Conf. Fuzzy Logic and Technology*, pp. 79–82. De Montfort University, Leicester, UK (2001)
- [972] Szydlowski, M., Krawiec, A.: Scientific cycle model with delay. *Scientometrics* 52(1), 83–95 (2001)
- [973] Szydlowski, M., Krawiec, A.: Growth cycles of knowledge. *Scientometrics* 78(1), 99–111 (2009)
- [974] Szymanski, B.K., de la Rosa, J.L., Krishnamoorthy, M.: An internet measure of the value of citations. *Information Sciences* 185, 18–31 (2012)
- [975] Tai, K.C.: Tree-to-tree correction problem. *Journal of the ACM* 26(3), 422–433 (1979)
- [976] Taillie, C.: Species equitability: A comparative approach. In: *Ecological Diversity in Theory and Practice*, pp. 51–62. Int. Coop. Publ. House, Fairland, Maryland (1979)
- [977] Tanenbaum, A.: *Systemy operacyjne*. Helion, Gliwice (2010)
- [978] Tastle, J., Tastle, W.: Extending the consensus measure: analyzing ordinal data with respect to extrema. In: *Proc. ISECON 2005*, vol. 22, pp. 1–5. Columbus OH, USA (2005)
- [979] Tellier, L.N.: The Weber problem: Solution and interpretation. *Geographical Analysis* 4(3), 215–233 (1972)
- [980] The CGAL Project: CGAL User and Reference Manual. CGAL Editorial Board, 4.6 edn. (2015), <http://doc.cgal.org/4.6/Manual/packages.html>
- [981] Tibshirani, R., Hastie, T., Narasimhan, B., Chu, G.: Diagnosis of multiple cancer types by shrunken centroids of gene expression. *Proceedings of the National Academy of Sciences* 99(10), 6567–6572 (2002)
- [982] Tikhonov, A., Arsenin, V.: *Solution of ill-posed problems*. Winston & Sons, Washington (1977)
- [983] Torra, V.: The weighted OWA operator. *International Journal of Intelligent Systems* 12, 153–166 (1997)
- [984] Torra, V.: On some relationships between hierarchies of quasi-arithmetic means and neural networks. *International Journal of Intelligent Systems* 14, 1089–1098 (1999)
- [985] Torra, V.: On the learning of weights in some aggregation operators: The weighted mean and OWA operators. *Mathware and Soft Computing* 6, 249–265 (1999)
- [986] Torra, V.: Learning weights for Weighted OWA operators. In: *Proc. IEEE Intl. Conf. Industrial Electr. Control and Instrumentation*, pp. 2530–2535 (2000)
- [987] Torra, V.: Learning weights for the quasi-weighted means. *IEEE Transactions on Fuzzy Systems* 10(5), 653–666 (2002)
- [988] Torra, V. (ed.): *Information fusion in data mining, Studies in Fuzziness and Soft Computing*, vol. 123. Springer-Verlag (2003)
- [989] Torra, V.: OWA operators in data modeling and reidentification. *IEEE Transactions on Fuzzy Systems* 12(5), 652–660 (2004)
- [990] Torra, V.: Aggregation operators and models. *Fuzzy Sets and Systems* 156, 407–410 (2005)
- [991] Torra, V.: Information fusion. Methods and aggregation operators. In: Maimon, O., Rokach, L. (eds.) *The Data Mining and Knowledge Discovery Handbook*, pp. 999–1008. Springer (2010)
- [992] Torra, V.: The WOWA operator: A review. In: Yager, R.R., Kacprzyk, J., Beliakov, G. (eds.) *Recent Developments in the Ordered Weighted Averaging Operators*, pp. 17–28. Springer (2011)
- [993] Torra, V., Lv, Z.: On the WOWA operator and its interpolation function. *International Journal of Intelligent Systems* 24, 1039–1056 (2009)

- [994] Torra, V., Narukawa, Y.: The interpretation of fuzzy integrals and their application to fuzzy systems. *International Journal of Approximate Reasoning* 41, 43–58 (2006)
- [995] Torra, V., Narukawa, Y.: *Modeling Decisions: Information Fusion and Aggregation Operators*. Springer-Verlag (2007)
- [996] Torra, V., Narukawa, Y.: A view of averaging aggregation operators. *IEEE Transactions on Fuzzy Systems* 15(6), 1063–1067 (2007)
- [997] Torra, V., Narukawa, Y.: The h -index and the number of citations: Two fuzzy integrals. *IEEE Transactions on Fuzzy Systems* 16(3), 795–797 (2008)
- [998] Trutschnig, W., González-Rodríguez, G., Colubi, A., Ángeles Gil, M.: A new family of metrics for compact, convex (fuzzy) sets based on a generalized concept of mid and spread. *Information Sciences* 179(23), 3964–3972 (2009)
- [999] Tukey, J.W.: Mathematics and the picturing of data. *Proc. Intl. Congress of Mathematicians* pp. 523–531 (1974)
- [1000] Tukey, J.: Some graphic and semigraphic displays. In: Bancroft, T. (ed.) *Statistical Papers in Honor of George W. Snedecor*, pp. 293–316. Ames (1972)
- [1001] Tuomisto, H.: An updated consumer’s guide to evenness and related indices. *Oikos* 121, 1203–1218 (2012)
- [1002] Ukkonen, E.: On approximate string matching. *Lecture Notes in Computer Science* 158, 487–495 (1983)
- [1003] Ukkonen, E.: Approximate string-matching with q-grams and maximal matches. *Theoretical Computer Science* 92, 191–211 (1992)
- [1004] van der Loo, M.: The stringdist package for approximate string matching. *The R Journal* 6(1), 111–122 (2014)
- [1005] van Eck, N.J., Waltman, L.: Generalizing the h - and g -indices. *Journal of Informetrics* 2(4), 263–271 (2008)
- [1006] van Kreveld, M., Mitchell, J.S., Rousseeuw, P., Sharir, M., Snoeyink, J., Speckmann, B.: Efficient algorithms for maximum regression depth. *Discrete and Computational Geometry* 39(4), 656–677 (2008)
- [1007] van Raan, A.: Sleeping beauties in science. *Scientometrics* 59(3), 467–472 (2004)
- [1008] van Raan, A.F.J.: In matters of quantitative studies of science. The fault of theorists is offering too little and asking too much. *Scientometrics* 43(1), 129–139 (1998)
- [1009] van Raan, A.F.J.: Comparison of the Hirsch-index with standard bibliometric indicators and with peer judgment for 147 chemistry research groups. *Scientometrics* 67(3), 491–502 (2006)
- [1010] Vancly, J.K.: On the robustness of the h -index. *Journal of the American Society for Information Science and Technology* 58(10), 1547–1550 (2007)
- [1011] Vannucci, S.: Dominance dimension: A common parametric formulation for integer-valued scientific impact indices. *Scientometrics* 84, 43–48 (2010)
- [1012] Vardi, Y., Zhang, C.H.: The multivariate l_1 -median and associated data depth. *Proceedings of the National Academy of Sciences* 97(4), 1423–1426 (2000)
- [1013] Vazquez, A.: Statistics of citation networks (2001), [arXiv:cond-mat/0105031v1](https://arxiv.org/abs/cond-mat/0105031v1)
- [1014] Veenman, C., Reinders, M., Backer, E.: A maximum variance cluster algorithm. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 24(9), 1273–1280 (2002)
- [1015] Venables, W., Ripley, B.: *S Programming*. Springer-Verlag (2000)
- [1016] Venables, W., Ripley, B.: *Modern Applied Statistics with S*. Springer-Verlag (2002)
- [1017] Vieira, E.S., Gomes, J.A.: Citations to scientific articles: Its distribution and dependencies on the article features. *Journal of Informetrics* 4, 1–13 (2010)
- [1018] Vieira, E.S., Gomes, J.A.: A comparison of *Scopus* and *Web of Science* for a typical university. *Scientometrics* 81(2), 587–600 (2009)

- [1019] Villasenor-Alva, J., Gonzalez-Estrada, E.: A bootstrap goodness of fit test for the Generalized Pareto Distribution. *Computational Statistics and Data Analysis* 53(11), 3835–3841 (2009)
- [1020] Vinkler, P.: Comparative investigation of frequency and strength of motives toward referencing. The reference threshold model. *Scientometrics* 43(1), 107–127 (1998)
- [1021] Vinogradov, A.E.: Secular trend of academician aging. *Scientometrics* 43(1), 149–160 (1998)
- [1022] Vintsyuk, T.: Speech discrimination by dynamic programming. *Cybernetics* 4(1), 52–57 (1968)
- [1023] von Neumann, J., Morgenstern, O.: *Theory of games and economic behavior*. Princeton University Press, Princeton (1947)
- [1024] Wagner, R.A., Fischer, M.J.: The string-to-string correction problem. *Journal of the ACM* 21(1), 168–173 (1974)
- [1025] Wagner-Döbler, R.: Where has the cumulative advantage gone? some observations about the frequency distribution of scientific productivity, of duration of scientific participation, and of speed of publication. *Scientometrics* 32(2), 123–132 (1995)
- [1026] Wallis, W., Shoubridge, P., Kraetz, M., Ray, D.: Graph distances using graph union. *Pattern Recognition Letters* 22(6–7), 701–704 (2001)
- [1027] Waltman, L., van Eck, N.J.: The inconsistency of the h-index. *Journal of the American Society for Information Science and Technology* 63(2), 406–415 (2012)
- [1028] Waltman, L., van Eck, N.J., Wouters, P.: Counting publications and citations: Is more always better? *Journal of Informetrics* 7, 635–641 (2013)
- [1029] Wandelt, S., et al.: State-of-the-art in string similarity search and join. *SIGMOD Record* 43(1), 64–76 (2014)
- [1030] Wang, X., Kerre, E.E.: Reasonable properties for the ordering of fuzzy quantities (I). *Fuzzy Sets and Systems* 118(3), 375–385 (2001)
- [1031] Wang, X., Kerre, E.E.: Reasonable properties for the ordering of fuzzy quantities (II). *Fuzzy Sets and Systems* 118(3), 387–405 (2001)
- [1032] Warshall, S.: A theorem on Boolean matrices. *Journal of the ACM* 9(1), 11–12 (1962)
- [1033] Weber, S.: Measures of fuzzy sets and measures of fuzziness. *Fuzzy Sets and Systems* 13, 247–271 (1984)
- [1034] Weiszfeld, E.: Sur le point par lequel la somme des distances de n points donnés est minimum. *Tohoku Mathematics Journal* 43, 355–386 (1937)
- [1035] Welzl, E.: Smallest enclosing disks (balls and ellipsoids). *Lecture Notes in Computer Science* 555, 359–370 (1991)
- [1036] Wickham, H.: *ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag (2009)
- [1037] Wickham, H.: *stringr: modern, consistent string processing*. *The R Journal* 2(2), 38–40 (2010)
- [1038] Wickham, H.: *testthat: Get started with testing*. *The R Journal* 3(1), 5–10 (2011)
- [1039] Widrow, B., Winter, R.: Neural nets for adaptive filtering and adaptive pattern recognition. *Computer* 21, 25–39 (1998)
- [1040] Wierzchowski, R., Zieliński, R.: *Komputerowe generatory liczb losowych*. WNT, Warszawa (1997)
- [1041] Wilkin, T., Beliakov, G.: Weakly monotonic averaging functions. *International Journal of Intelligent Systems* 30(2), 144–169 (2015)
- [1042] Wilkin, T., Beliakov, G., Calvo, T.: Weakly monotone averaging functions. *Communications in Computer and Information Science* 444, 364–373 (2014)
- [1043] Wilkin, T.A.: *Weakly monotonic averaging with application to image processing*. Ph.D. thesis, Deakin University (2014)
- [1044] Wilkinson, L.: *The Grammar of Graphics*. Springer-Verlag (2005)

- [1045] Williams, C.: Patterns in the balance of nature. Academic Press, London (1964)
- [1046] Williams, V.V.: Multiplying matrices faster than Coppersmith-Winograd. In: Proc. 44th ACM Symp. Theory of Computing (STOC '12). pp. 887–898 (2012)
- [1047] Wilsey, B., Potvin, C.: Biodiversity and ecosystem functioning: Importance of species evenness in an old field. *Ecology* 81(4), 887–892 (2000)
- [1048] Winkler, W.: String comparator metrics and enhanced decision rules in the Fellegi-Sunter model of record linkage. In: Proc. Section on Survey Research Methods, American Statistical Association, pp. 354–359 (1990)
- [1049] Winkler, W.E.: Overview of record linkage and current research directions. Tech. Rep. 2006-2, U.S. Census Bureau, Washington, DC (2006)
- [1050] Witzgall, C.: On convex metrics. *Journal of Research of the National Bureau of Standards – B. Mathematics and Mathematical Physics* 69B(3), 175–177 (1965)
- [1051] Woeginger, G.J.: An axiomatic analysis of Egghe’s g -index. *Journal of Informetrics* 2(4), 364–368 (2008)
- [1052] Woeginger, G.J.: An axiomatic characterization of the Hirsch-index. *Mathematical Social Sciences* 56(2), 224–232 (2008)
- [1053] Woeginger, G.J.: A symmetry axiom for scientific impact indices. *Journal of Informetrics* 2, 298–303 (2008)
- [1054] Woeginger, G.J.: Generalizations of Egghe’s g -index. *Journal of the American Society for Information Science and Technology* 60(6), 1267–1273 (2009)
- [1055] Woeginger, G.J.: An algorithmic comparison of three scientific impact indices. *Acta Cybernetica* 19, 661–672 (2010)
- [1056] Wolsey, L.: Integer Programming. John Wiley & Sons, New York (1998)
- [1057] Wooley, J.C.: Trends in computational biology: A summary based on a RECOMB plenary lecture. *Journal of Computational Biology* 6, 459–474 (1999)
- [1058] Wróblewski, A.K.: Bibliometryczne nieporozumienia. *Forum Akademickie* 9 (2001)
- [1059] Wu, Q.: The w -index: A measure to assess scientific impact by focusing on widely cited papers. *Journal of the American Society for Information Science and Technology* 61(3), 609–614 (2010)
- [1060] Xie, Y.: Dynamic Documents with R and knitr. Chapman & Hall/CRC (2013)
- [1061] Xu, R., Wunsch II, D.C.: Clustering. Wiley-IEEE Press (2009)
- [1062] Yager, R.R.: Quasi-associative operations in the combination of evidence. *Kybernetes* 16(1), 37–41 (1987)
- [1063] Yager, R.R.: On ordered weighted averaging aggregation operators in multicriteria decision making. *IEEE Transactions on Systems, Man, and Cybernetics* 18(1), 183–190 (1988)
- [1064] Yager, R.R.: Connectives and quantifiers in fuzzy sets. *Fuzzy Sets and Systems* 40, 39–75 (1991)
- [1065] Yager, R.R.: On the specificity of a possibility distribution. *Fuzzy Sets and Systems* 50, 279–292 (1992)
- [1066] Yager, R.R.: Toward a general theory of information aggregation. *Information Sciences* 68(3), 191–206 (1993)
- [1067] Yager, R.R.: Fusion of ordinal information using weighted median aggregation. *International Journal of Approximate Reasoning* 18, 35–52 (1998)
- [1068] Yager, R.R.: Prioritized aggregation operators. *International Journal of Approximate Reasoning* 48(1), 263–274 (2008)
- [1069] Yager, R.R.: On generalized Bonferroni mean operators for multi-criteria aggregation. *International Journal of Approximate Reasoning* 50, 1279–1286 (2009)
- [1070] Yager, R.R.: Lexicographic ordinal OWA aggregation of multiple criteria. *Information Fusion* 11, 374–380 (2010)

- [1071] Yager, R.R., Beliakov, G.: OWA operators in regression problems. *IEEE Transactions on Fuzzy Systems* 18(1), 106–113 (2010)
- [1072] Yager, R.R., Filev, D.P.: *Essentials of fuzzy modeling and control*. Wiley (1994)
- [1073] Yager, R.R., Kacprzyk, J. (eds.): *The ordered weighted averaging operators. Theory and applications*. Kluwer Academic Publishers, Norwell (1997)
- [1074] Yager, R.R., Kacprzyk, J., Beliakov, G. (eds.): *Recent Developments in the Ordered Weighted Averaging Operators*. Springer (2011)
- [1075] Yager, R.R., Rybalov, A.: Uninorm aggregation operators. *Fuzzy Sets and Systems* 80, 111–120 (1996)
- [1076] Yager, R.R., Rybalov, A.: Understanding the median as a fusion operator. *International Journal of General Systems* 26(3), 239–263 (1997)
- [1077] Yan, J.: Enjoy the joy of copulas: With a package `copula`. *Journal of Statistical Software* 21(4), 1–21 (2007)
- [1078] Yang, F., Sun, T., Zhang, C.: An efficient hybrid data clustering method based on K-harmonic means and particle swarm optimization. *Expert Systems with Applications* 36, 9847–9852 (2009)
- [1079] Yang, Q.: The PAN-integral on the fuzzy measure space. *Fuzzy Mathematics* 3, 107–114 (1985)
- [1080] Yeh, C.T.: Trapezoidal and triangular approximations preserving the expected interval. *Fuzzy Sets and Systems* 159, 1345–1353 (2008)
- [1081] Yeh, C.T.: Weighted trapezoidal and triangular approximations of fuzzy numbers. *Fuzzy Sets and Systems* 160(21), 3059–3079 (2009)
- [1082] Yeh, C.T.: A note on trapezoidal approximations of fuzzy numbers. *Fuzzy Sets and Systems* 158(7), 747–754 (2007)
- [1083] Yeh, C.T.: On improving trapezoidal and triangular approximations of fuzzy numbers. *International Journal of Approximate Reasoning* 48(1), 297–313 (2008)
- [1084] Yeh, C.T.: Approximation by interval, triangular and trapezoidal fuzzy numbers. In: Carvalho, J.P., et al. (eds.) *Proc. IFSA/EUSFLAT’09*, pp. 143–148. IFSA (2009)
- [1085] Yeh, C.T.: Weighted semi-trapezoidal approximations of fuzzy numbers. *Fuzzy Sets and Systems* 165(1), 61–80 (2011)
- [1086] Yianilos, P.: Data structures and algorithms for nearest neighbor search in general metric spaces. In: *Proc. ACM-SIAM Symp. Discrete Algorithms*, pp. 311–321. Society for Industrial and Applied Mathematics, Philadelphia, PA (1993)
- [1087] Yin, M., Hu, Y., Yang, F., Li, X., Gu, W.: A novel hybrid K-harmonic means and gravitational search algorithm approach for clustering. *Expert Systems with Applications* 38, 9319–9324 (2011)
- [1088] Young, N.S., Ioannidis, J.P.A., Al-Ubaydli, O.: Why current publication practices may distort science. *PLoS Medicine* 5(10), 1418–1422 (2008)
- [1089] Yu, H., Davis, M., Wilson, C.S., Cole, F.T.H.: Object-oriented data modelling for informetric databases. *Journal of Informetrics* 2(3), 240–251 (2008)
- [1090] Yu, J., Yang, M.S.: Optimality test for generalized FCM and its application to parameter selection. *IEEE Transactions on Fuzzy Systems* 13(1), 164–176 (2005)
- [1091] Yuan, B., Klir, G.J.: Constructing fuzzy measures: A new method and its application to cluster analysis. In: *Proc. NAFIPS’96*, pp. 567–571 (1996)
- [1092] Zadeh, L.A.: Fuzzy sets. *Information and Control* 8, 338–353 (1965)
- [1093] Zadeh, L.A.: Fuzzy logic = computing with words. *IEEE Transactions on Fuzzy Systems* 4(2), 103–111 (1996)
- [1094] Zadrozny, S., Kacprzyk, J.: Computing with words for text processing: An approach to the text categorization. *Information Sciences* 176, 415–437 (2006)

- [1095] Zahn, C.: Graph-theoretical methods for detecting and describing gestalt clusters. *IEEE Transactions on Computers* C-20(1), 68–86 (1971)
- [1096] Zeng, W., Li, H.: Inclusion measures, similarity measures, and the fuzziness of fuzzy sets and their relations. *International Journal of Intelligent Systems* 21, 639–653 (2006)
- [1097] Zhang, B.: K-harmonic means – A data clustering algorithm. Tech. Rep. HPL-1999-124, HP Laboratories, Palo Alto (1999)
- [1098] Zhang, B., Hsu, M., Dayal, U.: K-harmonic means – A spatial clustering algorithm with boosting. *Lecture Notes in Artificial Intelligence* 2007, 31–45 (2001)
- [1099] Zhang, D.: Triangular norms on partially ordered sets. *Fuzzy Sets and Systems* 153, 195–209 (2005)
- [1100] Zhang, J.: Improving on estimation for the Generalized Pareto Distribution. *Technometrics* 52(3), 335–339 (2010)
- [1101] Zhang, J., Stephens, M.A.: A new and efficient estimation method for the Generalized Pareto Distribution. *Technometrics* 51(3), 316–325 (2009)
- [1102] Zhang, K., Shasha, D.: Simple fast algorithms for the editing distance between trees and related problems. *SIAM Journal on Computing* 18(6), 1245–1262 (1989)
- [1103] Zhang, L., Glänzel, W., Liang, L.: Tracing the role of individual journals in a cross-citation network based on different indicators. *Scientometrics* 81(3), 821–838 (2009)
- [1104] Zhang, L., Janssens, F., Liang, L., Glänzel, W.: Hybrid clustering analysis for mapping large scientific domains. In: Larsen, B., Leta, J. (eds.) *Proc. 12th Intl. Conf. Scientometrics and Informetrics*. pp. 178–188 (2009)
- [1105] Zhang, L., Liu, X., Janssens, F., Liang, L., Glänzel, W.: Subject clustering analysis based on isi category classification. *Journal of Informetrics* 4, 185–193 (2010)
- [1106] Zhivotovsky, L.A., Krutowsky, K.V.: Self-citation can inflate h -index. *Scientometrics* 77(2), 373–375 (2008)
- [1107] Zieliński, R.: *Siedem wykładów wprowadzających do statystyki matematycznej*. PWN, Warszawa (1990)
- [1108] Zieliński, R.: Przedziały ufności dla frakcji. *Matematyka Stosowana* 10, 51–68 (2009)
- [1109] Zuo, Y.: Projection-based depth functions and associated medians. *The Annals of Statistics* 31(5), 1460–1490 (2003)
- [1110] Zuo, Y., Serfling, R.: General notions of statistical depth function. *The Annals of Statistics* 28(2), 461–482 (2000)
- [1111] Życzkowski, K.: Indeksy cytowań i wiosła. *Forum Akademickie* 9, 22–25 (2008)