

### **Relations and bounds for the zeros of graph polynomials using vertex orbits**

Dehmer, M., Emmert-Streib, F., Mowshowitz, A., Ilić, A., Chen, Z., Yu, G., Feng, L., Ghorbani, M., Varmuza, K. & Tao, J., 1 Sep 2020, In : Applied Mathematics and Computation. 380, 125239.

Research output: Contribution to journal › Article › Scientific › peer-review

### **A novel epidemic model considering demographics and intercity commuting on complex dynamical networks**

Yin, Q., Wang, Z., Xia, C., Dehmer, M., Emmert-Streib, F. & Jin, Z., 2020, In : Applied Mathematics and Computation. 386, 21 p., 125517.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Introducing Multi-Convexity in Path Constrained Trajectory Optimization for Mobile Manipulators**

Singh, A. K., Ahonen, A., Ghabcheloo, R. & Mueller, A., 2020, *European Control Conference 2020, ECC 2020*. IEEE, p. 1178-1185 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **Resilient Cooperative Voltage Control for Distribution Network with High Penetration Distributed Energy Resources**

Gusrialdi, A., Xu, Y., Qu, Z. & Simaan, M. A., 2020, *European Control Conference 2020, ECC 2020*. IEEE, p. 1533-1539 7 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **The watching system as a generalization of identifying code**

Ghorbani, M., Dehmer, M., Maimani, H., Maddah, S., Roozbayani, M. & Emmert-Streib, F., 2020, In : Applied Mathematics and Computation. 380, 7 p., 125302.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Graph entropy based on the number of spanning forests of c-cyclic graphs**

Wan, P., Tu, J., Dehmer, M., Zhang, S. & Emmert-Streib, F., 15 Dec 2019, In : Applied Mathematics and Computation. 363, 124616.

Research output: Contribution to journal › Article › Scientific › peer-review

### **On efficient network similarity measures**

Dehmer, M., Chen, Z., Shi, Y., Zhang, Y., Tripathi, S., Ghorbani, M., Mowshowitz, A. & Emmert-Streib, F., 1 Dec 2019, In : Applied Mathematics and Computation. 362, 124521.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Satisfiability of modal inclusion logic: Lax and strict semantics**

Hella, L., Kuusisto, A., Meier, A. & Vollmer, H., 1 Oct 2019, In : ACM TRANSACTIONS ON COMPUTATIONAL LOGIC. 21, 1, 7.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Visibility-Aware Part Coding for Vehicle Viewing Angle Estimation**

Yang, D., Qian, Y., Cai, D., Yan, S., Kämäräinen, J-K. & Chen, K., 1 Aug 2019, *9th International Conference on Information Science and Technology, ICIST 2019*. IEEE, p. 65-70 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **Sound Event Detection in the DCASE 2017 Challenge**

Mesaros, A., Diment, A., Elizalde, B., Heittola, T., Vincent, E., Raj, B. & Virtanen, T., 1 Jun 2019, In : IEEE/ACM Transactions on Audio Speech and Language Processing. 27, 6, p. 992-1006 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Hypermonogenic solutions and plane waves of the Dirac operator in $\mathbb{R}^p \times \mathbb{R}^q$**

Guzmán Adán, A., Orelma, H. & Sommen, F., 1 Apr 2019, In : Applied Mathematics and Computation. 346, p. 1-14 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Circularly Polarized Textile Tag Antenna for Wearable Passive UHF RFID Systems**

Kuang, Y., Ma, S., Ukkonen, L., Virkki, J. & Björninen, T., 18 Mar 2019, *2018 International Applied Computational Electromagnetics Society Symposium in China, ACES-China 2018*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **Comparison of Human Head Phantoms with Different Complexities for Implantable Antenna Development**

Ma, S., Ukkonen, L., Sydänheimo, L. & Björninen, T., 18 Mar 2019, *2018 International Applied Computational Electromagnetics Society (ACES) Symposium: 29 July-1 Aug. 2018, China*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **An automated algorithm for reliable equation of state fitting of magnetic systems**

Levämäki, H., Tian, L-Y., Vitos, L. & Ropo, M., 2019, In : *Computational Materials Science*. 156, p. 121-128 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Cuts for 3-D magnetic scalar potentials: Visualizing unintuitive surfaces arising from trivial knots**

Stockrahm, A., Lahtinen, V., Kangas, J. J. J. & Kotiuga, P. R., 2019, (Accepted/In press) In : *Computers and Mathematics with Applications*.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Modeling mass transfer in fracture flows with the time domain-random walk method**

Kuva, J., Voutilainen, M. & Mattila, K., 2019, In : *COMPUTATIONAL GEOSCIENCES*.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Optimal energy decay for the wave-heat system on a rectangular domain**

Batty, C., Paunonen, L. & Seifert, D., 2019, In : *SIAM JOURNAL ON MATHEMATICAL ANALYSIS*. 51, 2, p. 808-819 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **SCIP: a single-cell image processor toolbox**

Martins, L., Neeli-Venkata, R., Oliveira, S. M. D., Häkkinen, A., Ribeiro, A. S. & Fonseca, J. M., 15 Dec 2018, In : *Bioinformatics*. 34, 24, p. 4318-4320 3 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Comparative analysis of tissue reconstruction algorithms for 3D histology**

Kartasalo, K., Latonen, L., Vihinen, J., Visakorpi, T., Nykter, M. & Ruusuvoori, P., 1 Sep 2018, In : *Bioinformatics*. 34, 17, p. 3013-3021 9 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Multichannel Blind Sound Source Separation using Spatial Covariance Model with Level and Time Differences and Non-Negative Matrix Factorization**

Carabias Orti, J. J., Nikunen, J., Virtanen, T. & Vera-Candeas, P., Sep 2018, In : *IEEE/ACM Transactions on Audio Speech and Language Processing*. 26, 9, p. 1512-1527

Research output: Contribution to journal › Article › Scientific › peer-review

### **Hypermonogenic Functions of Two Vector Variables**

Eriksson, S. L., Orelma, H. & Vieira, N., 2018, In : *Complex Analysis and Operator Theory*. 12, 2, p. 555–570 16 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Chipless graphene tag and dual-CP reader for Internet of Things**

Dong, G., Shen, Y., He, H., Virkki, J. & Hu, S., 26 Sep 2017, *2017 International Applied Computational Electromagnetics Society Symposium in China, ACES-China 2017*. IEEE

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **Homogeneous $(\alpha, k)$ -Polynomial Solutions of the Fractional Riesz System in Hyperbolic Space**

Orelma, H. & Vieira, N., 2017, In : *Complex Analysis and Operator Theory*. 11, 5, p. 1253–1267 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Integral kernels for k-hypermonogenic functions**

Vuojamo, V. & Eriksson, S-L., 2017, In : *Complex Variables and Elliptic Equations*. 62, 9, p. 1-12 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **SamExploreR: Exploring reproducibility and robustness of RNA-seq results based on SAM files**

Stupnikov, A., Tripathi, S., De Matos Simoes, R., McArt, D., Salto-Tellez, M., Glazko, G., Dehmer, M. & Emmert-Streib, F., 1 Nov 2016, In : *Bioinformatics*. 32, 21, p. 3345-3347 3 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Introducing libeemd: a program package for performing the ensemble empirical mode decomposition**

Luukko, P. J. J., Helske, J. & Räsänen, E., 1 Jun 2016, In : *Computational Statistics*. 31, 2, p. 545-557 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Characterizing rate limiting steps in transcription from RNA production times in live cells**

Häkkinen, A. & Ribeiro, A. S., 1 May 2016, In : *Bioinformatics*. 32, 9, p. 1346-1352 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Modeling probability densities with sums of exponentials via polynomial approximation**

Dumitrescu, B., Şicleru, B. C. & Avram, F., 2016, In : *Journal of Computational and Applied Mathematics*. 292, p. 513-525

Research output: Contribution to journal › Article › Scientific › peer-review

### **On k-Hypermonogenic Functions and Their Mean Value Properties**

Eriksson, S-L. & Orelma, H., 2016, In : *Complex Analysis and Operator Theory*. 10, 2, p. 311-325 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Two models for hydraulic cylinders in flexible multibody simulations**

Ylinen, A., Mäkinen, J. & Kouhia, R., 2016, *Computational Methods for Solids and Fluids: Multiscale Analysis, Probability Aspects and Model Reduction*. Springer, p. 463-493 31 p. (Computational Methods in Applied Sciences; vol. 41).

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

### **A robust AMMI model for the analysis of genotype-by-environment data**

Rodrigues, P. C., Monteiro, A. & Lourenço, V. M., 1 Jul 2015, In : *Bioinformatics*. 32, 1, p. 58-66 9 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Graph distance measures based on topological indices revisited**

Dehmer, M., Emmert-Streib, F. & Shi, Y., 18 Jun 2015, In : *Applied Mathematics and Computation*. 266, p. 623-633 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Estimation of GFP-tagged RNA numbers from temporal fluorescence intensity data**

Häkkinen, A. & Ribeiro, A. S., 1 Jan 2015, In : *Bioinformatics*. 31, 1, p. 69-75 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Van der Waals interactions are critical in Car-Parrinello molecular dynamics simulations of porphyrin-fullerene dyads**

Karilainen, T., Cramariuc, O., Kuisma, M., Tappura, K. & Hukka, T. I., 2015, In : *Journal of Computational Chemistry*. 36, 9, p. 612-621 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Entropy bounds for dendrimers**

Chen, Z., Dehmer, M., Emmert-Streib, F. & Shi, Y., 1 Sep 2014, In : *Applied Mathematics and Computation*. 242, p. 462-472 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **NetBioV: An R package for visualizing large network data in biology and medicine**

Tripathi, S., Dehmer, M. & Emmert-Streib, F., 2 Apr 2014, In : *Bioinformatics*. 30, 19, p. 2834-2836 3 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Gene Sets Net Correlations Analysis (GSNCA): A multivariate differential coexpression test for gene sets**

Rahmatallah, Y., Emmert-Streib, F. & Glazko, G., 1 Feb 2014, In : *Bioinformatics*. 30, 3, p. 360-368 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**A full-potential linearized augmented plane wave study of the interaction of CO<sub>2</sub> with  $\alpha$ -Pu (020) surface nanolayers**

Wang, J. & Ray, A. K., 2014, In : Journal of Computational and Theoretical Nanoscience. 11, 7, p. 1710-1717 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**A microscopic view of the mechanisms of active transport across the cellular membrane**

Enkavi, G., Li, J., Wen, P., Thangapandian, S., Moradi, M., Jiang, T., Han, W. & Tajkhorshid, E., 2014, In : Annual Reports in Computational Chemistry. 10, p. 77-125 49 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Magnetic origin of the chemical balance in alloyed Fe-Cr stainless steels: First-principles and Ising model study**

Airiskallio, E., Nurmi, E., Väyrynen, I. J., Kokko, K., Ropo, M., Punkkinen, M. P. J., Johansson, B. & Vitos, L., 2014, In : Computational Materials Science. 92, p. 135-140 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**An efficient heuristic approach to detecting graph isomorphism based on combinations of highly discriminating invariants**

Dehmer, M., Grabner, M., Mowshowitz, A. & Emmert-Streib, F., Aug 2013, In : Advances in Computational Mathematics. 39, 2, p. 311-325 15 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Density functional theory study of FePd<sub>n</sub> (n = 2-14) clusters and interactions with small molecules**

Ma, L., Wang, J., Hao, Y. & Wang, G., Feb 2013, In : Computational Materials Science. 68, p. 166-173 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Growth behavior and magnetic properties of spherical uranium oxide nanoclusters**

Ma, L. & Ray, A. K., Feb 2013, In : Journal of Computational and Theoretical Nanoscience. 10, 2, p. 334-340 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Gene set analysis for self-contained tests: Complex null and specific alternative hypotheses**

Rahmatallah, Y., Emmert-Streib, F. & Glazko, G., Dec 2012, In : Bioinformatics. 28, 23, p. 3073-3080 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Universal construction mechanism for networks from one-dimensional symbol sequences**

Emmert-Streib, F., 15 Oct 2012, In : Applied Mathematics and Computation. 219, 3, p. 1020-1030 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Evolutionary dynamics of the spatial Prisoner's Dilemma with self-inhibition**

Emmert-Streib, F., 5 Feb 2012, In : Applied Mathematics and Computation. 218, 11, p. 6482-6488 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Machine learning: How it can help nanocomputing**

Uusitalo, M. A., Peltonen, J. & Ryhänen, T., Aug 2011, In : Journal of Computational and Theoretical Nanoscience. 8, 8, p. 1347-1363 17 p.

Research output: Contribution to journal > Review Article > Scientific > peer-review

**BACOM: In silico detection of genomic deletion types and correction of normal cell contamination in copy number data**

Yu, G., Zhang, B., Bova, G. S., Xu, J., Shih, I. M. & Wang, Y., Jun 2011, In : Bioinformatics. 27, 11, p. 1473-1480 8 p., btr183.

Research output: Contribution to journal > Article > Scientific > peer-review

**The different levels of magneto-mechanical coupling in energy conversion machines and devices**

Belahcen, A., Kouhia, R. & Fonteyn, K., 2011, *Proceedings of the 4th International Conference on Computational Methods for Coupled Problems in Science and Engineering, COUPLED PROBLEMS 2011*. p. 472-483 12 p.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Revealing differences in gene network inference algorithms on the network level by ensemble methods**

Altay, G. & Emmert-Streib, F., 25 May 2010, In : Bioinformatics. 26, 14, p. 1738-1744 7 p., btq259.

Research output: Contribution to journal › Article › Scientific › peer-review

**Unite and conquer: Univariate and multivariate approaches for finding differentially expressed gene sets**

Glazko, G. V. & Emmert-Streib, F., Sep 2009, In : Bioinformatics. 25, 18, p. 2348-2354 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**A comparative analysis of multidimensional features of objects resembling sets of graphs**

Dehmer, M., Emmert-Streib, F. & Gesell, T., 15 Feb 2008, In : Applied Mathematics and Computation. 196, 1, p. 221-235 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Structural similarity of directed universal hierarchical graphs: A low computational complexity approach**

Dehmer, M. & Emmert-Streib, F., 1 Dec 2007, In : Applied Mathematics and Computation. 194, 1, p. 7-20 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Information theoretic measures of UHG graphs with low computational complexity**

Emmert-Streib, F. & Dehmer, M., 15 Jul 2007, In : Applied Mathematics and Computation. 190, 2, p. 1783-1794 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Comparing large graphs efficiently by margins of feature vectors**

Dehmer, M. & Emmert-Streib, F., 15 May 2007, In : Applied Mathematics and Computation. 188, 2, p. 1699-1710 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Topological mappings between graphs, trees and generalized trees**

Emmert-Streib, F. & Dehmer, M., 15 Mar 2007, In : Applied Mathematics and Computation. 186, 2, p. 1326-1333 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**A similarity measure for graphs with low computational complexity**

Dehmer, M., Emmert-Streib, F. & Kilian, J., 1 Nov 2006, In : Applied Mathematics and Computation. 182, 1, p. 447-459 13 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Algorithmic computation of knot polynomials of secondary structure elements of proteins**

Emmert-Streib, F., 1 Oct 2006, In : Journal of Computational Biology. 13, 8, p. 1503-1512 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Melting of copper clusters**

Valkealahti, S. & Manninen, M., 1 Jan 1993, In : Computational Materials Science. 1, 2, p. 123-134 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review