

Department of Mathematics and Statistics at UNM  
Publications

Compiled by María Cristina Pereyra

**Papers published/accepted in 2023**

1. **C. P. Boyer\*\*** and C. W. Tonnesen-Friedman, *Constant Scalar Curvature Sasaki Metrics and Projective Bundles*. In: Cheltsov, I., Chen, X., Katzarkov, L., Park, J. (eds) "Birational Geometry, Kähler-Einstein Metrics and Degenerations". Springer Proceedings in Mathematics & Statistics, vol 409. Springer Cham. 2023  
[https://doi.org/10.1007/978-3-031-17859-7\\_5](https://doi.org/10.1007/978-3-031-17859-7_5)
2. **C. P. Boyer\*\*, H. Huang\***, E. Legendre, and C. Tonnesen-Friedman, *Existence and Non-Existence of Constant Scalar Curvature and Extremal Sasaki Metrics*. *Mathematische Zeitschrift* **304**, 61 (2023).  
<https://doi.org/10.1007/s00209-023-03323-5>
3. **A. Buium\*** and L.E.Miller, *Purely arithmetic PDEs over a p-adic field, I:  $\delta$ -characters and  $\delta$ -modular forms*. *Memoirs of the Eur. Math Soc.* (MEMS), Vol 6, 2023.  
<https://doi.org/10.4171/MEMS/6>
4. **A. Buium\*** and L. E. Miller, *Perfectoid spaces arising from arithmetic differential equations*. *American J. Math.* **145**, No. 1 (2023).  
<https://doi.org/10.1353/ajm.2023.0006>
5. **J. Chaudhry\***, D. Estep and S. Tavener, *A posteriori error analysis for a space-time parallel discretization of parabolic partial differential equations*. *Numerical Methods for Partial Differential Equations* **40**, Issue 1 (2024) [first published August 14, 2023]  
<https://doi.org/10.1002/num.23065>
6. **J. Chaudhry\***, D. Estep, **T. Giannini†**, **Z. Stevens†**, and S Tavener, *Error estimation for the time to a threshold value in evolutionary partial differential equations*. *BIT Numerical Mathematics* **63** 12 (2023).  
<https://doi.org/10.1007/s10543-023-00947-1>

7. **F. Christensen\*** and **V. R. C. Sieck†**, *Flexible, efficient borrowing: A power prior structure for Bayesian interim analysis.* Quality Engineering (2023).  
<https://doi.org/10.1080/08982112.2023.2209160>
8. **R. Christensen\***, *Comment on "Forbidden knowledge and specialized training: A versatile solution for the two main sources of overfitting in linear regression," by Rohlfs (2023).* The American Statistician (2023).  
<https://doi.org/10.1080/00031305.2023.2277156>
9. J. DeAguero, T. Howard, D. Kusewitt, A. Brearley, A.-M. Ali, **J. H. Degnan\***, S. Jett, J. Watt, G. P. Escobar, K. Dokladny, and B. Wagner *The onset of rare earth metallosis begins with renal gadolinium-rich nanoparticles from magnetic resonance imaging contrast agent exposure.* Sci Rep **13**, 2025 (2023).  
<https://doi.org/10.1038/s41598-023-28666-1>
10. E. C. Peckham-Gregory, L. M. Boff, J. M. Schraw, L. G. Spector, A. M. Linabery, **E. B. Erhardt\***, K. B. Ribeiro, C. E. Allen, M. E. Scheurer, P. J. Lupo *Role of non-chromosomal birth defects on the risk of developing childhood Hodgkin lymphoma: A Children's Oncology Group study.* Pediatric Blood & Cancer, first published Dec 25, 2023 (Early View).. <https://doi.org/10.1002/pbc.30822>
11. N. Shaff, **E. B. Erhardt\***, S. Nitschke, K. Julio, C. Wertz, A. Vakhtin, A. Caprihan, G. Suarez-Cedeno, A. Deligtisch, S. Pirio Richardson, A. R. Mayer, and S. G. Ryman, *Comparison of automated and manual quantification methods for n euromelanin-sensitive MRI in Parkinson's disease.* Human Brain Mapping (2023).  
<https://doi.org/10.1002/hbm.26544>
12. H. J. van der Horn, A. B. Dodd, T. V. Wick, C. R. Robertson-Benta, J. R. McQuaid, A. K. Hittson, J. M. Ling, V. Zotev, S. G. Ryman, **E. B. Erhardt\***, J. P. Phillips, R. A. Campbell, R. E. Sapien, and A. R. Mayer, *Neural correlates of cognitive control deficits in pediatric mild traumatic brain injury.* Human Brain Mapping (2023).  
<https://doi.org/10.1002/hbm.26504>
13. A. Caprihan, L. Hillmer, **E. B. Erhardt\***, J. Adair, J. Knoefel, J. Prestopnik, and G. Rosenberg , *A Trichotomy Method for Defining Homogeneous Subgroups in a Dementia Population.* Annals of Clinical and Translational Neurology Editorial Office (2023). <https://doi.org/10.1002/acn3.51869>
14. J. D. Miller, T. Jones, **J. Upston†**, Z.-D. Deng, S. M. McClintock, **E. B. Erhardt\***, D. Farrar, and C. C. Abbott, *Electric Field, Ictal Theta Power, and Clinical Outcomes in Electroconvulsive Therapy.* Biological Psychiatry: Cognitive Neuroscience

and Neuroimaging. **8**, Issue 7, 760–767 (2023).  
<https://doi.org/10.1016/j.bpsc.2023.03.001>

15. M. F. Bouchonville III, **E. B. Erhardt\***, **Y. L. Leyva††**, L. Myaskovsky, M. L. Unruh, and S. Arora, *1029-P: Building Diabetes Care Capacity in Rural Underserved Communities—A Comparison of Cardiorenal Risk Factor Outcomes in Patients Treated by ECHO-Trained Providers vs. an Academic Medical Center*. Diabetes **72** (Supplement\_1):1029-P (2023). <https://doi.org/10.2337/db23-1029-P>
16. S. G. Ryman, N. Shaff, A. Dodd, S. Nitschke, C. Wertz, K. Julio, G. Suarez Cedeno, A. Deligtisch, **E. Erhardt\***, H. Lin, A. Vakhtin, K. L. Poston, R. Tarawneh, S. Pirio Richardson, A. Mayer, *Reduced and Delayed Cerebrovascular Reactivity in Patients with Parkinson's Disease*. Movement Disorders (2023).  
<https://doi.org/10.1002/mds.29429>
17. **E. B. Erhardt\***, A. Horner, N. Shaff, C. Wertz, S. Nitschke, A. Vakhtin, A. Mayer, J. Adair, J. Knoefel, G. Rosenberg, K. Poston, G. S. Cedeno, A. Deligtisch, S. P. Richardson, and S. Ryman, *Longitudinal Examination of Hippocampal Subfields, CSF Biomarkers, and Cognition in Patients with Parkinson Disease Without Dementia*. Clinical Parkinsonism & Related Disorders Volume 9, 2023, 100199 (2023).  
<https://doi.org/10.1016/j.prdoa.2023.100199>
18. L. Hillmer L, **E. B. Erhardt\***, A. Caprihan, et al., *Blood-brain barrier disruption measured by albumin index correlates with inflammatory fluid biomarkers*. Journal of Cerebral Blood Flow & Metabolism **43** (5), 712-721 (2023).  
<https://doi.org/10.1177/0271678X221146127>
19. **E. Erhardt\***, **C. Murray-Krezan††**, L. Regino, D. Perez, E. L Bearer, and J. Page-Reeves, *Associations between depression and diabetes among Latinx patients from low-income households in New Mexico*. Social Science & Medicine **320** (2023).  
<https://doi.org/10.1016/j.socscimed.2023.115713>
20. J. Miller, C. Abbott, **E. Erhardt\***, T. Jones, *Electric field modeling, ictal theta power, and clinical outcomes in Electroconvulsive Therapy*. The American Journal of Geriatric Psychiatry **31** (3), S117 (2023).  
<https://doi.org/10.1016/j.jagp.2022.12.166>
21. A. R. Mayer, T. B. Meier, A. B. Dodd, D. D. Stephenson, C. R. Robertson-Benta, J. M. Ling, S. P. Reddy, V. Zotev, K. Vakamudi, R. A. Campbell, R. E. Sapien, **E. B. Erhardt\***, J. P. Phillips, and A. A. Vakhtin, *A prospective study of grey matter atrophy following pediatric mild traumatic brain injury*. Neurology **100** (5) e516-e527 (2023). <https://doi.org/10.1212/WNL.0000000000201470>

22. J. D. Miller, T. Jones, **J. Upston**<sup>†</sup>, Z.-D. Deng, S. M. McClintock, **E. B. Erhardt\***, D. Farrar, and C. C. Abbott, *Electric Field, Ictal Theta Power, and Clinical Outcomes in Electroconvulsive Therapy*. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging (2023). <https://doi.org/10.1016/j.bpsc.2023.03.001>
23. M. Kiebs, D. Farrar, **E. Erhardt\***, and C. Abbott, *The global ECT MRI collaboration: cognitive battery and prospective recommendations*. Brain Stimulation **16**, Issue 1, 129–130 (2023). <https://doi.org/10.1016/j.brs.2023.01.052>
24. K. Kan, G. Sanchez, **N. Greenberg**<sup>★</sup>, S. Villa, and M. Tizazu, *Impacts of the COVID-19 Pandemic on Maternal, Neonatal, and Childhood Outcomes*. UC Berkeley Publications (2023). <https://escholarship.org/uc/item/5d99h9r7>
25. **K. Henke**<sup>†</sup>, E Pelofske, G Hahn, and GT Kenyon, *Sampling binary sparse coding QUBO models using a spiking neuromorphic processor*. ICONS '23: Proceedings of the 2023 International Conference on Neuromorphic Systems, Article No.38, Pages 1–5 (2023). <https://doi.org/10.1145/3589737.3606003>
26. J. Hou, X. Xie, Q. Cai, Z. Deng, H. Yang, **H. Huang**<sup>\*</sup>, and Y. Wang, *Waste plastic bottles classification with deep learning model*. International Journal of Wireless and Mobile Computing **25**, 3, pp 296–302 (2023).  
<https://doi.org/10.1504/IJWMC.2023.134675>.
27. J. Brown, J.-P. Davis, **G. Huerta**<sup>\*\*\*</sup>, J. Tucker, and K Shuler, *Quantifying uncertainty in analysis of shockless dynamic compression experiments on platinum. II. Bayesian model calibration*. J. Appl. Phys. **134** 235902 (2023).  
<https://doi.org/10.1063/5.0173652>
28. D. Ries and **G. Huerta**<sup>\*\*\*</sup>, *Predicting fatigue from heart rate signatures using functional logistic regression*. Stat **12**, Issue 1, e595 (2023).  
<https://doi.org/10.1002/sta4.595>
29. **K. N. Rumsey**<sup>††</sup>, **G. Huerta**<sup>\*\*\*</sup>, and J. Derek Tucker, *A localized ensemble of approximate Gaussian processes for fast sequential emulation*. Stat **12**, Issue 1 (2023).  
<https://doi.org/10.1002/sta4.576>
30. K. Divis, R. Abbott, C. Branda, G. Emmanuel-Aviña, J. Femling, **J. G. Huerta**<sup>\*\*\*</sup>, et al., *Rim-to-Rim Wearables at the Canyon for Health (R2R WATCH): Physiological, Cognitive, and Biological Markers of Performance Decline in an Extreme Environment*. Journal of Human Performance in Extreme Environments **18**, Iss. 1 (2023).

<https://doi.org/10.7771/2327-2937.1134>

31. **A. Korotkevitch\***, *Inverse cascade of gravity waves in the presence of a condensate: A direct numerical simulation.* Physical Review Letters **130**, 264002 (2023).  
<https://doi.org/10.1103/PhysRevLett.130.264002>
32. **A. O. Korotkevich\***, **P. M. Lushnikov\***, **A.A. Semenova††**, **S. A. Dyachenko††**, *Superharmonic Instability of Stokes Waves.* Studies in Applied Mathematics **150** (1), 119–134 (2023). <https://doi.org/10.1111/sapm.12535>
33. B. M. Nagda, J. Du, **O. L. Lewis\***, A. L. Fogelson, *Deswelling Dynamics of Chemically-Active Polyelectrolyte Gels.* In: Mikyška, J., de Mulatier, C., Paszynski, M., Krzhizhanovskaya, V. V., Dongarra, J. J., Sloot, P.M. (eds) Computational Science - ICCS 2023. ICCS 2023. Lecture Notes in Computer Science, vol 10477. Springer, Cham. 332–346, 2023. [https://doi.org/10.1007/978-3-031-36030-5\\_27](https://doi.org/10.1007/978-3-031-36030-5_27)
34. J. Du, B. M. Nagda, **O. L. Lewis\***, D. B. Szyld, A. L. Fogelson, *A Computational framework for the swelling dynamics of mucin-like polyelectrolyte gels.* Journal of Non-Newtonian Fluid Mechanics **313**, (2023).  
<https://doi.org/10.1016/j.jnnfm.2023.104989>
35. **A. Cerjan\*\*\*** and **T. A. Loring\***, *Even spheres as joint spectra of matrix models.* Journal of Mathematical Analysis and Applications **531**, Issue 1, Part 2, (2024), 127892. (available online Oct 2023). <https://doi.org/10.1016/j.jmaa.2023.127892>
36. S. Wong, **T. A. Loring\***, and **A. Cerjan\*\*\***, *Probing topology in nonlinear topological materials using numerical -theory.* Physical Review B **108**, 195142 (2023).  
<https://doi.org/10.1103/PhysRevB.108.195142>
37. K. Y. Dixon, **T. A. Loring\***, and **A. Cerjan\*\*\***, *Classifying topology in photonic heterostructures with gapless environments.* Physical Review Letters **131**, 213801 (2023). <https://doi.org/10.1103/PhysRevLett.131.213801>
38. W. Cheng, **A. Cerjan\*\*\***, S. Y. Chen, E. Prodan, **T. A. Loring\***, and C. Prodan, *Revealing Topology in Metals using Experimental Protocols Inspired by K-Theory.* Nat. Commun. 14, 3071 (2023). <https://doi.org/10.1038/s41467-023-38862-2>. This article is getting extra publicity by Nature Physics "It's time for some K-theory"  
<https://www.nature.com/articles/s41567-023-02147-8>

39. **A. Cerjan\*\*\*, T. A. Loring\*, and F. Vives††**, *Quadratic pseudospectrum for identifying localized states.* J. Math. Phys. 64, 023501 (2023)  
<https://doi.org/10.1063/5.0098336>
40. **G. Zhang\* and Y. Lu\***, *Comparison of difference based variance estimators for partially linear models.* Communications in Statistics-Theory and Methods **52**:23, 8454-8466 (2023). <https://doi.org/10.1080/03610926.2022.2064498>.
41. D.M. Ambrose, **P.M. Lushnikov\***, M. Siegel, and **D.A. Silantyev††**, *Global existence and singularity formation for the generalized Constantin–Lax–Majda equation with dissipation: the real line vs. periodic domains.* Nonlinearity **37** (2) (2023). <https://doi.org/10.1088/1361-6544/ad140c>
42. B. Deconinck, **S. A. Dyachenko††**, **P. M. Lushnikov\***, and **A. Semenova††**, *The instability of near-extreme Stokes waves.* PNAS, Vol 120, No. 32 (2023). <https://doi.org/10.1073/pnas.2308935120>
- .
43. **M. Schield\*\*\***, *Practical Statistics for Decision Makers 1st Edition.* Wiley, 2023 (450pp.) ISBN-13: 978-1119421115
44. **M. Schield\*\*\***, *Statistical Literacy 2023: Critical Thinking about Everyday Statistics.* Kendall Hunt Publishing, 2023. ISBN-13: 979-8765740583
45. C. Janna, A. Franceschini, **J. B. Schroder\***, and L. Olson, *Parallel Energy-Minimization Prolongation for Algebraic Multigrid.* SIAM Journal on Scientific Computing, **45** (5), A2561-A2584 (2023). <https://doi.org/10.1137/22M1513794>
46. **D. A. Vargas†**, R. D. Falgout, S. Günther and **J. B. Schroder\***, *Multigrid Reduction in Time for Chaotic Dynamical Systems.* SIAM Journal on Scientific Computing **45** (4), A2019-A2042 (2023). <https://doi.org/10.1137/22M151833>
47. S. M. Guzik, J. Christopher, X. Gao, **J. B. Schroder\***, and R. D. Falgout, *On the use of a multigrid-reduction-in-time algorithm for multiscale convergence of turbulent simulations.* Computers and Fluids **261** (2023).  
<https://doi.org/10.1016/j.compfluid.2023.105910>
48. N. Bell, L. N. Olson, **J. Schroder\***, and B. Southworth, *PyAMG: Algebraic Multigrid Solvers in Python.* Journal of Open Source Software 8 (87), 5495 (2023).  
<https://doi.org/10.21105/joss.05495>

49. H. De Sterck, R. D. Falgout, O. A. Krzysik, and **J. B. Schroder\***, *Efficient multigrid reduction-in-time for method-of-lines discretizations of linear advection*. Journal on Scientific Computing **96**, 1 (2023). <https://doi.org/10.1007/s10915-023-02223-4>
50. **M. Sugiyama†, J. B. Schroder\***, B. S. Southworth, and S. Friedhoff, *Weighted relaxation for multigrid reduction in time*. Numerical Linear Algebra with Applications **30** (1), 2023. <https://doi.org/10.1002/nla.2465>
51. J. U. Chen, S. Kang, T. Bui-Thanh, and **J. N. Shadid\*\*\***, *Unified hp-HDG Frameworks for Friedrichs' PDE systems*. Computers & Mathematics with Applications **154**, 236–266 (2024). <https://doi.org/10.1016/j.camwa.2023.12.009>
52. J. Bonilla, **J. N. Shadid\*\*\***, X. Z. Tang, M. M. Crockatt, P. Ohm, E. G. Phillips, R. P. Pawlowski, S. Conde, and **O. Beznosov††**. *On a fully-implicit VMS-stabilized FE formulation for low Mach number compressible resistive MHD with application to MCF*. Computer Methods in Applied Mechanics and Engineering, Volume **417**, Part B, 116359 (2023). <https://doi.org/10.1016/j.cma.2023.116359>.
53. M. Maier, **J. N. Shadid\*\*\***, and I. Tomas, *Structure-preserving finite-element schemes for the Euler-Poisson equations*. Communications in Computational Physics, **33** (2023), 647–691. <https://doi.org/10.4208/cicp.OA-2022-0205>
54. M. M. Crockatt and **J. N. Shadid\*\*\***, *A non-neutral generalized Ohm's law model for magnetohydrodynamics in the two-fluid regime*. Physics of Plasmas **30**, 053902 (2023). <https://doi.org/10.1063/5.0138673>
55. S. Muralikrishnan, S. Shannon, T. Bui-Thanh, and **J. N. Shadid\*\*\***, *A multilevel block preconditioner for the HDG trace system applied to incompressible resistive MHD*. Computer Methods in Applied Mechanics and Engineering **404**, 1 February 2023. <https://doi.org/10.1016/j.cma.2022.115775>
56. A. Chattopadhyay, C. Pradhan, and **A. Skripka\***, *Approximation of the spectral action functional in the case of  $\tau$ -compact resolvents*. Integral Equations and Operator Theory **95**, 20 (2023). <https://doi.org/10.1007/s00020-023-02740-9>
57. T. van Nuland, **A. Skripka\***, *Higher-order spectral shift for resolvent comparable perturbations*. Journal of Operator Theory, **95**, 20 (2023).  
<https://doi.org/10.1007/s00020-023-02740-9>
58. **A. Skripka\***, *Lipschitz-type bounds for functions of operators with noncompact perturbations*. In: Alpay, D., Behrndt, J., Colombo, F., Sabadini, I., Struppa, D.C. (eds) Recent Developments in Operator Theory, Mathematical Physics and Complex

- Analysis. Operator Theory: Advances and Applications, vol 290. Birkhäuser, Cham. (2023). [https://doi.org/10.1007/978-3-031-21460-8\\_9](https://doi.org/10.1007/978-3-031-21460-8_9)
59. T. van Nuland\*\*\* and A. Skripka\*, *Spectral shift for relative Schatten class perturbations.* Journal of Spectral Theory, **12** (2022), no. 4, 1347–1382. <https://doi.org/10.4171/JST/425> [Publication date 18 May 2023].
60. D. J. Schodt, M. J. Webster, M. Fazel, S. Khan, H. Mazloom-Farsibaf, S. Pallikkuth, M. B. Meddents, F. Farzam, E. A. Burns, W. K. Kanagy, D. A. Rinaldi, E. Jhamba, S. Liu, P. K. Relich, M. J. Olah, S. L. Steinberg\*\*\*, and K. A. Lidke, *SMITE: Single Molecule Imaging Toolbox Extraordinaire (MATLAB).* Journal of Open Source Software, 8(90), 5563, (2023). <https://doi.org/10.21105/joss.05563>
61. G. M. Harris, S. E. Sesnie, and D. R. Stewart†, *Climate Change and Ecosystem Shifts in the Southwestern United States.* Sci Rep **13**, 19964 (2023). <https://doi.org/10.1038/s41598-023-46371-x>.
62. L. C. Feher, M. J. Osland, D.J. Johnson, J. B. Grace, G. R. Guntenspergen, D. R. Stewart†, C. Coronado-Molina, and F. H. Sklar, *Nonlinear patterns of surface elevation change in coastal wetlands: the value of generalized additive models for quantifying rates of change.* Estuaries and Coasts (2023). <https://doi.org/10.1007/s12237-023-01268-w>
63. D.R. Stewart†, J.C. Barron II, T. Harden, E.R. Grube, M. Ulibarri, A.T. Taylor, E.J. Heist, E.G. Mandeville, B.T. Nickerson, N. Berg, L.A. Johnson, M.J. Butler, and G.M. Harris, *The optimal stocking strategy for Yaqui Catfish Ictalurus pricei.* North American Journal of Fisheries Management (2023). <https://doi.org/10.1002/nafm.10942>
64. M.A. Boggie, M.J. Butler, S.E. Sesnie, B.A. Millsap, D.R. Stewart†, G.M. Harris, and J.C. Broska, *Forecasting suitable areas for wind turbine occurrence to proactively improve wildlife conservation.* Journal of Nature Conservation **74**, 1266442 (2023). <https://doi.org/10.1016/j.jnc.2023.126442>
65. D.R. Stewart†., K. Broms, K. Gerow, M. Allen, and M. Quist, *Statistical Analysis of Standard Data: Survey Design and Development.* In: Standard Methods for Sampling North American Freshwater Fishes, 2nd edition. American Fisheries Society (2023). [Accepted 02/28/2023]
66. J. Upston†, D. Sulsky\*\*, J. D. Tucker, Y. Guan, *CIEL\* Ch color map for visualization and analysis of sea ice motion.* Journal of Computational and Applied

Mathematics, Volume 429, 115126 (2023).  
<https://doi.org/10.1016/j.cam.2023.115126>

67. D. K. Quinn, **J. Upston**<sup>†</sup>, T. R. Jones, B. C. Gibson, T. A. Olmstead, J. Yang, A. M. Price, D.H. Bowers-Wu, E. Durham, S. Hazlewood, D. C. Farrar, J. Miller, M. O. Lloyd, C. A. Garcia, C. J. Ojeda, B. W. Hager, A. A. Vakhtin, and C.C. Abbott, *Electric field distribution predicts efficacy of accelerated intermittent theta burst stimulation for late-life depression.* Front Psychiatry. 2023; 14: 1215093 (2023). <https://doi.org/10.3389/fpsyg.2023.1215093>
68. S. Qi, V. D. Calhoun, D. Zhang, J. Miller, Z.-D. Deng, K. L. Narr, Y. Sheline, S. M. McClintock, R. Jiang, X. Yang, **J. Upston**<sup>†</sup>, T. Jones, J. Sui, and C. C. Abbott, *Correction: Links between electroconvulsive therapy responsive and cognitive impairment multimodal brain networks in late-life major depressive disorder.* BMC Medicine (2023) 21:113. <https://doi.org/10.1186/s12916-023-02800-2>
69. **A. Mohamed**<sup>†</sup> and **D. Vassilev**<sup>\*</sup>, *The Obata first eigenvalue theorems on a seven dimensional quaternionic contact manifold.* J. Geom. Anal. **33**, 13 (2023). <https://doi.org/10.1007/s12220-022-01072-1>
70. S. Ivanov, I. Minchev, and **D. Vassilev**<sup>\*</sup>, *Solution of the qc Yamabe equation on a 3-Sasakian manifold and the quaternionic Heisenberg group.* Analysis & PDE **16** (3), 839-860 (2023). <https://doi.org/10.2140/apde.2023.16.839>
71. N. Epstein, R. R.G. and **J. Vassilev**<sup>\*</sup>, *How to extend closure and interior operations to more modules.* Nagoya Mathematical Journal, First View, 1–48 (2023) . <https://doi.org/10.1017/nmj.2023.36>
72. C. Berkesh, S. Y. Jean Chan, P. Klein, L. F. Matusevich, J. Page, and **J. Vassilev**<sup>\*</sup>, *Differential operators, retracts, and toric face rings.* Algebra and Number Theory **17** (2023) no. 11, 1959–1984. <https://doi.org/10.2140/ant.2023.17.1959>
73. L. E. Miller, W. D. Taylor, **J. Vassilev**<sup>\*</sup>, *Differentially Fixed Ideals in Affine Semigroup Rings.* International Journal of Algebra and Computation **33** (2023) no.2; 1127–1156. <https://doi.org/10.1142/S0218196723500509>
74. N. Epstein, R. R.G., and **J. Vassilev**<sup>\*</sup>, *Nakayama closures, interior operations, and core-hull duality - with applications to tight closure theory.* J. Algebra **613** (2023), 46–86. <https://doi.org/10.1016/j.jalgebra.2022.09.008>

75. N. Epstein, R. R.G. , and **J. Vassilev\***, *Integral closure, basically full closure, and duals of nonresidual closure operations*. Journal of Pure and Applied Algebra **227**, Issue 4 (2023) 107256. <https://doi.org/10.1016/j.jpaa.2022.107256>
76. **H. Wearing\***, J. Colella, J. Cook, A. Monfils, A. Camacho, A. Lazar, and F. Souza-Gudinho, *Sin Nombre Hantavirus in the US*. Biodiversity Literacy in Undergraduate Education, QUBES Educational Resources (2023).  
<https://doi.org/10.25334/KSMH-QX61>
77. **N. Miller†** and **G. Zhang\***, *Additive Multi-task Learning Models and Task Diagnostics*. Communications in Statistics - Simulation and Computation (2023).  
<https://doi.org/10.1080/03610918.2023.2212430>
78. **S. Alver†** and **G. Zhang\***, *Multiple Comparisons of Treatment vs Control Under Unequal Variances Using Parametric Bootstrap*. Journal of Applied Statistics (2023).  
<https://doi.org/10.1080/02664763.2023.2245179>
79. D. Appelö, M. Hu, and **M. Zinchenko\***, *Taming the CFL Number for Discontinuous Galerkin Methods by Local Exponentiation*. In: Melenk, J.M., Perugia, I., Schöberl, J., Schwab, C. (eds) Spectral and High Order Methods for Partial Differential Equations ICOSAHOM 2020+1. Lecture Notes in Computational Science and Engineering, vol 137. Springer, Cham (2023).  
[https://doi.org/10.1007/978-3-031-20432-6\\_6](https://doi.org/10.1007/978-3-031-20432-6_6)
80. J. S. Christiansen, B. Simon, and **M. Zinchenko\***, *Asymptotics of Chebyshev polynomials, V. Residual polynomials*. The Ramanujan J. **61**, 251–278 (2023).  
<https://doi.org/10.1007/s11139-021-00500-0>

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