

Department of Mathematics and Statistics at UNM Publications

compiled by María Cristina Pereyra

Papers published/accepted in 2021

1. **O. Beznosov†** and D. Appelö, *Hermite-discontinuous Galerkin overset grid methods for the scalar wave equation.* Commun. Appl. Math. Comput. **3**, 391–418 (2021). <https://doi.org/10.1007/s42967-020-00075-5>
2. **M. Blair***, C. Sogge and Y. Sire, *Quasimode, eigenfunction and spectral projection bounds for Schrödinger operators on manifolds with critically singular potentials.* J. Geom. Anal **31**, 6624–6661 (2021). <https://doi.org/10.1007/s12220-019-00287-z>
3. **M.D. Blair***, X. Huang, Y. Sire, C. D. Sogge, *Uniform Sobolev Estimates on compact manifolds involving singular potentials.* Revista Mat. Iberoamericana **37**, no. 1 (2021). <https://doi.org/10.4171/RMI/1300>.
4. **C. P. Boyer****, **H. Huang***, and C. W. Tønnesen-Friedman, *Transverse Kähler holonomy in Sasaki Geometry and S-Stability.* Complex Manifolds **8** (2021), no. 1, 336–353. <https://doi.org/10.1515/coma-2020-0123>
5. **C. P. Boyer****, C. W. Tønnesen-Friedman, *Sasakian geometry on sphere bundles.* Differential Geom. Appl. **77** (2021), Paper No. 101765, 37 pp.
6. **C. P. Boyer****, **H. Huang***, E. Legendre, and C. Tønnesen- Friedman; *Some Open Problems in Sasaki Geometry.* In book: Differential Geometry in the Large, Cambridge University Press (2021), 143–168. [10.48550/arXiv.1906.04827](https://arxiv.org/abs/1906.04827)
7. **A. Buium*** and L. E. Miller, *Perfectoid spaces arising from arithmetic differential equations.* American J. Math. (accepted December 2021, issued 2023), preprint available arXiv:1911.00113.
8. **J. H. Chaudhry*** and J. Collins. *A posteriori Error Estimation for the Spectral Deferred Correction Method.* J. Comput. Appl. Math. **382** (2021), Paper No. 113097, 14 pp. <https://doi.org/10.1016/j.cam.2020.113097>
9. **J. H. Chaudhry***, L. N. Olson, and P. Sentz. *A Least-Squares Finite Element Reduced Basis Method.* SIAM J. Sci. Comput. **43** (2021), no. 2, A1081–A1107. <https://doi.org/10.1137/20M1323552>

10. **J. H. Chaudhry***, **A. E. Rappaport†**, and **J. N. Shadid*****, *An a posteriori error analysis for the equations of stationary incompressible magnetohydrodynamics*. SIAM J. Sci. Comput. **43** (2021), no. 2, B354–B380. <https://doi.org/10.1137/20M1342975>
11. V. Ramm, **J. H. Chaudhry***, and C. Cooper, *Efficient mesh refinement for the Poisson-Boltzmann equation with boundary elements*. Journal of Computational Chemistry **42** (12), 855–869 (2021). <https://doi.org/10.1002/jcc.26506>
12. **J. Chaudhry***, D. Estep and S. Tavener. *A posteriori error analysis for Schwarz overlapping domain decomposition methods*. BIT Numerical Mathematics **61** (4), 1153–1191 (2021). <https://doi.org/10.1007/s10543-021-00864-1>
13. **J.H. Chaudhry***, D. Estep, **Z. Stevens†**, and S.J. Taverner, *Error estimation and uncertainty quantification for first time to a threshold value*. BIT Numerical Mathematics **61** (2021), no. 1, 275–307. <https://doi.org/10.1007/s10543-020-00825-0>
14. **V. R. C. Sieck†** and **F. G. W. Christensen***, *A framework for improving the efficiency of operational testing through Bayesian adaptive design*. Quality and Reliability Engineering International **61** (4), 1153–1191(2021), <https://doi.org/10.1002/qre.2802>
15. S. McKenzie, R. Huszár, D.F. English, K. Kim, **F. Christensen***, E. Yoon, and G. Buzsáki, *Pre-existing hippocampal network dynamics constrain optogenetically induced place fields*. Neuron **109**, ISSUE 6, P1040-1054.E7,(2021), <https://doi.org/10.1016/j.neuron.2021.01.011>
16. **F. Quadan††** and **R. Christensen***, *On the equivalence between the LRT and F-test for testing variance components in a class of linear mixed models*. Metrika **313**–338 (2021). <https://doi.org/10.1007/s00184-020-00777-z>
17. **R. Christensen***, *Comment on ‘Test for Trend With a Multinomial Outcome’ by Szabo (2019)*. The American Statistician, **74**:3, 313–314 (2021). <https://doi.org/10.1080/00031305.2020.1763835>
18. **A.R.A. Alanzi††**, **J.H. Degnan***, *Correction: Statistical inconsistency of the unrooted minimize deep coalescence criterion*. Plos one **16** (8), e0256189 (2021). <https://doi.org/10.1371/journal.pone.0256189>
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24. C. C. Abbott, D. Quinn, J. Miller, E. Ye, S. Iqbal, M. Lloyd, T. R. Jones, **J. Upston†**, Z. D. Deng, **E. B. Erhardt***, and S. M. McClintock, *Electroconvulsive Therapy Pulse Amplitude and Clinical Outcomes.* American Journal of Geriatric Psychiatry **29**, Issue 2, February 2021, 166–178. <https://doi.org/10.1016/j.jagp.2020.06.008>.
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28. S. Campione, J.A. Stephens, N. Martin, A. Eckert, L. Warne, **Gabriel Huerta*****, Robert Pfeiffer, and Adam Jones, *Developing Uncertainty Quantification Strategies in Electromagnetic Problems Involving Highly Resonant Cavities.* Journal of Verification, Validation and Uncertainty Quantification **6** (4), 041003 (2021). <https://doi.org/10.1115/1.4051906>
29. **K. Rumsey†** and **G. Huerta***, *Fast Matrix Algebra for Bayesian Model Calibration.* Journal of Statistical Computation and Simulation **9** (7), 1331–1341 (2021). <https://doi.org/10.1080/00949655.2020.18>
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41. **Y. Lu***, Y. Fu, and **G. Zhang***, *Nonparametric regression estimators in dual frame surveys*. *Communications in Statistics-Simulation and Computation* **50** (3), 854–864 (2021). <https://doi.org/10.1080/03610918.2019.1568474>

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