

Department of Mathematics and Statistics at UNM Publications

Compiled by María Cristina Pereyra

Papers published/ accepted in 2020

1. **M. Blair***, C. Sogge and Y. Sire, *Quasimode, eigenfunction and spectral projection bounds for Schrödinger operators on manifolds with critically singular potentials.* To appear Journal of Geometric Analysis, special issue—a memorial issue in honor of Eli Stein (published on Sep 30, 2019. Issue Date 2021).
<https://doi.org/10.1007/s12220-019-00287-z>
2. **A. Buium***, *Arithmetic analogues of Hamiltonian systems.* Integrable Systems and Algebraic Geometry: Volume 2, London Math. Soc., Lecture Notes Series 459, Cambridge University Press, 2020, 13–40.
3. **A. Buium*** and L. E. Miller, *Solutions to arithmetic differential equations in algebraically closed fields.* Adv. Math. **375** (2020), 107342, 47pp.
<https://doi.org/10.1016/j.aim.2020.107342>
4. **J. Chaudhry***, D. Estep, **Z. Stevens†**, and S. Tavener. *Error estimation and uncertainty quantification for first time to a threshold value.* BIT Numerical Mathematics (Accepted 2020, appeared 2021).
5. **J. H. Chaudhry*** and J. Collins. *A posteriori Error Estimation for the Spectral Deferred Correction Method.* Journal of Computational and Applied Mathematics (Accepted 2020, appeared 2021).
6. **J. H. Chaudhry***, L. N. Olson, and P. Sentz. *A Least-Squares Finite Element Reduced Basis Method.* SIAM Journal on Scientific Computing (Accepted 11/27/2020, appeared 2021).
7. **J. H. Chaudhry***, **A. E. Rappaport†**, and **J. N. Shadid*****, *An a posteriori error analysis for the equations of stationary incompressible magnetohydrodynamics.* SIAM Journal on Scientific Computing Mathematics (Accepted 12/16//2020, appeared 2021)
8. **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 (first published Nov 17, 2020, issued 2021). <https://doi.org/10.1002/qre.2802>

9. **R. Christensen***, *Comment on ‘Test for Trend With a Multinomial Outcome’ by Szabo (2019)*. The American Statistician (accepted 2020, appeared 2021).
10. **R. Christensen***, *Plane Answers to Complex Questions: The Theory of Linear Models, Fifth Edition*. Springer-Verlag, New York, 2020.
11. **A. Kim†**, N. A. Rosenberg, and **J. H. Degnan***, *Probabilities of unranked and ranked anomaly zones under birth-death models*. Molecular Biology and Evolution 37 (5), 1480–1494 (2020). <https://doi.org/10.1093/molbev/msz305>
12. H.C. Palm, **J. H. Degnan***, S. D. Biefeld, A. L. Reese, E. Espey, and L. G. Hofler *An initiative to implement immediate postpartum long-acting reversible contraception in rural New Mexico*. American Journal of Obstetrics and Gynecology (2020) 222, S911.e1-7. <https://doi.org/10.1016/j.ajog.2020.01.027>
13. M. Z. S. Gerlach, C. Mermier, L. Kravitz, **J. Degnan***, and L. Dalleck, *Comparison of treadmill and cycle ergometer exercise during cardiac rehabilitation: a meta-analysis*. Archives of Physical Medicine and Rehabilitation 101, 690–699 (2020). <https://doi.org/10.1016/j.apmr.2019.10.184>
14. **J. H. Degnan***, *Meng and Kubatko (2009): Modeling hybridization with coalescence*. Theoretical Population Biology 133, 36–37 (2020). <https://doi.org/10.1016/j.tpb.2019.07.008>
15. **A. Kim†** and **J. Degnan***, *PRANC: ML species tree estimation from the ranked gene trees under coalescence*. Bioinformatics 36, Issue 18, 4819–4821(2020). <https://doi.org/10.1093/bioinformatics/btaa605>
16. 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 (June 10, 2020), *Electroconvulsive Therapy Pulse Amplitude and Clinical Outcomes*. Amer. J. Geriatr. Psychiatry, in press <https://doi.org/10.1016/j.jagp.2020.06.008>
17. **E. B. Erhardt*** and W. Lim, *Effects of a GAISE-based Teaching Method on Students’ Learning in Introductory Statistics*. Communications for Statistical Applications and Methods (27) (2020). <https://doi.org/10.29220/CSAM.2020.27.3.269>
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23. **K. Heinemann***, O. Beznosov†, J. Ellison****, D. Barber, and D. Appelö, *Re-evaluation of spin-orbit dynamics of polarized e^+e^- Beams in high energy circular accelerators and storage rings: an approach based on a Bloch equation*. International Journal of Modern Physics A, Vol. 35, No. 15n16, 2041003 (2020).
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<https://doi.org/10.1109/ICRC2020.2020.900015>
25. **K. Henke†**, G. Kenyon, and B. Miggliori, *Machine Learning in a Post Moore? Law World: Quantum vs. Neuromorphic Substrates ?* (March) 2020 IEEE Southwest Symposium on Image Analysis and Interpretation (SSIAI), Albuquerque, NM, USA, 2020, pp. 74-77, <https://doi.org/10.1109/SSIAI49293.2020.9094596>
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30. **A. A. Semenova[†], S. A. Dyachenko^{††}, A. O. Korotkevich***, and **P. M. Lushnikov***, *Comparison of Split-Step and Hamiltonian Integration Methods for Simulation of the Nonlinear Schrödinger Equation*. Accepted to J. Comp. Physics (accepted 2020). Available at arXiv:2008.03938
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* Tenure stream

** Emeritus

***Adjunct/Postdoc/Visiting Researcher

☆ Lecturer

† Graduate student at UNM or elsewhere

†† Former graduate student at UNM

††† Undergraduate student at UNM or elsewhere