

AIMS publications 2020

Almaraz, E., Li, B. and MacOrra, A. D. L. (2020) 'Nonlinear structure formation in Bound Dark Energy', *Journal of Cosmology and Astroparticle Physics*, 2020(3). doi: 10.1088/1475-7516/2020/03/016.

Alosaimi, S., **Mazandu, G.**, et al. (2020) 'A broad survey of DNA sequence data simulation tools', *Briefings in functional genomics*, 19(1), pp. 49–59. doi: 10.1093/bfgp/elz033.

Bah, B. and Bouchot, J.-L. (2020) 'Editorial: Recent Developments in Signal Approximation and Reconstruction', *Frontiers in Applied Mathematics and Statistics*, 6, pp. 1–2. doi: 10.3389/fams.2020.00006.

Böhm, J., **Marais, M. S.** and Steenpaß, A. (2020) 'The classification of real singularities using SINGULAR Part III: Unimodal singularities of corank 2', *Journal of Symbolic Computation*, 99, pp. 250–282. doi: 10.1016/j.jsc.2019.06.003.

Chen, G... **Hui, C.**, et al. (2020) 'Driving factors of community-level plant functional traits and species distributions in the desert-wetland ecosystem of Shule River, China', *Land Degradation & Development*, (April), pp. 1–15. doi: 10.1002/ldr.3624.

Cheng, D. **Fantaye, Y.**...et al. (2020) 'Multiple testing of local maxima for detection of peaks on the (celestial) sphere', *Bernoulli*, 26(1), pp. 31–60. doi: 10.3150/18-BEJ1068.

Cotton, W. D. ..**Oozeer, N.**, et al. (2020) 'Hydrodynamical backflow in X-shaped radio galaxy PKS 2014–55', *Monthly Notices of the Royal Astronomical Society*, 495(1), pp. 1271–1283. doi: 10.1093/mnras/staa1240.

Duniya, D. G. A. et al. (2020) 'Probing beyond-Horndeski gravity on ultra-large scales', *Journal of Cosmology and Astroparticle Physics*, 2020(1), p. 1271-1283 . doi: 10.1088/1475-7516/2020/01/033.

Duniya, D.G.A., Moloi, T., Clarkson, C., (...), Mongwane, B., Weltman, A. (2020) 'Probing beyond-Horndeski gravity on ultra-large scales', *Journal of Cosmology*, 01, p. 1271-1283 . doi: <https://doi.org/10.1088/1475-7516/2020/01/033>.

Durbach, I. and Stewart, T. (2020) 'Including uncertainties in Decision Analysis', in *Probability and Beyond*. Springer, Switzerland, pp. 75–91.

Essl, F...**Hui, C.** et al. (2020) 'Drivers of future alien species impacts: An expert-based assessment', *Global Change Biology*, 26(9), pp. 4880–4893. doi: 10.1111/gcb.15199.

Fobasso, M. F. C., **Fotue, A.J.**, et al. (2020) 'Thermal properties of magnetopolaron in a GaAs delta potential under Rashba effect', *Physica E: Low-Dimensional Systems and Nanostructures*. Elsevier B.V., 118(December 2019), p. 113941. doi: 10.1016/j.physe.2019.113941.

Khalique, C. M. and Abdallah, S. A. (2020) 'Coupled Burgers equations governing polydisperse sedimentation; a Lie symmetry approach', *Results in Physics*. Elsevier, 16(December 2019), p. 102967. doi: 10.1016/j.rinp.2020.102967.

Koffi, R. S. and Tambue, A. (2020) 'A Fitted Multi-point Flux Approximation Method for Pricing Two Options', *Computational Economics*, 55(2), pp. 597–628. doi: 10.1007/s10614-019-09906-x.

Lin, S... **Hui, C.**, ..et al. (2020) 'Leaf shape influences the scaling of leaf dry mass vs. area: a test case using bamboos', *Annals of Forest Science*. Annals of Forest Science, 77(1). doi: 10.1007/s13595-019-0911-2.

- Liu, G. ... **Hui, C.**, *et al.* (2020) 'Variation in individual biomass decreases faster than mean biomass with increasing density of bamboo stands', *Journal of Forestry Research*, 31(3), pp. 981–987. doi: 10.1007/s11676-018-0796-1.
- Mazandu, G. K.** *et al.* (2020) 'A potential roadmap to overcome the current eastern DRC Ebola virus disease outbreak: From a computational perspective', *Scientific African*, 7, p. e00282. doi: 10.1016/j.sciaf.2020.e00282.
- Mukam, J. D. and **Tambue, A.** (2020) 'Strong convergence of a stochastic Rosenbrock-type scheme for the finite element discretization of semilinear SPDEs driven by multiplicative and additive noise', *Stochastic Processes and their Applications*. Elsevier B.V., 130(8), pp. 4968–5005. doi: 10.1016/j.spa.2020.02.008.
- Mukam, J. D. and **Tambue, A.** (2020) 'Strong convergence of the linear implicit Euler method for the finite element discretization of semilinear non-autonomous SPDEs driven by multiplicative or additive noise', *Applied Numerical Mathematics*. Elsevier B.V., 147, pp. 222–253. doi: 10.1016/j.apnum.2019.08.009.
- Nickelson, D.** and Kastner, M. (2020) 'Modelling equilibration of local many-body quantum systems by random graph ensembles', *QUANTUM*, 4(273). doi: <https://doi.org/10.22331/q-2020-05-28-273>.
- Nkya, S...**Mazandu, G.**, ... *et al.* (2020) 'Identifying genetic variants and pathways associated with extreme levels of fetal hemoglobin in sickle cell disease in Tanzania', *BMC Medical Genetics*, 21(1). doi: 10.1186/s12881-020-01059-1.
- Novoa, A. ... **Hui, C.**, *et al.* (2020) 'Invasion syndromes: a systematic approach for predicting biological invasions and facilitating effective management', *Biological Invasions*, 22(5), pp. 1801–1820. doi: 10.1007/s10530-020-02220-w.
- Prudden, H. J....**Ndifon, W.**, ...*et al.* (2020) 'Meeting Report: WHO Workshop on modelling global mortality and aetiology estimates of enteric pathogens in children under five. Cape Town, 28–29th November 2018', *Vaccine*, 38, pp. 4792–4800. doi: 10.1016/j.vaccine.2020.01.054.
- Shi, P. ... **Hui, C.**, *et al.* (2020) 'Does the law of diminishing returns in leaf scaling apply to vines? – Evidence from 12 species of climbing plants', *Global Ecology and Conservation*, 21, p. e00830. doi: 10.1016/j.gecco.2019.e00830.
- Shi, P. ... **Hui, C.**, *et al.* (2020) 'Leaf bilateral symmetry and the scaling of the perimeter vs. the surface area in 15 vine species', *Forests*, 11(2), p. e246. doi: 10.3390/f11020246.
- Su, M., Yang, Y. and **Hui, C.** (2020) 'How intraguild predation affects the host diversity-disease relationship in a multihost community', *Journal of Theoretical Biology*. Elsevier Ltd, 490, p. 110174. doi: 10.1016/j.jtbi.2020.110174.
- Tahiridimbisoa, N. M. H. and Fantaye, Y. T.** (2020) 'Symmetric group and the Axelrod model for dissemination of cultures', *Scientific African*. Elsevier B.V., 7. doi: 10.1016/j.sciaf.2020.e00272.
- Tambue, A.** and Mukam, J. D. (2020) 'Optimal error estimate of the finite element approximation of second order semilinear non-autonomous parabolic PDEs', *Indagationes Mathematicae*, 31, pp. 714–727. doi: 10.1016/j.indag.2020.06.008.
- Tambue, A.** and Mukam, J. D. (2020) 'Magnus-type integrator for non-autonomous spdes driven by multiplicative noise', *Discrete and Continuous Dynamical Systems- Series A*, 40(8), pp. 4597–4624. doi: 10.3934/dcds.2020194.

Tang, Y., Yuen, M. and **Zhang, L.** (2020) 'Double Wronskian solutions to the (2+1)-dimensional Broer–Kaup–Kupershmidt equation', *Applied Mathematics Letters*. Elsevier Ltd, 105(11672270), p. 106285. doi: 10.1016/j.aml.2020.106285.

von der Heyden, S., Mbongwa, N. and **Hui, C.** (2020) 'Supporting sandy beach conservation through comparative phylogeography: The case of *Excirolana* (Crustacea: Isopoda) in South Africa', *Estuarine, Coastal and Shelf Science*. Elsevier Ltd, 242(April), p. 106841. doi: 10.1016/j.ecss.2020.106841.

Wickman, J. ... **Hui, C., et al.** (2020) 'How geographic productivity patterns affect food-web evolution', *Journal of Theoretical Biology*. Elsevier Ltd, 506, p. 110374. doi: 10.1016/j.jtbi.2020.110374.

Zhang, L. (2020) 'Bifurcations and exact traveling wave solutions of the Zakharov-Rubenchik equation', *Discrete & Continuous Dynamical Systems - S*, p. 2927. doi: 10.3934/dcdss.2020214.

Zhang, L. (2020) 'Smooth and singular traveling wave solutions for the Serre-Green-Naghdi equations', *Discrete & Continuous Dynamical Systems - S*, p. 2917. doi: 10.3934/dcdss.2020217.