

Dummy file for html research publications

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November 10, 2025

Procedure Replace the cite command below with a cite command from BibDesk for all publications sorted by year, say. L^AT_EX this file, ignoring all error messages. Then BibTeX this file to get the `ajr.bbl` file. *Do not L^AT_EX* the file `site.tex` to translate the bbl file into the html file of the cite.

There exists an error such as url with extra brace, which I cannot track down. But it makes no difference to the result as far as I can see.

Writing publications.php file lets see what happens.

1. **Accurate families of multi-continuum micromorphic homogenisations in multi-d space-time via dynamical systems theory.** A.~J. Roberts. *Transactions of Mathematics and Its Applications*, 9(tnaf001):1–72, August 2025.
 2. **Construct accurate multi-continuum micromorphic homogenisations in multi-d space-time with computer algebra.** A.~J. Roberts. Technical report, [<http://arxiv.org/abs/2407.03483v3>], April 2025.
 3. **Efficient prediction of static and dynamical responses of functional graded beams using sparse multiscale patches.** Thien

Tran-Duc, J.~E. Bunder, and A.~J. Roberts. *Computational Mechanics*, pages 1–22, March 2025.

4. **Accurate and efficient multiscale simulation of a heterogeneous elastic beam via computation on small sparse patches.** A.~J. Roberts, Thien Tran-Duc, J.~E. Bunder, and I.~G. Kevrekidis. In Elliot Carr, Vivien Challis, Qianqian Yang, Tim Moroney, and Judith Bunder, editors, *Proceedings of the 20th Biennial Computational Techniques and Applications Conference, CTAC-2022*, volume 64 of *ANZIAM J.*, pages C161–C177, April 2024.
5. **Efficient computational homogenisation of 2D beams of heterogeneous elasticity using the patch scheme.** Thien Tran-Duc, J.E. Bunder, and A.~J. Roberts. *International Journal of Solids and Structures*, 292(112719):1–15, April 2024.
6. **Staggered grids for multidimensional multiscale modelling.** J. Divahar, A.~J. Roberts, Trent~W. Mattner, J.~E. Bunder, and Ioannis~G. Kevrekidis. *Computers and Fluids*, 271(106167):1–18, jan 2024.
7. **Embed in ensemble to rigorously and accurately homogenise quasi-periodic multi-scale heterogeneous material.** A.~J. Roberts. *ANZIAM Journal*, 66(1):1–34, 2024.
8. **Two novel families of multiscale staggered patch schemes efficiently simulate large-scale, weakly damped, linear waves.** J. Divahar, A.~J. Roberts, Trent~W. Mattner, J.~E. Bunder, and Ioannis~G. Kevrekidis. *Computer Methods in Applied Mechanics and Engineering*, 413(116133):1–21, August 2023.
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10. Ngamta Thamwattana, Mike Meylan, and A.~J. Roberts, editors. *Proceedings of the 2022 Mathematics in Industry Study Group*, volume 64 of *ANZIAM J.*, December 2022. <http://journal.austms.org.au/ojs/index.php/ANZIAMJ> [2022-12-06].
11. **High-order homogenisation by learning spatial discretisations of PDEs that provably preserve self-adjointness.** J.~E. Bunder and A.~J. Roberts. *Partial Differential Equations in Applied Mathematics*, 6(100449):1–16, September 2022.

12. **Backwards theory supports modelling via invariant manifolds for non-autonomous dynamical systems.** A.~J. Roberts. Technical report, [<http://arxiv.org/abs/1804.06998v5>], May 2022.
13. **Learning high-order spatial discretisations of pdes with symmetry-preserving iterative algorithms.** J.~E. Bunder and A.~J. Roberts. Technical report, <https://arxiv.org/abs/2204.06743>, April 2022.
14. **Adaptively detect and accurately resolve macro-scale shocks in an efficient Equation-Free multiscale simulation.** John Maclean, J.~E. Bunder, I.~G. Kevrekidis, and A.~J. Roberts. *SIAM Journal on Scientific Computing*, 44(4):A2557–A2581, 2022.
15. **A toolbox of equation-free functions in matlab/octave for efficient system level simulation.** John Maclean, J.~E. Bunder, and A.~J. Roberts. *Numerical Algorithms*, 87:1729–1748, oct 2021.
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17. **Large-scale simulation of shallow water waves with computation only on small staggered patches.** J.E. Bunder, J. Divahar, Ioannis~G. Kevrekidis, Trent~W. Mattner, and A.J. Roberts. *International Journal for Numerical Methods in Fluids*, 93(4):953–977, apr 2021.
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36. **Resolution of subgrid microscale interactions enhances the discretisation of nonautonomous partial differential equations.** J.~E. Bunder and A.~J. Roberts. *Applied Mathematics and Computation*, 304:164–179, 2017.
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