

Publication list of Yen-Hsi Richard Tsai

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Preprints

1. **Error analysis for the Implicit Boundary Integral Method**
Y. Zhong, K. Ren, O. Runborg, and R. Tsai. [arXiv:2312.07722](https://arxiv.org/abs/2312.07722)
2. **Corrected trapezoidal rule-IBIM for linearized Poisson-Boltzmann equation**
F. Izzo, O. Runborg, and R. Tsai. 2022. [arXiv:2208.08216](https://arxiv.org/abs/2208.08216)
3. **Convergence of a class of high order corrected trapezoidal rules**
F. Izzo, O. Runborg, and R. Tsai. 2022 [arXiv:2208.08216](https://arxiv.org/abs/2208.08216)
4. **Visibility optimization for surveillance-evasion games**
L. Ly and R. Tsai, 2020. [arXiv Preprint arXiv:2010.09001](https://arxiv.org/abs/2010.09001)

Under Review

5. **Efficient and robust sensor placement in complex environments**
L. Taus and R. Tsai. [arXiv preprint arXiv:2309.08545](https://arxiv.org/abs/2309.08545)
6. **A Volumetric Approach to Monge's Optimal Transport on Surfaces**
R. Tsai and A.G. Turnquist. [arXiv:2310.01745](https://arxiv.org/abs/2310.01745)
7. **Stabilization of parareal algorithms for long time computation of a class of highly oscillatory Hamiltonian flows using data**
R. Fang and R. Tsai. [arXiv:2309.01225](https://arxiv.org/abs/2309.01225). 2023
8. **Usable boundary for visibility-based surveillance-evasion games**
C. Esteve-Yagüe and R. Tsai. [arXiv preprint arXiv:2308.09152](https://arxiv.org/abs/2308.09152). 2023

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9. **Nearest neighbor sampling of point sets using rays**
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10. **High order corrected trapezoidal rules for a class of singular integrals**
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11. **Side effects of learning from low dimensional manifolds**
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12. **Numerical wave propagation aided by deep learning**
H. Nguyen and R. Tsai, [arXiv preprint arXiv:2107.13184](https://arxiv.org/abs/2107.13184). 2021. To appear *J. Comput. Phys.* <https://doi.org/10.1016/j.jcp.2022.111828>

13. **Corrected Trapezoidal Rules for Singular Implicit Boundary Integrals**
F. Izzo, O. Runborg, and R. Tsai, *Journal of Computational Physics* 461, 111193. (2022)
14. **Equivalent Extensions of Hamilton–Jacobi–Bellman Equations on Hypersurfaces**
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15. **Fast colonic polyp detection using a Hamilton-Jacobi approach to non-dominated sorting**
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16. **A stable parareal-like method for the second order wave equation**
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42. **Heterogeneous Multiscale Methods for ODEs**
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