

## Some Recent Publications

- Mashayek, A., J. Gula, L. E. Baker, A. C. Naveira Garabato, L. Cimoli, and J. J. Riley. 2024. “On the role of seamounts in upwelling deep-ocean waters through turbulent mixing”, *Proc. Nat. Acad. Sci.*, **121**(27):e2322163121.
- Riley, J. J., M. M. P. Couchman, and S. M. de Bruyn Kops. 2023. “The effect of Prandtl number on decaying stratified turbulence”, *J. Turb.*, **24**(6-7):330-348.
- Blakeley, B. C. B. J. Olson, and J. J. Riley. 2023. “On the evolution of scalar iso-surface area density in a turbulent mixing layer”, *J. Fluid Mech.*, **966**:A33.
- Tiwari, A., S. Devasia, and J. J. Riley. 2023. “Low-distortion information propagation with noise suppression in swarm networks”, *Proc. Nat. Acad. Sci.*, **121**(11):e2219948120.
- Riley, J. J. 2022. “How does turbulence mix a stratified fluid”, *J. Fluid Mech.*, **952**:F1.
- Blakeley, B. C., B. J. Olson, and J. J. Riley. 2022. “Self-similarity of scalar isosurface area density in a temporal mixing layer”, *J. Fluid Mech.*, **951**:A44.
- K. P. Shete, D. J. Boucher, J. J. Riley, and S. M. de Bruyn Kops. 2022. “Effect of viscous-convective subrange on passive scalar statistics at high Reynolds number”, *Phys. Rev. Fluids*, **7**(2):024601.
- Perfect, B., N. Kumar, and J. J. Riley. 2020. “Energetics of seamount wakes. Part 1. Energy exchange”, *J. Phys. Ocean.*, **50**(5):1365-1382.
- Perfect, B., N. Kumar, and J. J. Riley. 2020. “Energetics of seamount wakes. Part 2. Wave fluxes”, *J. Phys. Ocean.*, **50**(5):1383-1398.
- Guan, Y., J. J. Riley, and I. Novosselov. 2020. “Three-dimensional electroconvective vortices in a crossflow”, *Phys. Review E*, **101**(3):033103.
- Blakeley, B. C., W. Wang, and J. J. Riley. 2019. “On the kinematics of scalar iso-surfaces in decaying, homogeneous, isotropic turbulence”, *J. Turbulence*, **20**(10):661-680.
- Watanabe, T., J. J. Riley, K. Nagata, K. Matsuda, and R. Onishi. 2019. “Hairpin vortices and long, elongated flow structures in a stably-stratified shear layer”, *J. Fluid Mech.*, **878**:37-61.
- de Bruyn Kops, S. M., and J. J. Riley. 2018. “The effects of stable stratification on the decay of initially isotropic homogeneous turbulence”, *J. Fluid Mech.*, **860**:787-821
- Perfect, B. H., N. Kumar, and J. J. Riley 2018. “The energetics and vortex structure of seamounts in stratified, rotating flow”, *Geophys. Res. Ltrs.*, **45**(17):9098-9105.
- Watanabe, T., J. J. Riley, K. Nagata, R. Onishi, and K. Matsuda. 2018. “A localized turbulent mixing layer in a uniformly stratified environment”, *J. Fluid Mech.*, **849**:245-276.
- Gregg, M. C. E. A. D’Asaro, J. J. Riley, and E. Kunze. 2018. “Mixing efficiency in the ocean”, *Annu. Rev. Mar. Sci.*, bf 10:443-474, 2018.
- Watanabe, T., J. J. Riley, and K. Hagata. 2017. “Turbulent entrainment across turbulent/nonturbulent interfaces in stably stratified mixing layers”, *Phys. Rev. Fluids*, **2**(10): 104803.
- Riley, J. J., O. Flores, and A. R. Horner-Devine. 2017. “On the dynamics of turbulence near a free surface”, *J. Fluid Mech.*, **821**:248-265.

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- Sudharsan, M., S. L. Brunton, and J. J. Riley. 2016. “Lagrangian coherent structures and inertial particle dynamics”, *Phy. Rev. E*, **93**(3):033108.