**M. Nicholas J. Moore**

**Education and Professional Preparation**

University of Tennessee, Knoxville Mathematics B.S. 2005

University of North Carolina, Chapel Hill Mathematics Ph.D. 2010

Courant Institute of Mathematical Sciences, NY Mathematics Postdoc 2010-2014

**Employment and Appointments**

2014-present Assistant Professor of Mathematics Tallahassee, FL

and Associate of the Geophysical Fluid

Dynamics Institute, FSU

**Products**

***5 most relevant products, beginning from the most relevant***

M. McCurdy, M.N.J. Moore, X. Wang. Convection in a coupled fluid-porous media system. In press at *SIAM Journal on Applied Mathematics*. Preprint available at arXiv:1901.02925 (2019).

B. Quaife and M.N.J. Moore. A boundary-integral framework to simulate viscous erosion of a porous medium. *Journal of Computational Physics*, **375**, 1-21 (2018).

M.N.J. Moore. Riemann-Hilbert problems for the shapes formed by bodies dissolving, melting, and eroding in fluid flows. *CPAM*, **70**(9), 1810-1831 (2017).

J.M. Huang, M.N.J. Moore, L. Ristroph. Shape dynamics and scaling laws for a body dissolving in fluid flow. *Journal of Fluid Mechanics*, **765**, R3 (2015).

M.N.J. Moore, L. Ristroph, S. Childress, J. Zhang, M.J. Shelley. Self-similar evolution of a body eroding in a fluid flow. *Phys. Fluid*, **25**, 116602 (2013).

***Other Products***

Majda, A. J., Moore, M. N. J., Qi, D. (2019). Statistical dynamical model to predict extreme events and anomalous features in shallow water waves with abrupt depth change. *PNAS*, **116**(10), 3982-3987.

Bolles, C. T., Speer, K., Moore, M. N. J. (2019). Anomalous wave statistics induced by abrupt depth change. *Physical Review Fluids*, **4**(1), 011801.

Gray, L. J., Jakowski, J., Moore, M. N. J., Ye, W. (2019) Boundary integral analysis for non-homogeneous, incompressible Stokes flows. *Advances in Computational Mathematics*, **45**(3), 1729-1734.

Moore, M. N. J. (2017) A fast Chebyshev method for simulation flexible-wing propulsion. *Journal of Computational Physics*, 345, 792-817.

L. Ristroph, M.N.J. Moore, S. Childress, M.J. Shelley, J. Zhang. Sculpting of an erodible body by flowing water. *PNAS*, **48**, 19606-19609 (2012).

**Synergistic Activities**

1. Contributed interview and research material for educational video entitled “Using Mathematics to Optimize Wing Design” published by CPALMS. CPALMS is the State of Florida's official source for standards information and course descriptions for K-12 education.

2. Co-organized SIAM Southeast Atlantic Sectional (SEAS) meeting, with B. Quaife, X. Wang and X. Wang. The meeting was held at Florida State University in Spring 2017. The organizers encouraged undergraduate and graduate student presentations, and organized awards for the best student talks.

3. Honors thesis supervisor for C. Tyler Bolles (B.S. in Mathematics, FSU 2017) whose research was selected for special recognition at the FSU President’s showcase and also featured in presentations at two different *SIAM* conferences.

4. Serving on the Graduate Program Committee at the Geophysical Fluid Dynamics Institute (GFDI) at Florida State University.

5. Served on the review panel for the “IDEA grant” at Florida State University, which is a grant for undergraduate research.