

Academic Positions

University of Illinois at Urbana-Champaign, Professor of Mathematics (2019-); Associate Chair for Faculty (2017-20); Assistant and Associate Professor (2010-19); Computational Science and Engineering, Faculty Affiliate (2010-).

MIT, Department of Mathematics, CLE Moore Instructor (2006-09).

Long-term Visiting (3 months or more)

Brown University, Department of Mathematics, Visiting Associate Professor (2016-17).

Caltech, Departments of Mathematics, Computing + Mathematical Sciences, Visiting Assistant Professor (2011-12).

ICERM (Spring 2017); MSRI (Fall 2015); IMA (2009-10); Institut Mittag-Leffler, Sweden (Fall 2005).

Education Brown University, PhD in Mathematics (2006).

Selected Accolades

Simons Fellow in Mathematics (2016).

NSF CAREER Award (2014).

Alfred P. Sloan Research Fellowship (2012).

University of Illinois, College of LAS, Fellow in a Second Discipline (2020); Campus Distinguished Promotion Award (2019); Center for Advanced Study, Associate (2019), Beckman Fellow (2014); College of LAS, Brad and Karen Smith Professorial Scholar (2018); Philippe Tondeur Scholar in Mathematics (2016); Arnold O Beckman Award (2014, 16); List of Teachers Ranked as Excellent, 8 courses out of 16.

Grants (Active)

NSF DMS-2009981, \$359,350 (2020-23).

Selected Publications

(Authors are listed alphabetically and are equal contributors in mathematics, unless otherwise noted as *=first author and **=principal investigator.)

10. Gauge invariant autoregressive neural networks for quantum lattice models.
(2021) (with Di Luo*, Zhou Chen*, Kaiwen Hu, Zhizhen Zhao, and Bryan K. Clark**).
9. Unstable Stokes waves.
(2020) (with Zhao Yang).
8. Stokes waves with constant vorticity: folds, gaps and fluid bubbles.
Journal of Fluid Mechanics, 878 (2019) 502–521 (with Sergey A Dyachenko).
7. Modulational instability in a full-dispersion shallow water model.
Studies in Applied Mathematics, 142 (2019) 3–47 (with Ashish Kumar Pandey).
(Top downloaded paper 2018-19).
6. Wave breaking in the Whitham equation.
Advances in Mathematics, 317 (2017) 410-437.
5. Modulational instability in equations of KdV type.
E. Tobisch (ed.), *Lecture Notes in Physics*, 908, Springer (2016) 83–133
(with Jared C Bronski and Mathew A Johnson).
4. No solitary waves exist on 2D deep water.
Nonlinearity, 25 (2012) 3301-3312 (in the *Nonlinearity* 2012 Highly Downloaded Collection).

3. Strichartz estimates for the water-wave problem with surface tension.
Communications in Partial Differential Equations, 35 (2010) 2195-2252
(with Hans Christianson and Gigliola Staffilani).
2. Unstable surface waves in running water.
Communications in Mathematical Physics, 282 (2008) 733-796 (with Zhiwu Lin).
1. Exact solitary water waves with vorticity.
Archive for Rational Mechanics and Analysis, 188 (2008) 213-244.

Selected Addresses

4th IMA Conference on Nonlinearity and Coherent Structures, UK, Invited plenary address (2021).
KAIX School in PDE, Daejeon, South Korea, 3 hourly lectures (2018).
Columbia University, Applied Physics and Applied Mathematics Colloquium (2018).
Brandeis-Harvard-MIT-Northeastern Joint Mathematics Colloquium (2016).
AMS Central Sectional Meeting, Invited plenary address (2015).

Mentoring Experience

PhD students, placement

Ting-Yang Hsiao; Samuel Wester, Mathematics (current); Ashish Pandey, Mathematics (2018),
Tenure-Track, IIT Delhi, India.

Graduate research supervision, placement

Di Luo, PhD, Physics (2020-21), Postdoc at MIT; Michael Livesay, MS, Mathematics (2015-16),
Sandia National Labs; Seokjong Ryu, PhD, Economics (2012-13), Tenure-Track at SUFE, China;
Nanjundamurthy Venkatasubbu, MS, Aerospace Engineering (2010-12), Caterpillar Inc.

Postdoctoral research supervision, placement

Zhao Yang (current); Sergey Dyachenko (2015-19), Tenure-Track at SUNY Buffalo; Lizheng Tao
(2013-15), Visiting Assistant Professor at UC Riverside.

Selected Service

IMSI Workshop: Confronting Climate Change, Co-organizer (2021).
University of Illinois, Campus Research Board, Member (2020-).
Fluids, Topics Board, Editor (2020-); Illinois Journal of Mathematics, Editor (2019-).
Graduate Research Opportunities for Women (GROW) Conference, Co-organizer (2019, 20).
SIAM T Brook Benjamin Prize, Selection Committee, Member (2019).
AWM Scientific Advisory Committee, Member (2019).
Midwest Women in Mathematics Symposium, Principal Organizer (2016).
University of Illinois, College of LAS, Award Committee, Member (2020-); Strategic Planning
Working Group, Member (2019); Senior Women's Advisory Task Force, Member (2017-19).
University of Illinois, Department of Mathematics, Faculty Search Committee, Chair (2019-20);
Chair Search Committee, Member (2017); PI4, Advisory Board, Member (2014-) (Connecting math
grad interns with industry, government and on-campus labs).

Last updated: January, 2021

<https://math.illinois.edu/directory/profile/verahur>