

Albert Ai

CONTACT INFORMATION	UW-Department of Mathematics Van Vleck Hall 480 Lincoln Drive Madison, WI 53706 USA	Email: aai@math.wisc.edu Homepage: https://math.berkeley.edu/~aai/
RESEARCH INTERESTS	Nonlinear dispersive partial differential equations, fluid dynamics, harmonic analysis	
EMPLOYMENT	Department of Mathematics, University of Wisconsin-Madison, Madison, WI, USA Van Vleck Visiting Assistant Professor, August 2019 - Present <ul style="list-style-type: none">• Host: Mihaela Ifrim	
EDUCATION	Department of Mathematics, University of California Berkeley, Berkeley, CA, USA Ph.D. in Mathematics, August 2013 – May 2019 <ul style="list-style-type: none">• Advisor: Daniel Tataru• Thesis: Low regularity solutions for gravity water waves Princeton University, Princeton, NJ, USA A.B. in Mathematics, August 2009 – May 2013 <ul style="list-style-type: none">• summa cum laude, with 3.9/4.0 GPA	
HONORS AND AWARDS	<ul style="list-style-type: none">• Herb Alexander Prize (for an outstanding dissertation in pure mathematics) (2019)• Outstanding Graduate Student Instructor Award (2019)• National Defense Science and Engineering Graduate Fellowship (2014 – 2017)• Phi Beta Kappa (2013)	
PUBLICATIONS AND PREPRINTS	<ul style="list-style-type: none">• A. Ai, M. Ifrim, and D. Tataru, <i>Two dimensional gravity waves at low regularity I: Energy estimates</i>, arXiv preprint arXiv:1910.05323 (2019).• A. Ai, <i>Low regularity solutions for gravity water waves II: The 2D case</i>, arXiv preprint arXiv:1811.10504 (2018).• A. Ai, <i>Low regularity solutions for gravity water waves</i>, <i>Water Waves</i>, 1(1):145-215 (2019).• A. Ai, Z. Dvir, S. Saraf, and A. Wigderson, <i>Sylvester-Gallai type theorems for approximate collinearity</i>, <i>Forum Math. Sigma</i>, Vol. 2 (2014).• A. Ai, A. Lapanowski, Y. Plan, and R. Vershynin, <i>One-bit compressed sensing with non-gaussian measurements</i>, <i>Linear Algebra and its Applications</i>, Vol. 441 (2014), p. 222-239.	

CONFERENCE AND
SEMINAR TALKS

- *AMS Special Session on Nonlinear Dispersive Equations and Water Waves*. Sept. 14, 2019. Madison, WI, USA.
- *Oberwolfach Workshop: Mathematical Theory of Water Waves*. July 14 – 20, 2019. MFO, Oberwolfach-Walke, Germany.
- *Analysis and PDE Seminar*. February 13, 2019. Michigan State University, East Lansing, MI, USA.
- *Rainwater Seminar*. February 5, 2019. University of Washington, Seattle, WA, USA.
- *AMS Special Session on Analysis and Geometry of Nonlinear Evolution Equations*. January 17, 2019. Baltimore, MD, USA.
- *PDE Geometric Analysis Seminar*. November 5, 2018. University of Wisconsin-Madison, Madison, WI, USA.
- *Harmonic Analysis and PDE Student Seminar*. October 17, 2017. UC Berkeley, Berkeley, CA, USA.

CONFERENCES
ATTENDED AS
PARTICIPANT

- *Winter School on Fluid Dynamics, Dispersive Equations, and Quantum Fluids*. December 17 – 21, 2018. Università Degli Studi Di Padova, Bressanone, Italy.
- *Nonlinear Dirac Equations and Related Problems*. May 28 – 30, 2018. Bielefeld University, Bielefeld, Germany.
- *Rivière-Fabes Symposium on Analysis and PDE*. April 27 – 29, 2018. University of Minnesota, Minneapolis, MN, USA.
- *Shanks Workshop on Mathematical Aspects of Fluid Dynamics*. March 24 – 25, 2018. Vanderbilt University, Nashville, TN, USA.
- *Oberwolfach Workshop: Nonlinear Waves and Dispersive Equations*. June 11 – 14, 2017. MFO, Oberwolfach-Walke, Germany.
- *Mathematical Analysis of Water Waves and Related Models*. June 5 – 9, 2017. Bodega Marine Laboratory, Bodega Bay, CA, USA.
- *Rivière-Fabes Symposium on Analysis and PDE*. April 28 – 30, 2017. University of Minnesota, Minneapolis, MN, USA.

ACADEMIC
SERVICES

- Co-organizer (with J. Wang) of the *Harmonic Analysis and PDE Student Seminar*. Department of Mathematics, UC Berkeley, Berkeley, CA, USA. Fall 2018 – Spring 2019.
- Co-organizer (with H. Mandel) of the *Preliminary Examination Workshop*. Department of Mathematics, UC Berkeley, Berkeley, CA, USA. Summer 2018 – Winter 2018.
- Co-organizer (with K. O’Neill) of the *Harmonic Analysis and PDE Student Seminar*. Department of Mathematics, UC Berkeley, Berkeley, CA, USA. Spring 2018.
- Co-organizer (with J. Chen) of the *Preliminary Examination Workshop*. Department of Mathematics, UC Berkeley, Berkeley, CA, USA. Fall 2016 – Winter 2017.

TEACHING AND
MENTORING
EXPERIENCE

- Mentor for the *Directed Reading Program*. Department of Mathematics, UC Berkeley, Berkeley, CA, USA.
 - Spring 2017 Nonlinear dispersive partial differential equations
 - Fall 2016 Geometry and general relativity
 - Fall 2015 Spectral theory and Schrödinger operators
 - Fall 2014 Probabilistic algorithms
- *Instructor*. Department of Mathematics, UC Berkeley, Berkeley, CA, USA.
 - Summer 2016 Introduction to Complex Analysis
 - Summer 2015 Introduction to PDE
 - Summer 2014 Linear Algebra and Differential Equations
- *Graduate Student Instructor*. Department of Mathematics, UC Berkeley, Berkeley, CA, USA.
 - Spring 2019 Introduction to PDE
 - Spring 2018 Discrete Mathematics
 - Fall 2017 Introduction to PDE
 - Spring 2017 Introduction to PDE
 - Spring 2016 Analytic Geometry and Calculus
 - Spring 2015 Linear Algebra
 - Fall 2014 Analytic Geometry and Calculus
 - Spring 2014 Multivariable Calculus
 - Fall 2013 Calculus

REFERENCES

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