

# Timothy M. Wertz

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## EDUCATION

- 2015 **Ph.D. in Mathematics.**, *Department of Mathematics*, University California, Davis, USA.  
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2010 **M.A. in Mathematics**, *Department of Mathematics*, San Francisco State University, USA.  
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2006 **B.A.,B.S. in Mathematics, Physics, Foreign Service**, Alma College, Michigan, USA.  
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## RESEARCH INTERESTS

**Harmonic Analysis:** frames, Gabor systems, Fourier series of operators; **Operator Theory:** spectral invariance, eigenvector localization, Banach algebras of localized operators; **Random Matrix Theory:** random Schrödinger operators, the empirical spectral distribution of localized random matrices

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## EMPLOYMENT HISTORY

- July 2015 – Present **Postdoctoral Teaching Fellow**, *Division of Science*, Yale-NUS College, Singapore.  
Taught undergraduate courses and conducted independent and collaborative research. Created and administered a peer tutoring program for students in quantitative subjects.
- September 2011 – June 2015 **Graduate Student Researcher**, *Department of Mathematics*, University of California, Davis, USA.  
Conducted independent and collaborative research. Presented findings at conferences and seminars. Prepared and successfully submitted results for publication.
- Summer 2012 & 2013 **Instructor**, *Department of Mathematics*, University of California, Davis, USA.  
Introduced students to the basics of logic and proof-writing in the context of real analysis and set theory. Planned and delivered lectures. Wrote, administered, and graded assignments, quizzes, and exams.
- Summer 2011 **Instructor**, *Academy of Art University*, Sacramento, CA, USA.  
Instructed art, design, and culinary arts students in remedial mathematics, including fractions and basic algebra. Planned and delivered lectures. Wrote, administered, and graded assignments, quizzes, and exams.
- September 2010 – June 2011 **Graduate Teaching Assistant**, *Department of Mathematics*, University of California, Davis, USA.  
Held weekly discussion sections and office hours for calculus and introductory real analysis. Graded homework assignments and exams.
- Summer 2010 **Instructor**, *Summer Bridge Program*, San Francisco State University, USA.  
Provided remedial mathematics instruction to recently graduated high school seniors from disadvantaged backgrounds in order to prepare them for university-level coursework. Planned and delivered lectures. Wrote, administered, and graded assignments, quizzes, and exams. Supervised teaching assistants.
- August 2008 – May 2009 **Graduate Teaching Assistant**, *Department of Mathematics*, San Francisco State University, USA.  
Planned and delivered lectures; wrote, administered, and graded assignments, quizzes, and exams for students in remedial algebra. Held weekly discussion sections and office hours for calculus students.

- May 2006 – **Assistant Director of Admissions**, *Alma College*, Alma, Michigan, USA.  
July 2008 Met with high-school students and their families to guide them through the admissions process. Gave recruitment presentations to groups of students, parents, and guidance counselors. Reviewed applications and made admissions decisions. Supervised student workers.

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## PUBLICATIONS

- Preprint Ilya Krishtal, Thomas Strohmer, T.W., *Localization of matrix factorizations II: dominance patterns*.  
Submitted Thomas Strohmer, T.W., *Almost eigenvalues and eigenvectors for the almost Mathieu operator*.  
2014 Ilya Krishtal, Thomas Strohmer, T.W., *Localization of matrix factorizations*, Foundations of Computational Mathematics.  
2013 Alex Schuster, T.W., *Interpolation on non-uniformly separated sequences in a weighted Bergman space.*, Journal of the Egyptian Mathematical Society.

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## AWARDS, FELLOWSHIPS, AND SCHOLARSHIPS

- Fall 2013 William Karl Schwarze Scholarship for Excellence in Teaching, University of California, Davis.  
Summer 2013 VIGRE Summer Research Fellowship, University of California, Davis  
September 2012 – GAANN Fellowship, University of California, Davis  
June 2013  
April 2012 – VIGRE Fellowship, University of California, Davis  
June 2012  
May 2010 Graduate Student Award for Distinguished Achievement, San Francisco State University  
June 2009 – Creating Momentum through Communicating Mathematics (*CM*)<sup>2</sup> Fellowship, NSF GK-12 program, San Francisco State University  
May 2010

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## MATHEMATICS OUTREACH AND COMMUNITY INVOLVEMENT

- Fall 2013 – Reviewer for Mathematical Reviews  
present  
May 2013 – Galois Group President, Mathematics Department, University of California, Davis.  
May 2014  
September 2011 – Mathematics Department Tea coordinator, University of California, Davis.  
June 2012  
September 2011 – Mathematics Department representative to the Graduate Student Assembly, University of California, Davis.  
June 2012  
January 2011 – Northern California American Regions Math League (NorCal ARML) Coach.  
June 2012  
January 2011 – Oakland East-Bay Math Circle (OEBMC) Instructor  
May 2012  
September 2009 – San Francisco Math Circle Instructor  
May 2010

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## COMPUTING

Familiarity with the basics of Python, Java, R, and Matlab

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## LANGUAGES

English, native speaker  
Chinese (Mandarin), conversational