Andrew Thaler

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Education

- Ph.D. student, Department of Mathematics, University of Utah   2010-Present
  Advisor: Graeme Milton
  Committee: Andrej Cherkaev, Elena Cherkaev, Fernando Guevara Vasquez, Hyeonbae Kang

- MS Mathematics, University of Utah   2010-2012
  Advisor: Graeme Milton
  Committee: Andrej Cherkaev, Fernando Guevara Vasquez

- Honors BS Mathematics, Summa Cum Laude, University of Utah   2006-2010
  Thesis Advisor: Daniel Onofrei
  Thesis Title: Approximate Electromagnetic Cloaking

Scholarships and Awards

- Outstanding Graduate Student Award
  Department of Mathematics, University of Utah   Spring 2013

- Best graduate student talk
  ETOPIM9 (Electrical, Transport and Optical Properties of Inhomogeneous Materials),
  Marseille, France   September 2012

- Travel Grants

  - Introduction to the Mathematics of Seismic Imaging
    MSRI, University of California, Berkeley   July/August 2013

  - AIP (Applied Inverse Problems) Conference
    Daejeon, Korea   July 2013

  - CNA (Center for Nonlinear Analysis) Summer School
    Topics in Nonlinear PDEs and Calculus of Variations, and Applications in
    Materials Science
    Carnegie Mellon University   June 2013

  - A conference on inverse problems in honor of Gunther Uhlmann
    University of California, Irvine   June 2012

  - Gene Golub SIAM Summer School
    University of British Columbia   July 2011

  - IPDE (Inverse Problems and Partial Differential Equations) Summer School
    University of Washington   June/July 2010

- Calvin H. Wilcox Memorial Scholarship
  Department of Mathematics, University of Utah   Fall 2009

- Theodore Verender Hanks Scholarship
  College of Science, University of Utah   Fall 2008

- Presidential Scholarship
  University of Utah   Fall 2006

- Lutheran Medical Center Junior Volunteer Scholarship
  Lutheran Medical Center, Wheat Ridge, Colorado   Fall 2006

- Comcast Leaders and Achievers Scholarship   Fall 2006

- Phi Beta Kappa Honor Society

- Phi Kappa Phi Honor Society

- Pi Mu Epsilon Honor Society

Publications

- "Bounds on the volume of an inclusion in a body from a complex conductivity measurement," accepted for publication in *Communications in Mathematical Sciences*, see also arXiv: 1306.6608

- "Exact determination of the volume of an inclusion in a body having constant shear modulus," in preparation

- "On the sensitivity of anomalous localized resonance phenomena with respect to dissipation," in preparation

- "The near-cloak defeats the anti-cloak," in preparation

Talks

- "The near-cloak defeats the anti-cloak"
  Applied Math Seminar, University of Utah   September 2013

- "Bounds on the volume of an inclusion in a body with complex permittivities"
  Invited Talk–Applied Inverse Problems Conference, Daejeon, Korea   July 2013

- "Bounds on the volume fraction of an inclusion in a body"
  Graduate Colloquium, University of Utah   March 2013

- "An introduction to negative-index materials"
  Graduate Colloquium, University of Utah   October 2012

- "Bounds on the displacement field in two-phase composites with complex permittivities"
  ETOPIM9 (Electrical, Transport and Optical Properties of Inhomogeneous Media),
  Marseille, France   September 2012

- "Bounds on the average fields and volume fraction in two-phase composites with complex permittivities"
  Applied Math Seminar, University of Utah — August 2012

- "The near-cloak defeats the anti-cloak"
  AMS Western Section Meeting, University of Utah — October 2011

- "An overview of the mathematics behind CAT scans"
  Graduate Colloquium, University of Utah — October 2011

- "The effect of dissipation on the transformation-based cloaking scheme"
  Undergraduate Colloquium, University of Utah — December 2010

Teaching and Research Assistantships

- Instructor: Engineering Calculus I — Spring 2014
- Research Assistantship — Fall 2011, Summer 2012-Fall 2013
- Instructor: Calculus I — Spring 2012
- Instructor: Linear Algebra — Summer 2011
- Instructor: Calculus I — Spring 2011
- Instructor: Calculus I — Fall 2010
- Grader: PDEs for Engineers — Summer 2009

Conferences and Summer Schools Attended

- MSRI (Mathematical Sciences Research Institute) Summer School
  Introduction to the Mathematics of Seismic Imaging
  MSRI, University of California, Berkeley — July/August 2013

- AIP (Applied Inverse Problems) Conference
  Daejeon, Korea — July 2013

- CNA (Center for Nonlinear Analysis) Summer School
  Topics in Nonlinear PDEs and Calculus of Variations, and Applications in
  Materials Science
  Carnegie Mellon University — June 2013

- ETOPIM9 (Electrical, Transport and Optical Properties of Inhomogeneous Media)
  Marseille, France — September 2012

- A conference on inverse problems in honor of Gunther Uhlmann
  University of California, Irvine — June 2012

- AMS (American Mathematical Society) Western Section Meeting
  University of Utah — October 2011

- Gene Golub SIAM Summer School
  University of British Columbia   July 2011

- IPDE (Inverse Problems and Partial Differential Equations) Summer School
  University of Washington   June/July 2010

Service

- Retention, Promotion, and Tenure Graduate Committee   August 2012-Present

- Tutor at Benny T. Rushing Mathematics Center, University of Utah   January 2008-August 2010

- Private mathematics tutor

Computer Skills

- Languages: C, MATLAB, Python

- Operating Systems: UNIX, Windows

- Software: Asymptote, HTML, LaTeX, Maple, MsOffice