

# Theodore S. Lindsey

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## Education

- Dec 2016 **MS, Computer Science**, *The University of Kansas*, Lawrence, KS, 3.63.  
May 2014 **MA, Mathematics**, *The University of Kansas*, Lawrence, KS, 3.61.  
Jun 2011 **BS, Mathematics**, *Principia College*, Elsah, IL, 3.50.

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## Computer tools

- Languages Bash, C, C++, CSS, HTML,  $\LaTeX$ , Matlab, Python  
Frameworks/Tools Git, Mathematica, RegEx, SQLite, TkInter

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## Vocational Experience

- 2011–Present **Graduate Teaching Assistant**, *The University of Kansas*.  
Full teaching responsibility of the following courses:
  - o EECS 138: Introduction to Computing (C++), Fall 2015, Spring 2016
  - o EECS 448: Software Engineering Lab, Spring 2015
  - o Math 121: Calculus I - Fall 2013, Spring 2014
  - o Math 115: Business Calculus - Spring 2013
  - o Math 101: College Algebra - Fall 2014, Fall 2012
  - o Math 002: Elementary Algebra - Fall 2011, Spring 2012Responsible for preparing lecture material, creating homework assignments, lecturing, and grading.
- 2016 **Software Development**, *Masters Project*.  
Implemented a rule induction system (IRIM) from publication articles.
- Spring 2016 **Team Lead**, *Information Retrieval Class Project*.  
Designed and built a search engine using the TF-IDF vector space model. Integrated relevance feedback from user into ranking algorithm. Implemented a web crawler to index specific websites.
- Summer 2015 **Software Development**, *Personal Project*.  
Designed, developed, and tested a digital cookbook application in Python and TkInter.
- Fall 2014 **Team Lead**, *Software Engineering Class Project*.  
Team lead for a class project in which we wrote a cookbook application. Responsible for project architecture, scheduling, module integration, and spec authoring.
- 2011–2014 **Private Mathematics Tutor**, *Self-employed*, Lawrence, KS.  
Tutored one-on-one in subjects from algebra to differential equations. Managed marketing, scheduling, lesson plan design.
- 2010 – 2011 **Mathematics Teaching Assistant**, *Principia College*, Elsah, IL.  
Tutored in both lab and classroom settings from remedial algebra through differential equations and statistics.
- 2009–2011 **Student Manager, Tech Advisor**, *Principia College*, Elsah, IL.  
Managed observatory, arranged scheduling, improved observatory operation with assistance from faculty advisor, organized observatory club functions, advised faculty on purchases for observatory, served as liaison between faculty and student operators.
- 2008–2011 **Observatory Operator**, *Principia College*, Elsah, IL.  
Staffed observatory, trained Junior Operators, led tours, recruited new operators.

- 2010 **Physics Department Intern**, *Principia College*, Elsah, IL.  
Managed and cataloged lab supplies, assisted professors in lab preparation, created promotional materials including large format banners.
- 2007–2008 **Mathematics tutor**, *Clackamas Community College*, Oregon City, OR.  
Tutored community college students in a lab setting in subjects ranging from elementary algebra to calculus, linear algebra, and differential equations.

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## Publications

- April 2014 T. Lindsey. *On the Kalman Filter and Its Variations*. M.A. thesis, ProQuest Dissertation Publishing.
- February 2014 M. Bayeh, E. Compaan, T. Lindsey, N. Orlow, S. Melczer, S. Frazer, Z. Voller. *Ink-constrained halftoning with applications to QR codes*. IS&T/SPIE Electronic Imaging 2014.

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## Presentations

- April 18, 2014 *On the Kalman Filter and Its Variations*. M.A. thesis defense, The University of Kansas, Lawrence, Kansas.
- August 16, 2013 *Ink-constrained halftoning with applications to QR codes*. Mathematical Modeling in Industry XVII, Minneapolis, Minnesota.
- April 2, 2011 *Orthogonality Throughout Mathematics*. MAA-MOMATYC contributed talk, Columbia College of Missouri, Columbia, Missouri.

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## Workshops & Special Sessions

- 2014 Group leader in “Students + Workshops = Success + Fun” workshop series for elementary school students, in conjunction with Mathematics Awareness Month, Lawrence, KS, USA, April 10 and 16.
- 2013 Team member in the “Mathematical Modeling in Industry XVII,” Visually significant QR-codes team (hosted by Institute for Mathematics and its Applications, University of Minnesota).
- 2013 Assistant for the special session on “The History of Workshops for High School Students and Teachers: The Ideas and Technology of Control Systems,” held in conjunction with the American Control Conference, Washington, DC, USA, June 19.
- 2013 Assistant for the special session on “The History of Women in Control,” held in conjunction with the 2013 American Control Conference, Washington, D.C., USA, June 18.
- 2013 Assistant for “The Beauty of Controls” workshop for middle and high school students and teachers, held in conjunction with the 2013 American Control Conference, Washington, D.C., USA, June 17.
- 2013 Co-coordinator of the “Students + Workshops = Success + Fun” workshop series for elementary school students, in conjunction with Mathematics Awareness Month, Lawrence, KS, USA, April 10 and 16.
- 2012 Presenter in the “Math, Statistics, and the Data Deluge” workshop for elementary school students, in conjunction with Mathematics Awareness Month, Lawrence, KS, USA, April 10 and 16.

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## Conferences Attended

- 2014 American Control Conference, Portland, OR, USA, June 4 - 6

- 2013 American Control Conference, Washington, DC, USA, June 17 - 19
- 2012 AMS Central Section Meeting, Lawrence, Kansas, USA, March 30 - April 1
- 2011 MAA-MOMATYC, Columbia, Missouri, USA, March 31 - April 2

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## Honors & Awards

- 2014 Finalist for the *Florence Black Teaching Award* (The University of Kansas)
- 2013 National Science Foundation Graduate Research Assistant (DMS-1108884)
- 2013 Joan Kirkham Travel Scholarship (The University of Kansas)
- 2011 Robert and Mary Keely Mathematics Award (Principia College)
- 2008 Eagle Scout, gold palm, American Legion Eagle Scout of the Year (Oregon)
- 2007 Phi Theta Kappa (2-year college honor society, Clackamas Community College)

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## Community Service

- 2012-2015 **Mathematics Awareness Month Volunteer**, *The University of Kansas*.  
Designed and presented interactive lectures covering various core mathematical concepts for 5th and 6th graders.  
Organized and assisted with competitions and activities for K-12 students to raise math awareness.
- 2010-2011 **President, Founding member**, *FreeGeek: Principia College*, Elsah, IL.  
Volunteer-run computer recycling and re-purposing group on campus. Rebuilt computers were given to needy and disadvantaged students.
- 2009 **Classroom Assistant**, *Bagdad Elementary School*, Bagdad, AZ.  
Served in 1st grade classroom as general assistant and math tutor.
- 2007-2008 **Eagle Scout Project**, Beavercreek, OR.  
Worked with local hamlet to raise funds, purchase, and install street signs to promote community identity.  
Worked with the community to develop procedures and regulations governing street signs for hamlets.
- 2006-2008 **FreeGeek: Portland**, Portland, OR.  
Rebuilt computers for computer recycling non-profit

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## Personal Interests

- Home automation Atmel AVR (Arduino)-based automation.
- Prop manufacturing Mold-making, casting, fiberglass and resin, sculpture for costumes and props.
- Multicopter UAS Building and programming RC quadcopters