

# Theodore S. Lindsey

☎ (503) 898 0184  
✉ [tlindsey@ku.edu](mailto:tlindsey@ku.edu)  
📄 [TheodoreLindsey.io](http://TheodoreLindsey.io)

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## Education

- 2014–2016 **MS, Computer Science**, *The University of Kansas*, Lawrence, KS, 3.63.  
2011–2014 **MA, Mathematics**, *The University of Kansas*, Lawrence, KS, 3.61.  
2008–2011 **BS, Mathematics**, *Principia College*, Elsah, IL, 3.50.  
2004–2008 **A.A.**, *Clackamas Community College*, Oregon City, OR, 3.94.

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## Computer tools

- Languages Bash, C, C++, CSS, HTML,  $\text{\LaTeX}$ , 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:  
◦ EECS 138: Introduction to Computing (C++), Fall 2015  
◦ EECS 448: Software Engineering Lab, Spring 2015  
◦ Math 121: Calculus I - Fall 2013, Spring 2014  
◦ Math 115: Business Calculus - Spring 2013  
◦ Math 101: College Algebra - Fall 2014, Fall 2012  
◦ Math 002: Elementary Algebra - Fall 2011, Spring 2012  
Responsible for preparing lecture material, creating homework assignments, lecturing, and grading.
- 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**, Beaver Creek, 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