

Russell Feldhausen

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3537 Warwick Ct.
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Education

Ph.D. Computer Science Kansas State University Expected May 2021

- GPA: 4.0/4.0
- Major Professor: Dr. Daniel A. Andresen

M.S. Computer Science Kansas State University May 2018

- GPA: 4.0/4.0
- Major Professor: Dr. Daniel A. Andresen
- Thesis: *Mission to Mars: A Computer Science Curriculum for Middle School STEM Camps*

B.S. Computer Science Kansas State University December 2008

- Magna Cum Laude Graduate (GPA: 3.867/4.0)
- Completed College of Engineering Honors Program
- Member of Tau Beta Pi Engineering Honor Society
- Senior Project: AJAX Based Web Form Creator and Database Host System
- Honors Project: Implementing a Two-Phase Algorithm for Solving a Rubik's Cube

Professional Experience

Instructor

Kansas State University - Computer Science 2018-Present

- Developing online undergraduate certificate program in CS
- Developing new online programming curriculum using Codio
- Courses developed may also be used for additional programs such as high school outreach, professional development, and a new BA in CS
- Recording lecture videos and creating automated project assessments
- Teaching online course in system administration

Graduate Teaching Assistant

Kansas State University - Computer Science 2017-2018

- Graded weekly assignments, written papers, and online homework
- Assisted the instructor with course management duties
- Provide ideas and feedback to instructor regarding the course

Instructor | Academic Advisor

CyberCorps: Scholarship for Service (SFS) Program Coordinator

Kansas State University - Computer Science 2012-2017

- Developed and taught courses in introductory computing science and systems admin
- Advised students each semester to choose appropriate courses and find employment
- Recruited and managed students in the SFS cyber security scholarship program
- Met with prospective students and parents to discuss our program at various events
- Assisted with several department outreach and recruiting events
- Advised several student club groups and department open house committee

Computer Support Specialist

Kansas State University - Communications and Ag. Education

2008-2012

- Provided technical support for department & K-State Research and Extension (KSRE)
- Supervised students providing helpdesk services for KSRE across the state
- Designed, evaluated and implemented technology solutions to meet needs
- Created and maintained documentation for systems, software, and processes used
- Assisted with several reorganization efforts and search committees in department

Personal Consulting

2005-2012

- Provided hardware and software purchase consulting, installation and maintenance
- Designed and implemented technology solutions and backup strategies for clients

Honors & Awards

- **Kansas 4-H Distinguished Service Award Recipient** 2013
 - Recognizes volunteer work with the Kansas 4-H program
- **Kansas 4-H Clover Award** 2011
 - Recognizes significant contribution to Kansas 4-H by non-4-H staff
- **Communications and Ag. Ed. Unclassified Employee of the Year** 2011
- **Top Placing in K-State ACM Chapter's Programming Contest** 2009-2011
 - 2nd Place Fall 2009; 1st Fall 2010; 2nd Spring 2011; 3rd Fall 2011

Teaching Activities

Computational Core

2019-Present

- Developing a new set of online courses in programming and software development to begin Fall 2019
- Courses will be offered online using state-of-the-art learning platforms such as Codio, Canvas & Piazza
- Courses will form the basis of a new undergraduate certificate program
- Many courses will contain automated project assessments to increase scalability without additional faculty time
- Courses may be used for other programs such as high school outreach, professional development, and a new BA in Applied CS

CIS 115: Introduction to Computing Science

2013-2017

- Co-created and updated curriculum for this class with other faculty
- Independently taught 24 sections of 30-50 students each over a span of 4 years
- Hired and managed up to 12 undergraduate teaching assistants each semester and directed their work to grade student assignments and provide effective feedback
- Student retention from freshman to sophomore year within the department has increased significantly after the introduction of this course
- Consistently given very high "teacher effectiveness" rating from students (4.8+ / 5.0)
- **Course contents and objectives:**
 - Provide a broad overview of computing science to incoming students
 - Cover the basics of computer programming skills
 - Expose students to a wide variety of computer science research topics
 - Introduce students to teamwork and communication skills needed in field
 - Students write several blog articles to discuss and reflect on important topics
 - Include many guest speakers from CS faculty, campus groups, and industry partners

CIS 225: Personal Computer Systems Administration

2013-2016

- Developed this course as a new offering for information systems majors
- Class curriculum based on my experience as a system administrator on campus
- Hired and managed 2 undergraduate teaching assistants to assist with grading and helping students complete lab assignments.
- Consistently given very high “teacher effectiveness” rating from students (4.8+ / 5.0)
- **Course contents and objectives:**
 - Give students experience working with Windows and Linux systems
 - Introduce students to shell scripting, networking, user management, troubleshooting, and virtual machine software
 - Provide hands-on experience working with many different technologies
 - Prepare students to be competent in any IT field or related areas

CIS 527: Enterprise Systems Administration

2014-2017, 2018-Present

- Developed this course as a new technical elective for all department majors
- Curriculum based on my past experience and new cloud server technologies
- Consistently given high “teacher effectiveness” rating from students (4.6+ / 5.0)
- Redeveloped into an online course in 2018 with new modules added
- **Course contents and objectives:**
 - Students build working server systems using Windows and Linux virtual machines
 - Increase students’ ability to search for problem solutions with minimal guidance
 - Explore networked environments mimicking those used in industry
 - Students gain experience working with cloud systems and
 - Expose students to virtual machine software and other IT tools and practices

CIS 595: Information Systems Internship

2014-2017

- Coordinated this class for students completing their required internship
- **Course contents and objectives:**
 - Students gain an approved internship on campus or in industry
 - Students submit regular reports to show they are achieving their goals
 - Students give a final presentation to the department and peers describing the internship and knowledge gained from the experience

CIS 190: Open House Committee

2014-2017

- Developed this course for students interested in presenting at open house
- **Course contents and objectives:**
 - Students collaborate to form teams and create displays for open house
 - Give hands-on experience with teamwork, creativity, and communication skills
 - Explore how to share aspects of computer science with the public

DEN 301: Creative Problem Solving in Engineering

2017

- Co-created new curriculum materials for this course for all engineering disciplines with another engineering faculty member
- **Course contents and objectives:**
 - Explore the decision-making process within engineering and design
 - Expose students to concepts such as neuroscience, bias, and reasoning
 - Students collaborate on teams to design a learning experience for peers

Peer Reviewed Papers & Posters

- Feldhausen, R., Weese, J. L., & Bean, N. H. (2018, Feb). **Increasing Student Self-Efficacy in Computational Thinking via STEM Outreach Programs** 2018
Proceedings of the 49th ACM Technical Symposium on Computing Science Education, SIGCSE '18, Baltimore, Maryland. 10.1145/3159450.3159593
Acceptance rate: 35%
- Weese, J. L., & Feldhausen, R. (2017, June). **STEM Outreach: Assessing Computational Thinking and Problem Solving** 2017
Paper presented at 2017 ASEE Annual Conference & Exposition, Columbus, Ohio. <http://peer.asee.org/28845>
- Weese, J. L., Feldhausen, R., & Bean, N. H. (2016, June). **The Impact of STEM Experiences on Student Self-Efficacy in Computational Thinking** 2016
Paper presented at 2016 ASEE Annual Conference & Exposition, New Orleans, Louisiana. 10.18260/p.26179
- Bean, N.H., Weese, J.L., Feldhausen, R., & Bell, R. S. (2015, October). **Starting from Scratch: Developing a Pre-Service Teacher Training Program in Computational Thinking.** 2015
Frontiers in Education Conference (FIE), 2015. 32614 2015. IEEE, El Paso, TX. 10.1109/FIE.2015.7344237
- Bean, N.H., Bell, R.S., & Feldhausen, R. (2015, April). **Scratching the Surface: First Steps in Preservice Teacher Training on Computational Thinking** 2015
Paper presented at the 2015 annual meeting of the American Educational Research Association, Chicago, Illinois.
- Feldhausen, R., Bell, R.S., & Andresen, D.A. (2014, July). **Minimum Time, Maximum Effect: Introducing Parallel Computing in CS0 and STEM Outreach Activities Using Scratch** 2014
Proceedings of the 2014 Annual Conference on Extreme Science and Engineering Discovery Environment (XSEDE '14), Atlanta, Georgia. 10.1145/2616498.2616568. Acceptance rate: 67%
- Feldhausen, R., Bell, R.S., Andresen, D.A. (2013, November). **"Introducing HPC to Young Students"** 2013
Poster presented at the International Conference for High Performance Computing, Networking, Storage and Analysis 2013 (SC13), Denver, Colorado. Acceptance rate: 39%

Other Selected Papers & Posters

- Feldhausen, R., Bell, R.S., Andresen, D.A. (2013, September). **"Introducing HPC and Multi-Threaded Computing to Middle School Girls using Scratch."** 2013
Poster presented at 2013 Midwest Section Conference of the American Society for Engineering Education (ASEE), Salina, Kansas.
3rd Place Award for Best Graduate Poster.

Invited Talks

- **"Computer Science in the Real World"** 2019
at K-State Have a Byte 2019
 - Described new Computational Core curriculum
 - Explained motivation behind course design
 - Encouraged audience to check out free demo

- **“Computer Tear-Down Workshop”** 2015-2016
for K-State ACM Women in Computing (ACM-W)
 - Demonstrated how to disassemble and reassemble a computer
 - Describe how each part of the computer functions
 - Give tips on purchasing new equipment and safety
- **“Technology Petting Zoo”** 2010-2014,
adult session at Kansas 4-H Ambassador Training 2016
 - Hands-on demonstration of new technologies and devices
 - Focused mainly on 4-H parents’ and volunteers’ needs and questions
- **“Technology == Change”** 2015
at Marshall Co. KS Extension Council Board Meeting
 - Discuss the many links between technology and extension
- **“New Technologies and their Role in the Workplace”** 2011
guest lecture for K-State New Media Technology (AGCOM 590) class
 - Covered many upcoming technologies in media and elsewhere
 - Gave class a better understanding of technology affecting their field
- **“Using Technology Every Day, Everywhere”** 2011
at KSRE Youth Development Program Focus Team retreat
 - Discussed a variety of topics important for professional staff
 - Gave many tips and tricks to use technology in staff’s daily routine
- **“Technology Petting Zoo”** 2009
at Kansas 4-H Foundation’s Friends of 4-H Day
 - Demonstrated new devices and websites to 4-H Foundation donors
 - Answered questions from donors about how 4-H is using technology

Selected Presentations

- **“Building Creativity”** 2015-
at Kansas 4-H Youth Leadership Forum 2016
 - Teach 4-H youth activities and ideas to help build their creativity
- **“Effective Use of Social Media”** 2015
at Kansas 4-H Ambassador Training
 - Shared social media tips and ideas with 4-H ambassadors
 - Discussed topics such as online bullying and social media research
- **“Lessons Learned from Teaching”** 2014
at National Extension Technology Conference (NETC)
 - Share tips and tricks for training sessions based on my experience teaching
- **Computer support roundtable session** 2009-
at National Extension Technology Conference (NETC) (with others) 2012
 - Invite colleagues from other institutions to share advice and ideas
 - Helped moderate discussion and coordinate session
- **“Cool Computer Support Tools”** 2012
at National Extension Technology Conference (NETC) (with others)
 - Share tools used in our office for computer support and maintenance

- **“AJAX Based Web Form Creator and Database Host System”** 2008
Senior Project Presentation
 - Presented information gained from reviewing existing papers
 - Described and demonstrated how to use the system created
 - Gave information on possible future work and improvement on project

- **“Implementing a Two-Phase Algorithm for Solving a Rubik’s Cube”** 2008
Honors Project Presentation
 - Described research on Rubik’s cube algorithm found online
 - Explained how I implemented that algorithm independently in Java
 - Showed how completed algorithm was designed to be efficient and demonstrated its use

Service Activities

- **Reviewer for ACM Special Interest Group on Computer Science Education (SIGSCE)** 2016-Present

- **Faculty Co-Advisor for Kansas Gamma Chapter of Tau Beta Pi** 2016-2017

- **Faculty Advisor for K-State Web Development Club** 2015-2017

- **Kansas STARBASE Program** 2015-2017
 - Presented sessions about computer programming for Kansas youth
 - Introduced high performance computing and led tours of the Beocat supercomputer at K-State

- **Faculty Co-Advisor for K-State Association for Computing Machinery (ACM) Student Chapter** 2014-2017

- **Computer Science Department Open House Advisor** 2013-2017
 - Coordinated department student groups and events for open house
 - Worked with student led committee to promote department

- **Computer Science Undergraduate Advising & Recruitment Cmte.** 2013-2017
 - Discussed and provided guidance on issues related to recruiting and advising undergraduate students in computer science

- **Kansas 4-H Discovery Days** 2014-2016
 - Taught classes on programming and computer science to 4-H teens

- **USD 383 Summer STEM Camp** 2014-2016
 - Collaborated with teachers from USD 383 (Manhattan) and K-State College of Education students to develop curriculum materials
 - Taught 4 weeks of classes to grade and middle school students
 - Trained teachers to be more comfortable teaching programming
 - Collected research data to rate effectiveness of the course

- **Kansas 4-H Photography Judge** 2014-Present
 - Provided ratings, critiques and feedback to youth 4-H photographers at many 4-H events throughout the year
 - Met with 4-H youths in person to discuss how to improve their work

- **K-State Office for the Advancement of Women in Science and Engineering (KAWSE) GROW & EXCITE Outreach Programs**
 - Presented lessons about computer science and high-performance computing to middle and high school girls

2013-2015