Wade Fagen-Ulmschneider

Curriculum Vitae

Department of Computer Science
University of Illinois at Urbana-Champaign
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Education

» Ph.D. » Computer Science 2013
University of Illinois at Urbana-Champaign (UIUC)

- Thesis Advisor: Sam Kamin; Committee: Klara Nahrstedt, Karrie Karahalios, and Mark Guzdial

» M.S. with Thesis » Computer Science – Intelligent Systems 2006
» B.S. » Software Engineering 2005
University of Texas at Dallas (UT-Dallas)

- Thesis Advisor: João Cangussu

Employment

» Department of Computer Science, University of Illinois at Urbana-Champaign 2013 -

2019-	Teaching Associate Professor, Computer Science Affiliate (0%) Teaching Associate Professor, Statistics
2016-2019	Teaching Assistant Professor, Computer Science
2013-2016	Lecturer, Computer Science
2007-2013	Graduate Teaching Assistant, Computer Science

» Morgan Stanley; New York City, NY 2010 - 2011
Associate, Fixed Income Strategist of Commercial Mortgage-Backed Securities (CMBS)

» Google, Inc. Summer 2009
Google Summer of Code, Summer Internship Program

» Cisco Systems; Richardson, TX Summer 2008
Software Developer, Summer Intern

Notable Accomplishments

» Nationally-recognized Interactive Data Visualizations 2020
Including 91-DIVOC, featured on CBS “This Morning”, Washington Post, Popular Mechanics, Vox, Gizmodo, and more; 100k+ daily users and 1b+ interactions across all published visualizations.

» Provost’s Award for Excellence in Undergraduate Teaching 2020
Top teaching award by The University of Illinois for undergraduate education, awarded by the Provost.

» Invited Guest: National Academy of Engineering's Frontiers of Engineering Education 2016
“The Frontiers of Engineering Education (FOEE) Symposium brings together some of the nation’s most engaged and innovative engineering educators in order to recognize, reward, and promote effective, substantive, and inspirational engineering education." – National Academy of Engineering

— Impact —

My impact has been both in the public discourse (data visualizations, widely-adopted tools, and invited talks) as well as in academic endeavors (conferences, journals, and other peer-reviewed work). In my role at the University of Illinois, an emphasis is placed on providing education to undergraduate students and an (*) denotes an undergraduate co-author.

Data Visualizations

» The 91-DIVOC Project featuring visualizations of COVID-19 (2020); W. Fagen-Ulmschneider. Five visualizations, 1b+ interaction, 10m+ unique visitors, and 100k+ daily users; used by governors of multiple states and featured in reporting by CBS This Morning, Washington Post, Popular Mechanics, Vox, The Verge, SLATE,Gizmodo, and other national media. Updated multiple times daily.

91-DIVOC-01: "An interactive visualization of the exponential spread of COVID-19"
91-DIVOC-02: "COVID-19 Data for Locations of People You Love"
91-DIVOC-03: "Coronavirus Visualized as a 1,000-Person Community"
91-DIVOC-04: "Coronavirus Contribution by State"
91-DIVOC-05:: "Interactive Visualization of COVID-19 in Illinois"

» "The Grainger Engineering Metro Map" (2020); senior thesis of Tamara Nelson-Fromm*; advised by W. Fagen-Ulmschneider. Awarded best presentation at Illinois' undergraduate research symposium.

» "Gender Diversity of Course Instructors at Illinois" (2019); Tamara Nelson-Fromm*, Grace Cao*, Suhritha Raj*, and W Fagen-Ulmschneider.

» "Pokemon Egg Move Calculator" (2019); A. Buyevich*, E. Chen, A. Sundararajan, W. Fagen-Ulmschneider.

» "Perception of Probability Words" (2019); W. Fagen-Ulmschneider.

» "Racial Demographics at UIUC" (2017); D. Oliver*, W. Fagen-Ulmschneider, T. Abraham*, and K. Landolt*. Awarded first prize in the University of Illinois' 2018 Data Visualization Contest.

» "Grade disparity between sections at UIUC" (2017); D. Oliver*, J. Guo*, J. Tan*, J. Li*, T. Abraham*, A. T. Mao*, K. Landolt*, N. Cho*, and W. Fagen-Ulmschneider.

» "GPAs of Every Course at The University of Illinois" (2016); J. Lee*, N. Claussen*, W. Fagen-Ulmschneider, and Cinda Heeren.

» "Every Gen Ed at UIUC, by GPA" (2016); K. Fei*, C. Breckenfelder*, and W. Fagen-Ulmschneider. Awarded "Best Original Content of 2016" at The University of Illinois.

» "Illini Nation through 120+ Years of Illini Football" (2016); A. Simon*, N. Ng*, W. Fagen-Ulmschneider.

» "120 Years of Illini Football, By Coach" (2016); N. Ralston*, J. Pellettiere*, W. Fagen-Ulmschneider.

» "Class Hierarchy At University of Illinois Urbana-Champaign" (2016); senior thesis of A. Mori*; advised by W. Fagen-Ulmschneider and C. Heeren.

Widely Used/Widely Adopted Tools

» Illinois' LinkedIn Banner Image Generator (2019-)**;** Ashley Grudzinski*, Karle Flanagan and Wade Fagen-Ulmschneider. Generates Illinois-themed, professional banners for use on LinkedIn; 2,000+ banners generated to date, including in use by the chief marketing officer at Illinois.

» The Illinois Open Source Queue (2017-); many contributors on github.com/illinois/queue. Online queue to facilitate office hours, used by 8,000+ students /semester across 50+ courses, advising offices, and student groups at The University of Illinois.

» u/uiuc-bot on reddit (2019-); Rose Nowak* and Wade Fagen-Ulmschneider. A reddit bot designed for r/uiuc, one of the largest college-based reddit communities, that helps with course schedules and GPAs.

» GitHub Repository Creator (2018-); Wade Fagen-Ulmschneider. A microservice that allows students to create a GitHub repository in a course organization; used by 10,000+ students from 10+ courses.

Selection of Notable Media Coverage

» **CBS This Morning** (Manuel Bojorquez, 2020); Bojorquez's (National Correspondent, CBS) segment on the coronavirus includes a video interview with Fagen-Ulmschneider regarding COVID-19 data.

» **Washington State Governor Jay Inslee** (2020); used 91-DIVOC as part of Washington's COVID-19 press conferences on March 26; Gov. Inslee's office also tweeted about the visualization later that day.

» **Kentucky State Governor Andy Beshear** (2020); used 91-DIVOC as part of many of Kentucky's COVID-19 press conferences in April, June, July and August.

» **SLATE** (Ben Mathis-Lilley, 2020); "Texas and Florida, Please Put Masks On or We'll Never Get Out of This" uses Fagen-Ulmschneider's 91-DIVOC visualization as part of a piece on COVID-19.

» **Popular Mechanics** (Esther Landhuis, 2020); "These Data Science Wizards Tell Us What's Really Happening With Coronavirus" quotes Fagen-Ulmschneider; covers 91-DIVOC as "the easiest way to make sense of essential data".

» **Washington Post** (Paige Winfield Cunningham, 2020); "The Health 202: Most states lifting coronavirus lockdowns haven't met federal guidelines for reopening" uses Fagen-Ulmschneider's 91-DIVOC visualization as part of a piece on COVID-19.

» **The Verge** (Adi Robertson, 2020); "The Best Graphs and Data for Tracking the Coronavirus Pandemic" lists Fagen-Ulmschneider's 91-DIVOC as one of the five "most helpful public resources" for tracking COVID-19.

» **Gizmodo** (Beth Skwarecki, 2020); "Esta gráfica con los casos de covid-19 por países es buena para tu información, pero no para tu ansiedad" writes about Fagen-Ulmschneider's 91-DIVOC visualization for a Spanish-language audience.

Invited Academic Talks and Seminars

» **University of Texas at Dallas** (2020), "Data Visualization and 91-DIVOC".

» **University of Illinois at Urbana-Champaign, Provost's Annual Faculty Retreat** (2020)**,** "The Emotion of Discovery" with Karle Flanagan and "The Emotion of Competition & Winning" with Karle Flangan.

» **University of Illinois at Urbana-Champaign, Department of Statistics** (2019)**,** "Data Visualization, Storytelling, and Data Science at The University of Illinois".

» **Carleton College** (2016), "Beyond PowerPoint: Mobile-first, Dynamic, Trackable Presentations in HTML5".

» **Swarthmore College** (2016), "Beyond PowerPoint: Mobile-first, Dynamic, Trackable Presentations in HTML5".

Academic Publications

Conference/Journal Publications

» **"Work in Progress: Analysis of the Impact of Office Hours on Graded Course Assessments"**; Natalia Ozymko*, Matthew McCarthy*, *Wade Fagen-Ulmschneider*, Karin Jensen, and Karle Flanagan; 127th American Society for Engineering Education Annual Conference & Exposition (ASEE 2020).

» **"Measuring Impact: Student and Instructor Experience Using an Online Queue"**; David Mussulman, Karin Jensen, Jennifer R. Amos, Lawrence Angrave, Karle Flanagan, Wade Fagen-Ulmschneider, Natalia Ozymko*, Rittika Adhikari*, and Jacqueline Osborn*; 127th American Society for Engineering Education Annual Conference & Exposition (ASEE 2020).

» **“Introducing junto: a Web Tool to Build Project Teams based on a Bidding Strategy”**; Akhil Mohan*, Priyanka Dey*, Sizhi Tan*, Blake Johnson, Wade Fagen-Ulmschneider, and Mariana Silva; 127th American Society for Engineering Education Annual Conference & Exposition (ASEE 2020).

» **“Adoption of an online queue app for higher education: a case study”**; K. Jensen, J. Amos, L. Angrave, W. Fagen-Ulmschneider, K. Flanagan, D. Mussulman, and C. Schmitz; ; 126th American Society for Engineering Education Annual Conference & Exposition (ASEE 2019).

» **“Re-engineering an "Introduction to Computing" course within a College-Wide Community of Practice”**; W. Fagen, C. Heeren, G. Herman, M. West; 122nd American Society for Engineering Education Annual Conference & Exposition (ASEE 2015).

» **“Quantitative Correlation between Student Use of Office Hours and Course Performance”;** C. Heeren, W. Fagen; 122nd American Society for Engineering Education Annual Conference & Exposition (ASEE 2015).

» **“Computerized Testing: A Vision and Initial Experiences”**; C. Zilles, R.T. Deloatch, J. Bailey, B. Khattar*, W. Fagen, C. Heeren, D. Mussulman, and M. West; 122nd American Society for Engineering Education Annual Conference & Exposition (ASEE 2015).

» **“Measuring increased engagement using Tablet PCs in a code review class”**; W. Fagen, S. Kamin; Proceeding of the 44th ACM technical symposium on Computer Science Education (SIGCSE 2013).

» **“A Cross-Platform Framework for Educational Application Development on Phones, Tablets, and Tablet PCs”**; W. Fagen, S. Kamin; Proc. of the 2012 Intl. Conf. on Frontiers in Education: Computer Science and Computer Engineering (FECS 2012).

» **“Developing Device-independent Applications for Active and Collaborative Learning with the SLICE Framework”**; W. Fagen, S. Kamin; Proc. of the 2012 World Conf. on Educational Multimedia, Hypermedia and Telecommunications (EdMedia 2012).

» **“Supporting active learning in large classrooms using pen-enabled computers”**; S. Kamin, W. Fagen; Proc. of the 2012 Intl. Conf. on Frontiers in Education: Computer Science and Computer Engineering (FECS 2012).

» **“A virtual environment for network testing”**; W. Fagen, J. Cangussu, R. Dantu; Journal of Network and Computer Applications (JNCA Volume 32, Issue 1, Jan. 2009).

» **“Goliath: A Configurable Approach for Network Testing”**; W. Fagen, J. Cangussu, R. Dantu; 3rd International Conference on Testbeds and Research Infrastructure for the Development of Networks and Communities, 2007 (TridentCom 2007).

Talks, Posters, and Technical Reports

» **“Beyond PowerPoint: Mobile-first, Dynamic, Trackable Presentations in HTML5”** (Workshop Talk); W. Fagen; Illinois Learning Sciences Design Laboratory (ILSDL 2015).

» **“Enabling Students through a Modern, Computing-Centric Education”** (Workshop Poster); W. Fagen, C. Heeren; ; Illinois Learning Sciences Design Laboratory (ILSDL 2015).

» **“Quantitative Correlation between Student Use of Office Hours and Course Performance”** (Workshop Poster); C. Heeren, W. Fagen; Illinois Learning Sciences Design Laboratory (ILSDL 2015).

» **“Tablet PCs in a code review class**”; S. Kamin, W. Fagen; 2013 Workshop on the Impact of Pen & Touch Technology on Education (WIPTTE 2013).

» **"A framework developing cross-platform pen-based classroom applications with an automated measure of vocal participation"** (Ph.D. Dissertation); W. Fagen; 2013.

» **"Exploring a New World of Identity with Identity 2.0 based Solutions"** (Technical Report); W. Fagen, K. Karahalios; Department of Computer Science, Report No. 2855, University of Illinois at Urbana-Champaign; 2007.

» **"Goliath: A Configurable Approach for Network Testing"** (Master's Thesis); W. Fagen; 2006.

— Education —

New Course Development

» CS 240: System Applications
New offering to replace computer architecture (CS 233) and systems programming (CS 241) for CS+X students with areas of specialization where understanding cloud computing resources is critical. CS 240 is part of the CS core curriculum for three CS+X majors.

» STAT/CS/IS 107: Data Science Discovery
First campus-wide introduction to data science general education course; serves as the entry-point to the Data Science majors, minors, and certificates. Developed and piloted with Karle Flanagan in Spring 2019; currently offered every semester with 300+ students /year enrollment.

» Coursera MOOC: Accelerated CS Fundamental Specialization
A sequence of three month-long Coursera MOOCs built as a specialization: "Object-Oriented Data Structures in C++", "Ordered Data Structures", and "Unordered Data Structures". Provides a technical on-ramp for students applying to the online MCS program. 45,000+ enrolled students.

» CS 305: Data Driven Discovery
A data-driven analysis and visualization course, developed and piloted with Cinda Heeren in 2015. Provides non-majors opportunities to explore technical data visualization and data science.

Instruction

Course ratings are collected via Coursera (MOOC courses) or the Center for Innovation in Teaching and Learning (CITL) at The University of Illinois (on-campus courses). For on-campus courses, the rating of: (*****) denotes "excellent", (******) denotes "outstanding", and (—) denotes a course where no evaluation was done (ex: in cases where I was team-teaching a course, but was not a primary lecturer, or for courses as part of a non-degree program).

Semester	Course	Students	Rating
[Ongoing]	Coursera: Object-Oriented Data Structures in C++ The first course of the Accelerated CS Fundamental Specialization on Coursera	34,101	4.7
	Coursera: Ordered Data Structures The second course of the Accelerated CS Fundamental Specialization on Coursera	7,288	4.8
	Coursera: Unordered Data Structures The final course of the Accelerated CS Fundamental Specialization on Coursera	4,999	4.8
Fall 2020	CS 240: Computer Systems (New Course Development)	[TBD]	[TBD]
Spring 2020	STAT/CS/IS 107: Data Science Discovery Co-Instructors: Karle Flanagan and Ha Nuygen	100	*
	Introduction to Programming (Illinois International's KAUST Scholars)	16	—[1]
Fall 2019	STAT/CS/IS 107: Data Science Discovery Co-Instructor: Karle Flanagan	185	*

Summer 2019	Data Science Creativity (Illinois International Summer Program) Co-Instructor: Karle Flanagan	30	—[1]
	Data Science Sprint (Illinois International Summer Program) Co-Instructor: Karle Flanagan	85	—[1]
Spring 2019	STAT/CS/IS 107: Data Science Discovery (New Course Development) Pilot Section, Co-Instructor: Karle Flanagan	18	*
	CS 225: Data Structures Co-Instructor: Craig Zilles	535	—[2]
	CS 296-25: Honors in Data Structures	100	*
Fall 2018	CS 225: Data Structures Co-Instructor: Mattox Beckman	795	**
Spring 2018	CS 225: Data Structures Co-Instructor: Eric Shaffer	775	*
Fall 2017	CS 225: Data Structures Co-Instructor: Mattox Beckman	800	*
Spring 2017	CS 225: Data Structures Co-Instructor: Cinda Heeren	777	—[2]
	CS 296-25: Honors in Data Structures	40	
	CS 305: Data Driven Discovery	11	**
Fall 2016	CS 305: Data Driven Discovery Co-Instructor: Cinda Heeren	17	*
Spring 2016	CS 305: Data Driven Discovery Co-Instructor: Cinda Heeren	33	*
Fall 2015	CS 105: Introduction to Computing (non-technical majors) Co-Instructor: Martin Hellwig	998	
	CS 305: Data Driven Discovery (New Course Development) Co-Instructor: Cinda Heeren	19	
Spring 2015	CS 105: Introduction to Computing (non-technical majors)	499	
Fall 2014	CS 105: Introduction to Computing (non-technical majors)	912	
Spring 2014	CS 105: Introduction to Computing (non-technical majors)	476	
Fall 2013	CS 241: System Programming	205	*

[1]: Part of a non-degree program and no student evaluations data was provided to the instructors.

[2]: Team-taught course where Fagen-Ulmschneider did not serve as the primary instructor and was not evaluated by students.

Mentorship

Senior Thesis

» Current Thesis Students: **Ashley Grudzinski** (2021) and **Natalia Ozymko** (2021).

» **Tamara Nelson-Fromm** (2020), "Visualizing Curriculum Commonalities and Prerequisite Chains Through Metro Maps".

» **Alec Mori** (2016), "Class Hierarchy At University of Illinois Urbana-Champaign", co-advisied with Cinda Heeren.

Independent Plan of Study (IPS)

» **Tim Krock** (2017), BS-LAS in Computational Economics.

Independent Study, Team Projects, and Course Aides (CAs)

I interacted with each student on (at least) a weekly basis as they conducted research, worked on development projects, or assisted in teaching.

» Spring 2020: Tamara Nelson-Fromm, Natalia Ozymko, Matt McCarthy, Rittika Adhikari, Jackie Osborn, Priyanka Dey, Akhil Mohan, Sizhi Ta, Ashley Grudzinski, Jasmine Domingo, Jesse Gong, Tamun Hanjra, Yoon Kyung "Lina" Hong, Katy Miles, Emily Jepsen, Dean Chou, Gabby Digan, and Elizabeth De Sa E Silva.

» Fall 2019: Rose Novak, Tamera Nelson-Fromm, Aishik Ghosh, Isha Kukadia, Sarah Nadeem, Elaine Wang, Alvina Waseem, Suhirtha Raj, Omar Mbarki, Will Koster, Elaine Houha, Sam Pal, Jackie Oh, Jatin Mathur, Natalia, Ozymko, Matt McCarthy, Rittika Adhikari, James Wang, Jackie Osborn, Caren Zeng, Ophir Sneh, Michael Kokkines, Anna Buyevich, Nupoor Gandhi, Prajakti Jinachandran, Ayline Villegas, Calina Shaw, Jordan Kahn, Maciej Krzysiak, Elizabeth De Sa E Silva, Jasmine Domingo, Dean Chou, Gabby Digan, Jesse Gong, and Tamun Hanjra.

» Spring 2019: Grace Cao, Suhirtha “Suhi” Raj, Alecia Bell, Anu Devarmanai, Aparajitha Adiraju, Adrian Clark, Annie Kim, Ashley Zhao, Devanshi Pratap, Eddie Huang, Francisco Carreon, Grant Li, Hana Rimawi, Jack Henhapl, James Wang, Jacqueline Osborn, Jeremy Hu, Utsav Kawrani, Kanika Punhani, Natalia Ozymko, Nathan Walters, Jordi Paris Ferrer, Piotr Galusza, Rahul Rameshbabu, Rittika Adhikari, Rose Nowak, Simeng Liu, Siping Meng, Shreyas Patil, Sam Pal, Tamara Nelson-Fromm, Jenny Chen, and Xinyu Li.

» Fall 2018: Emily Chen, Tina Abraham, Anna Buyevich**,** Alecia Bell, Adrian Clark, Annie Kim, Aidan San, Ashley Zhao, Devanshi Pratap, Eddie Huang, Francisco Carreon, Franklin Ye, Genevieve Helsel, Grant Li, Hana Rimawi, Jackie Osborn, Jeremy Hu, Utsav Kawrani, Jessie Le, Kanika Punhani, Ema Milojkovic, Nikhil Modak, Nathan Walters, Jennifer He, Jordi Paris Ferrer, Piotr Galusza, Rahul Rameshbabu, Rittika Adhikari, Rohan Khanna, Simeng Liu, Siping Meng, Sylvia Haas, Shreyas Patil, Jenny Chen, and Xinyu Li

» Spring 2018: Devin Oliver, Kara Landolt, Tina Abraham, Adrian Clark, Aidan San, Alecia Bell, Allegra Domel, Annie Kim, Ashley Zhao, Eddie Huang, Ema Milojkovic, Emma Chen, Franklin Ye, Genevieve Helsel, Grant Li, Hana Rimawi, Jennifer He, Jessie Le, Jordi Paris Ferrer, Kanika Punhani, Kelly Mack, Lauren Smith, Matt Rastovac, Nathan Walters, Nikhil Modak, Piotr Galusza, Raajesh Arunachalam, Rahul Rameshbabu, Rohan Khanna, Shreyas Patil, Simeng Liu, Siping Meng, Stan Gurtler, Sylvia Haas, Utsav Kawrani, Victorique Pang, and Xinyu Li.

» Fall 2017: Aashna Makkar, Aidan San, Allegra Domel, Anushri Devarmanai, Apoorva Dixit, Arman Tajback, Ashley Zhao, Bliss Chapman, Ema Milojkovic, Emma Chen, Franklin Ye, Grant Li, Ishaque Shaikh, Jenny Tran, Jessie Le, Jordi Paris Ferrer, Kanika Punhani, Kelly Mack, Lauren Smith, Matt Rastovac, Mike Peretz, Nathan Beauchamp, Nathan Walters, Nikhil Modak, Ning Wang, Patrick Hurtado, Ruiqian Yao, Shreyas Patil, Stan Gurtler, Sylvia Haas, Travis Newgren, Victorique Pang, and Xinyu Li.

» Spring 2016: Alec Mori, Corly Leung, Tim Krock, Emilee Noh, and Aaron Palmer.

» Fall 2015: Alec Mori, Corly Leung, Han Chen, Kelly Mack, Tim Krock, Ashley Simon, Jake Akstins, Ali Alagha, Reid Butler, Brianna Collender, Ryan Eifert, Emma Lazar, Emilee Noh, Jordyn Kass, Cynthia Qi, Caroline Breckenfelder, Leah Lach, Emily Chou, Coco Wang, Lexi Grochowski, Emma Moore, Piotr Chmielewski, and Eric Chai.

» Spring 2015: Richard Kacirek, Catherine Kang, Tim Krock, Ashley Simon, and Eric Zhang.

» Fall 2014: Richard Kacirek, Catherine Kang, Tim Krock, Sonia Mohanlal, Ashley Simon, Tom Yan, and Eric Zhang.

— Awards and Grants —

Awards

» Provost’s Award for Excellence in Undergraduate Teaching (2020), The University of Illinois; given to 5-7 faculty annually, the Provost Award is the top teaching award at The University of Illinois.

» Scott H. Fisher Computer Science Teaching Award (2019), Department of Computer Science at The University of Illinois; given to one CS faculty annually, the Fisher award is the top CS teaching award.

» Chi Omega’s Outstanding Faculty Award (2018), “A University-level award for excellence in teaching and mentoring", awarded by the Chi Omega chapter at The University of Illinois.

» Engineering Council’s Award for Excellence in Advising (2018), awarded by the Engineering Council of the Grainger College of Engineering at The University of Illinois.

» Collins Award for Innovative Teaching (2017), awarded by Grainger College of Engineering at The University of Illinois; “This award recognizes outstanding development or use of new and innovative teaching methods."

» Invited Guest: National Academy of Engineering's Frontiers of Eng. Ed. (2016)**,** invited by the

National Academic of Engineering; “The Frontiers of Engineering Education (FOEE) Symposium brings together some of the nation’s most engaged and innovative engineering educators in order to recognize, reward, and promote effective, substantive, and inspirational engineering education."

» Teachers Ranked as Excellent by Their Students (2008, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020), awarded based on student course evaluations done by the Center for Innovation in Teaching and Learning (CITL) at The University of Illinois.

» Chirag Foundation Fellow (2006), awarded by Department of Computer Science at The University of Illinois.

Grants

» Strategic Instructional Innovations Program (SIIP) from the Academy for Excellence in Engineering Education (AE3), Grainger College of Engineering, University of Illinois; “Broadening and Evaluating Support for Effective Office Hours in Large Courses Using a Digital Queue System”; Co-PIs: W. Fagen-Ulmschneider, K. Flanagan, K. Jensen, L. Angrave, D. Mussulman. $30,000.

» Campus Innovation Grant from the Office of the Provost at The University of Illinois. Co-PIs: W. Fagen-Ulmschneider, K. Flanagan. $8,000.

» Strategic Instructional Innovations Program (SIIP) from the Academy for Excellence in Engineering Education (AE3), Grainger College of Engineering, University of Illinois; “Computerized Testing”; Co-PIs: C. Zilles, L. Angrave, B. Bailey, W. Fagen, C. Heeren, and K. Karaholios. $100,000.

» Strategic Instructional Innovations Program (SIIP) from the Academy for Excellence in Engineering Education (AE3), Grainger College of Engineering, University of Illinois; “Adaptive Learning”; Co-PIs: M. West, G. Dullerud, W. Fagen, S. Oh, C. Zilles. $113,000.

— Service —

Departmental Service

» Department of Computer Science Advisory Committee; Member, by election from CS department faculty (2019-).

» Data Science Subcommittee of Undergraduate Study; Chair (2019-).

» Undergraduate Study Committee; Member (2019-)

» Academic Integrity Appeals Committee; Member (2017-).

» Instructional Faculty Committee; Member (2013-).

» Faculty Mentor to Undergraduate Students; Mentor (2015-).

» Committee on Technology Facilities and Services; Chair (2015-’18), Member (2013-’15, 2018-’19).

» Committee for Instructional Faculty Recruiting; Member (2014-’15).

» Ad-Hoc Working Group on MOOC Platform Evaluation: Working Group Lead (2014).

College and University Service

» Provost’s Working Group on Data Science Education, University of Illinois; Member (2018-)

» University of Illinois Senate; Faculty Senator, by election from CS department faculty (2019-).

» Pursuing Undergraduate Research Experience (PURE), Grainger College of Engineering; Faculty Mentor, (2018-).

» Faculty Advisory Committee for the Informatics Minor; Member (2017-).

» Grainger College of Engineering Strategic Planning Subcommittee for Undergraduate Education; Member (2019).

» Working Group for the Campus Instructional Facility (CIF); Member, (2017-'19).

» "Test Kitchen" Subcommittee of the Working Group for the Campus Instructional Facility (CIF); Member, (2017-'19).

» Special Committee for Curriculum in the Carle Illinois College of Medicine; Member, (2015-'16).

Community Engagement

» Invited Speaker » "HackThis" Hackathon (2020); "Intro to Data Science in Python"; Livestreamed Presentation (YouTube).

» Invited Panelist » Pixo Consulting (2020)**;** Virtual Presentation (Zoom).

» Invited Speaker » Champaign-Urbana Data Science User Group (2020); "Data Visualization and 91-DIVOC"; Virtual Presentation (Zoom).

» Invited Panelist » University of Illinois' Bioengineering Summer Camp (2020); "Engineering Response to the COVID-19 Pandemic"; Virtual Presentation (Zoom).

» Invited Hackathon Judge » HackIllinois Hackathon (2020); University of Illinois.

» Invited Hackathon Judge » Code Ada Hackathon (2019); Women in Computer Science, University of Illinois.

» Invited Speaker » Illinois Solar Car Team (October 2019); "Telematics and Data Visualization"; Department Electrical and Computer Engineering, University of Illinois.

» Invited Speaker » Alpha Phi Omega (2019); "Data Science and The University of Illinois", with Karle Flanagan; University of Illinois.

» Invited Guest » Association of Computer Machinery (ACM) Student Chapter at The University of Illinois (2019); "Professor Day"; University of Illinois.

» Invited Speaker » Illinois Business Council (2019); "Data Science and The University of Illinois", with Karle Flanagan; University of Illinois.

» Invited Panelist » Women in Computer Science (2019); "Mental Health in Computer Science"; University of Illinois.

» Invited Speaker » Champaign-Urbana Data Science User Group (2019); "Data Science and The University of Illinois"; Research Park, Champaign, IL.

» Video Vignette » Center for Innovation in Teaching and Learning (2019); "Deploying a Phone and Web-Based Digital Queue for TA Office Hours"; University of Illinois.

» Invited Speaker » Illinois Solar Car Team (March 2019); "Telematics"; Department Electrical and Computer Engineering, University of Illinois.

» Invited Hackathon Judge » HackIllinois Hackathon (2019); University of Illinois.

» Invited Research Poster Session Judge » PURE: Pursuing Undergraduate Research Experience (2017, 2018, 2019); University of Illinois.

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