

## Corey E. Baker, Ph.D.

Assistant Professor  
Ming Hsieh Department of Electrical and Computer Engineering  
Viterbi School of Engineering, School of Advanced Computing  
University of Southern California  
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### EDUCATION

- August 2015 **University of Florida**, Gainesville, FL  
Ph.D. Computer Engineering  
Dissertation: *Opportunistic routing in delay tolerant mobile social networks*  
Advisor: Janise McNair
- May 2012 **University of Florida**, Gainesville, FL  
M.S. Computer Engineering
- June 2010 **California State University Los Angeles**, Los Angeles, CA  
M.S. Electrical and Computer Engineering  
Thesis: *Design and implementation of a non-linear dynamical spring replicating buckling behavior*
- May 2008 **San Jose State University**, San Jose, CA  
B.S. Computer Engineering  
Minor: Mathematics

### ACADEMIC APPOINTMENTS

- Jan. 2024 - Present *Assistant Professor*, Ming Hsieh Department of Electrical and Computer Engineering, Viterbi School of Engineering, University of Southern California, Los Angeles, CA
- Jan. 2018 - Dec. 2023 *Assistant Professor*, Inaugural Endowed Fiftieth Anniversary Computer Science Faculty Fellow (2018 - 2020), Department of Computer Science, University of Kentucky, Lexington, KY
- June 2017 - Dec. 2017 *Visiting Scholar*, Department of Electrical Engineering, University of Southern California, Los Angeles, CA, Mentor: Bhaskar Krishnamachari
- Aug. 2015 - Dec. 2017 [University of California Presidents Postdoctoral Fellow](#), Department of Electrical and Computer Engineering, Qualcomm Institute, University of California - San Diego, La Jolla, CA, Mentors: Tara Javidi & Ramesh Rao
- Aug. 2010 - Aug. 2015 *Research Assistant*, Wireless and Mobile Systems Laboratory, University of Florida, Gainesville, FL, Advisor: Janise McNair
- Feb. 2009 - June 2010 *Research Assistant*, Brain and Body Dynamics Laboratory, University of Southern California, Los Angeles, CA, Advisor: Francisco Valero-Cuevas
- Feb. 2009 - Aug. 2009 *Research Assistant*, Neuroengineering Technology Laboratory, California State University Los Angeles, Los Angeles, CA, Advisor: Deborah Won

### ACADEMIC AFFILIATIONS & MEMBERSHIPS

- Feb. 2024 - Present Associate *Member*, [Cancer Control Research](#), [Norris Comprehensive Cancer Center](#), Keck Medicine of University of Southern California, Los Angeles, CA
- Feb. 2024 - Present *Member*, [Diabetes and Obesity Research Institute \(DORI\)](#), University of Southern California, Los Angeles, CA
- Feb. 2024 - Present *Member*, [Center for AI in Society \(CAIS\)](#), University of Southern California, Los Angeles, CA
- Oct. 2022 - Dec. 2023 *Member*, [Cancer Prevention and Control \(CP\)](#), Cancer Research Priority, University of Kentucky Markey Cancer Center, Lexington, KY
- Jan. 2020 - Dec. 2023 *Member*, [UNITE Research Priority Area](#), University of Kentucky, Lexington, KY

## INDUSTRY EXPERIENCE

- June 2023 - Present *App / Framework Engineer, Health and Research Products, Apple, Santa Clara, CA*
  - Conducted research and development on health based applications and frameworks such as [CareKit and ResearchKit](#)
- May 2014 - 2022 *CEO and Co-Founder, 1 Degree Technologies LLC, Gainesville, FL*
  - Lead the company on designing infrastructure-free mobile ad-hoc social networks for disaster relief, emergency response, military applications, and social networking
- Oct 2012 - Jan. 2013 *RF Architecture Intern, Intel, Santa Clara, CA*
  - Conducted research and implementation utilizing Bluetooth 4.0 along with other sensors for accurate proximity detection
- May 2012 - Aug. 2012 *Graduate Intern, Intel, Santa Clara, CA*
  - Part of the Intel Collaborators program. Project manager/engineer on a three person team that enabled one button touch gaming on wireless displays using C, C++, and C#. Also conducted research on Bluetooth 4.0 RSSI proximity detection
- Jun. 2010 - Aug. 2010 *Software Engineer Graduate Intern, Intel, Santa Clara, CA*
  - Wrote code in an Intel proprietary language for Intel graphic cards to test cards performance and identify compiler & runtime bugs
- Feb. 2007 - Aug. 2008 *Software Engineer Intern, Hewlett Packard, Cupertino, CA*
  - Wrote test automation code using VB Script for HP Itanium Servers. Scripts tested HP's Software Management Software and made sure servers were reporting accurate system information
- Aug. 2006 - Feb. 2007 *Database Administrator, NASA AMES Research Center (ISSI Contractor), Moffett Field , CA*
  - Managed databases for the Hazardous Waste/Materials group using SQL. Databases were on apache servers and interacted with users through PHP, HTML, and CSS
- Jun. 2006 - Aug. 2006 *Firmware Engineer Intern, Hewlett Packard, Vancouver, WA*
  - On the engine design team for HP's first business printer. Specifically worked with MIPIO (Memory & Internet Protocol IO). Wrote test code in C and C++ to test MIPIO communication between the engine and the formatter over PCI-Express
- Mar. 2005 - Aug. 2005 *Executive Support Intern, Hewlett Packard, Cupertino, CA*
  - Technical support for HP Executive's and CEO's. Gained experience by working with a team and learning how to support hardware, software, smart phones, and network setup

## SPONSORED RESEARCH (Awarded: \$15,950,651, Responsible: \$1,895,546, Pending: \$743,171)

[S 12] Title: Synergistic adherence of patients & systems to facilitate opportunistic remote patient monitoring

- Amount Awarded: **\$733,171**  
Agency: National Science Foundation (NSF)  
PI: **Baker CE**  
Status: Pending  
Dates: 02/2025 - 01/2030
- [S 11] Title: Offline-first remote patient architectures that motivate patient adherence  
Amount Awarded: **\$10,000**  
Agency: Okawa Foundation  
PI: **Baker, CE**  
Status: Pending  
Dates: 10/24 - 09/25
- [S 10] Title: Apple Artificial Intelligence & Machine Learning (AIML) at the University of Southern California  
Amount Awarded: **\$206,500**  
Agency: National Action Council for Minorities in Engineering (NACME), Apple Inc.  
PI: **Baker, CE**  
Status: Funded  
Dates: 6/24 - Present  
Link: <https://www.nacme.org/bootcamp>
- [S 9] Title: Applied Machine Learning Intensive (AMLi) at the University of Kentucky  
Amount Awarded: **\$262,209**  
Agency: National Action Council for Minorities in Engineering (NACME), Google Inc.  
PI: **Baker, CE**  
Status: Funded  
Dates: 6/21 - 11/22  
Link: <https://amli.engr.uky.edu/>
- [S 8] Title: Mid-scale RI-1 (M1:IP): EduceLab: infrastructure for next-generation natural and cultural heritage science (NCHS)  
Amount Awarded: \$14M (Responsible for **\$1M**)  
Agency: National Science Foundation (NSF)  
PI: Seales WB  
Co-PI: **Baker CE**, Balk T, Reyes-Centeno H, Smith S  
Status: Funded  
Dates: 10/2021 - 09/2026
- [S 7] Title: Reinforcement learning based remote patient monitoring applications  
Amount Awarded: **\$110,872**  
Agency: Eli Lilly and Company  
PI: **Baker, CE**  
Status: Funded  
Dates: 7/2/21 - 7/1/22
- [S 6] Title: SCC-PG: Low-cost smart cities: designing affordable smart cities for all communities  
Amount Awarded: **\$150,000**  
Agency: National Science Foundation (NSF)  
PI: **Baker, CE**  
Co-PIs: Grant CE, Erhardt G, Khamfroush H  
Status: Funded  
Dates: 07/1/20 - 9/31/21
- [S 5] Title: Applied Machine Learning Intensive (AMLi) at the University of Kentucky  
Amount Awarded: **\$300,000**  
Agency: National Action Council for Minorities in Engineering (NACME), Google Inc.  
PI: **Baker, CE**  
Status: Funded  
Dates: 6/18/20 - 8/31/21  
Link: <https://amli.engr.uky.edu/>
- [S 4] Title: NSF Student Travel Grant for 2020 21st ACM Workshop on Mobile Computing Systems and Applications (ACM HotMobile)  
Amount Awarded: **\$19,400**

- Agency: National Science Foundation (NSF)  
 PI: **Baker, CE**  
 Status: Funded  
 Dates: 1/1/20 - 12/31/20
- [S 3] Title: Linking and amplifying user-centered networks through connected health  
 L.A.U.N.C.H  
 Amount Awarded: \$199,999 (Responsible for **\$25,094**)  
 Agency: Westat  
 PI: Chih M  
 Co-I: **Baker, CE**, Huang B, Kim J, Mullet T  
 Status: Funded  
 Dates: 11/1/19 - 7/31/20
- [S 2] Title: Linking and amplifying user-centered networks through connected health  
 L.A.U.N.C.H  
 Amount Awarded: \$150,000 (Responsible for **\$12,971**)  
 Agency: ICF  
 PI: Vanderpool R  
 Co-I: **Baker, CE**, Chih M, Huang B, Mullet T, Studts J  
 Status: Funded  
 Dates: 3/17/19 - 9/21/19
- [S 1] Title: University of Kentucky Inaugural Endowed Fiftieth Anniversary Computer Science  
 Faculty Fellowship  
 Amount Awarded: **\$15,000**  
 PI: **Baker, CE**  
 Status: Funded  
 Dates: 1/1/18- 12/31/20

## **PUBLICATIONS**

### *Journal Articles*

- [J 6] Donawa A, Powell C, Wang R, Chih M, Aronoff-Spencer E, **Baker CE**, “Designing survey-based mobile interfaces for rural cancer patients using Apple’s ResearchKit and CareKit: usability study,” *Journal of Medical Internet Research (JMIR) Formative Research*, 2024 (Accepted, In-Press)
- [J 5] Spencer E, McComsey M, Chih M, Hubenko A, **Baker C**, Kim J, Ahern D, Gibbons MC, Cafazzo J, Nyakairu P, Vanderpool RC, Mullett TW, Chih M, Attencio V, Patterson G, Boten J, Hartshorn C, Bartolome B, Gorscak K, Huang B, and Hesse BW, “Designing for health system resilience in challenging times: A framework for remote cancer care through community codesign,” *Journal of Medical Internet Research (JMIR)*, 2022
- [J 4] DeHart J, Ajisehiri O, Erhardt G, Cleveland J, **Baker CE**, Grant C, “Becoming a smart city: A textual analysis of the US smart city challenge finalists,” *IARIA International Journal on Advances in Intelligent Systems (IntSys)*, 2021
- [J 3] Hesse BW, Ahern D, Ellison M, Vanderpool RC, Onyeije K, Gibbons MC, Mullett TW, Chih M, Attencio V, Patterson G, Boten J, Hartshorn C, Bartolome B, Gorscak K, McComsey M, Hubenko A, Huang B, **Baker C**, and Norman D, “Barn-Raising on the Digital Frontier: The L.A.U.N.C.H Collaborative,” *Journal of Appalachian Health*, Vol. 2, Issue 1, January 2020
- [J 2] St Juste P, Jeong K, Eom H, **Baker C**, and Figueiredo R, “TinCan: User-defined P2P virtual network overlays for ad-hoc collaboration,” *ICST Transactions on Collaborative Computing*, Vol. 14, Issue 2, August 2014
- [J 1] St Juste P, Eom H, Woodruff B, **Baker C**, and Figueiredo R, “Enabling decentralized microblogging through P2PVPNs,” *The International Journal of Security and Networks*, Vol. 8, Issue 3, pp. 169-178, November 2013

### *Refereed Conference Proceedings*

- [C 12] Max-Onakpoya E, Mullett TW, **Baker CE**, “Preserving anonymity in remote patient monitoring systems that utilize opportunistic connectivity,” (In-Review)

- [C 11] Max-Onakpoya E, **Baker CE**, “Evaluating the joint use of alternate data delivery models in deterministic rural areas,” IEEE International Conference on Computer Communication and Networks (ICCCN), 2023
- [C 10] Donawa A, Powell C, Wang R, Chih M, Aronoff-Spencer E, **Baker CE**, “Note: Assessing cancer patient usability of a mobile distress screening app,” ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies (COMPASS), 2022
- [C 9] Madamori O, Max-Onakpoya E, Erhardt G, and **Baker CE**, “Enabling opportunistic low-cost smart cities by using tactical edge node placement,” IEEE Wireless On-demand Network systems and Services Conference (WONS), 2021 (**Top Paper Award**)
- [C 8] DeHart J, **Baker CE**, Grant C, “Considerations for Designing Private and Inexpensive Smart Cities,” IARIA International Conference on Wireless and Mobile Communications (ICWMC), Porto, Portugal 2020
- [C 7] Max-Onakpoya E, Madamori O, Grant F, Vanderpool R, Chih M, Ahern DK, Aronoff-Spencer E, and **Baker CE**, “Augmenting cloud connectivity with opportunistic networks for remote patient monitoring in rural areas,” IEEE International Conference on Computing, Networking and Communications (ICNC), Big Island, HI, 2020 (**Acceptance Rate: 24.9%**)
- [C 6] Starke A, Nei Z, Hodges M, **Baker CE**, and McNair J, “Denial of service detection & mitigation scheme using responsive autonomic virtual networks (RAvN),” IEEE Military Communications Conference (MILCOM), Norfolk, VA, 2019
- [C 5] Donawa A, Orukari I, **Baker CE**, “Scaling blockchains to support electronic health records for hospital systems,” IEEE Annual Ubuquitous Computing, Electronics & Mobile Communication Conference, Columbia University, NY, 2019
- [C 4] Madamori O, Max-Onakpoya E, Grant C, and **Baker CE**, “Using delay tolerant networks as a backbone for low-cost smart cities,” IEEE International Conference on Smart Computing (SmartComp), Washington DC, 2019
- [C 3] Baker C, Starke A., Hill-Jarrett T, and McNair J, “In vivo evaluation of a secure opportunistic schemes middleware using a delay tolerant social network,” IEEE International Conference on Distributed Computing Systems (ICDCS), Atlanta, GA, 2017 (**Acceptance Rate: 15%**)
- [C 2] **Baker C**, Dunnivant J, and McNair J, “How the pathway to engineering affects diversity in the engineering workforce: A Silicon Valley Case Study,” ASEE Annual Conference & Exposition, Seattle, WA, 2015
- [C 1] **Baker C**, Almodovar-Faria J, St Juste P, and McNair J, “Low energy socially cognizant routing for delay tolerant mobile networks,” IEEE Military Communications Conference (MILCOM), San Diego, CA, 2013

#### ***Refereed Workshop Proceedings***

- [W 4] Donawa A, Powell C, Wang R, Chih M, **Baker CE**, “Designing mobile distress screening apps for technically disadvantaged patients with apple’s researchkit and carekit,” AMIA Clinical Informatics 2022
- [W 3] Max-Onakpoya E and **Baker CE**, “Assessing a synergistic use of alternate broadband delivery models in rural areas,” IEEE International Conference on Pervasive Computing and Communications (Percom Works In Progress), 2022
- [W 2] Madamori O, Max-Onakpoya E, Erhardt G, and **Baker CE**, “A latency-defined edge node placement scheme for opportunistic smart cities,” IEEE International Conference on Pervasive Computing and Communications Workshops (Percom Workshops), 2021
- [W 1] Max-Onakpoya E, Madamori O, **Baker CE**, “Utilizing opportunistic social networks for remote patient monitoring in rural areas,” ACM International Workshop on Technology Enablers and Innovative Applications for Smart Cities (TESCA), Columbia University, NY, 2019

#### ***Refereed Posters, Printed-Abstracts, Demos***

- [P 14] Grooms X and **Baker CE**, “Optimizing edge connectivity post natural disaster using UAVs,” ACM International Workshop on Mobile Computing Systems and Applications (HotMobile), Austin, TX, 2020 [*Poster, Printed-Abstract*]

- [P 13] Vanderpool R, Mullet T, Chih M, Studts J, and Baker CE, "Linking and amplifying user-centered networks through connected health (L.A.U.N.C.H)," Markey Cancer Center Affiliate Network Cancer Care Conference, Lexington, KY, 2019 [Poster, Demo]
- [P 12] Grooms X and Baker CE, "Utilizing delay tolerant networking in unmanned arial vehicle applications," ACM Richard Tapia Celebration of Diversity in Computing, San Diego, CA, 2019 (1<sup>st</sup> Place) [Poster]
- [P 11] Madamori O and Baker CE, "Opportunistic Device-to-Device Communication for Low-cost Smart Cities," ACM Richard Tapia Celebration of Diversity in Computing, San Diego, CA, 2019 [Poster]
- [P 10] Madamori O and Baker CE, "Using delay tolerant networks as a backbone for low-cost smart cities," IEEE International Conference on Smart Computing (SmartComp), Washington DC, 2019 [Poster]
- [P 9] Imarah M, Sutton L, and Baker CE, "Improving the awareness and diagnoses of parkinson's disease using computer-aided techniques," University of Kentucky Undergraduate Scholars Showcase, 2019 [Poster]
- [P 8] Max-Onakpoya E, Jacobs A, and Baker CE, "An Opportunistic mHealth Architecture for Remote Patient Monitoring," ACM International Workshop on Mobile Computing Systems and Applications (HotMobile), Santa Cruz, CA, 2019 [Poster, Printed-Abstract]
- [P 7] Baker C, Starke A., Hill-Jarrett T, and McNair J, "In vivo evaluation of a secure opportunistic schemes middleware using a delay tolerant social network," IEEE International Conference on Distributed Computing Systems (ICDCS), Atlanta, GA, 2017 [Poster, Demo]
- [P 6] Baker C, Starke A, Xing S, and McNair J, "AlleyOop Social: a research platform for real-world evaluation of routing schemes in delay tolerant social networks," IEEE International Conference on Computer Communications (INFOCOM), Atlanta, GA, 2017 [Poster, Printed-Abstract, Demo]
- [P 5] Baker C, and Javidi T, "Considering uncertainty in link-state information for wireless D2D communication in software defined networks," Academic Research and Leadership Network, Massachusetts Institute of Technology, Boston, MA, 2016 [Poster]
- [P 4] Baker C, Almodovar-Faria J, and McNair J, "Simulations of LESC routing over Bluetooth LE," ACM Richard Tapia Celebration of Diversity in Computing, Seattle, WA, 2014 (3<sup>rd</sup> Place) [Poster]
- [P 3] Baker C, Almodovar-Faria J, and McNair J, "Low bandwidth efficient mobile message delivery with LESC," 2013 NSF I<sup>3</sup> Graduate Student Research Day, University of Florida, Gainesville, FL, 2013 [Poster]
- [P 2] Baker C, St. Juste P, and McNair J, "Socially aware delay tolerant microblogging for mobile devices," GT<sup>2</sup>, Georgia Institute of Technology, Atlanta, GA, 2012 [Poster]
- [P 1] Baker C, Valero-Cuevas FJ, "Design and implementation of a non-linear dynamical system replicating spring replicating spring buckling behavior," NSF LSAMP/BD Meeting and Presentation On The Hill, Washington D.C., 2010 [Poster]

### **Intellectual Property**

- [I 2] Baker C, Almodovar-Faria J, and McNair J, "Ad-hoc social network (AHSN) system, ahsn-enabled device, and methods of use," US Patent, US10,694,362B2, June 23, 2020
- [I 1] Baker C, Almodovar-Faria J, and McNair J, "Ad-hoc social network (AHSN) system, ahsn-enabled device, and methods of use," WO Patent, WO2016179583-A1, November 10, 2016

### **PRESENTATIONS**

#### **Talks**

- [T 2] Donawa A, Baker CE, "Addressing the need for remote patient monitoring applications in appalachian areas," Symposium of the Workgroup On Interactive Systems in Health (WISH), 2020
- [T1] Max-Onakpoya E, Baker CE, "Utilizing opportunistic social networks for remote patient monitoring in rural areas," IEEE/ACM Medical Cyber Physical Systems in Internet of Things Workshop, Washington, DC, 2019

#### **Invited Talks**

- [I 12] Baker CE, "[Overcoming Network Intermittency to Facilitate Remote Patient Monitoring](#)," Tektronix TekTok Series hosted by Tektronix Women in Technology (WIT) and Black Excellence Matters (BEM), 2021
- [I 11] Baker CE, "Overcoming Network Intermittency to Facilitate Remote Patient Monitoring," Eli Lilly and Company, 2021
- [I 10] Baker CE, "[Tolerable delay: augmenting cloud connectivity with opportunistic communication for entity centered apps](#)," Corporate Liaison Program, IEEE Santa Clara Valley Section, 2020
- [I 9] Baker CE, "Tolerable delay: augmenting cloud connectivity with opportunistic communication for entity centered apps," Department of Electrical and Computer Engineering, New York University (NYU) 2020
- [I 8] Baker CE, "AlleyOop Social: supplementing centralized infrastructure with opportunistic communication," Obsidis Meshing With Data Hackathon, San Juan, PR, 2018
- [I 7] Baker C, "When disaster strikes: supplementing centralized infrastructure with opportunistic communication," Ming Hsieh Institute Seminar Series Communication, Networks, and Systems (CommNetS), University of Southern California, March 2017
- [I 6] Baker C, "Considering uncertainty in link-state information for wireless D2D communication in software defined networks," University of California Presidents Fellow Academic Retreat, April 2016
- [I 5] St. Juste P, Baker C, Figueiredo R. "Data privacy tools in the age of ubiquitous data collection," ACM Richard Tapia Celebration of Diversity in Computing, 2015
- [I 4] Baker C, McNair J, "Message delivery for evolving community structures in mobile ad-hoc social networks," Black Graduate Student Organization Grad Research Impact Series, November 2014
- [I 3] Baker C, McNair J, "Community based message delivery for wearables using bluetooth low energy socially cognizant routing," Future Faculty and Professional Technical Presentation, GEM Annual Board Meeting and Conference, August 2014 (3<sup>rd</sup> Place)
- [I 2] Baker C, Almodovar-Faria J, St. Juste P, and McNair J, "Socially cognizant delay tolerant microblogging for mobile devices," GEM Tech Talks, National Society of Black Engineers, National Convention, 2013
- [I 1] Baker C, Valero-Cuevas FJ, "Design and implementation of a non-linear dynamical system replicating spring replicating spring buckling behavior," MORE Programs Student Seminars, California State University Los Angeles, Los Angeles CA, May 2010

## TEACHING

Fall 2023	CS 485G Mobile Applications Development for iOS, University of Kentucky Syllabus: <a href="https://bit.ly/cs485gFall23">https://bit.ly/cs485gFall23</a>
Spring 2023	CS 485G Mobile Applications Development for iOS, University of Kentucky Syllabus: <a href="https://bit.ly/cs485gSpring23">https://bit.ly/cs485gSpring23</a>
Fall 2022	CS 485G Mobile Applications Development for iOS, University of Kentucky Syllabus: <a href="https://bit.ly/3E1CzBf">https://bit.ly/3E1CzBf</a>
Summer 2022	CS 485G Applied Machine Learning, University of Kentucky Syllabus: <a href="https://bit.ly/3LNKWlq">https://bit.ly/3LNKWlq</a>
Spring 2022	CS 485G Mobile Applications Development for iOS, University of Kentucky Syllabus: <a href="https://bit.ly/3dJLigg">https://bit.ly/3dJLigg</a>
Spring 2022	CS 685 Designing Applications for Medical Research, University of Kentucky Syllabus: <a href="https://bit.ly/3Rg1tQk">https://bit.ly/3Rg1tQk</a>
Summer 2021	CS 485G Applied Machine Learning, University of Kentucky Syllabus: <a href="https://bit.ly/3Can9Jk">https://bit.ly/3Can9Jk</a>
Spring 2021	CS 485G Mobile Applications Development for iOS, University of Kentucky

Fall 2020	Syllabus: <a href="https://bit.ly/3oTLf1i">https://bit.ly/3oTLf1i</a> CS 485G Mobile Applications Development for iOS, University of Kentucky
Spring 2020	Syllabus: <a href="https://bit.ly/2YY4H25">https://bit.ly/2YY4H25</a> CS 685 Opportunistic Wireless Communication, University of Kentucky
Fall 2019	Syllabus: <a href="https://bit.ly/39V0oen">https://bit.ly/39V0oen</a> CS 485G Mobile Applications Development for iOS, University of Kentucky
Spring 2019	Syllabus: <a href="http://bit.ly/2MzV9Uz">http://bit.ly/2MzV9Uz</a> CS 685 Mobile Applications for Blockchains, University of Kentucky
Fall 2018	Syllabus: <a href="http://bit.ly/2M7oAOG">http://bit.ly/2M7oAOG</a> CS 485G Mobile Applications Development for iOS, University of Kentucky
Spring 2018	Syllabus: <a href="http://bit.ly/2B51eTs">http://bit.ly/2B51eTs</a> CS 685 Opportunistic Wireless Communication, University of Kentucky
Spring 2016	Syllabus: <a href="http://bit.ly/2pfzVTU">http://bit.ly/2pfzVTU</a> ECE 158B Data Networks II, University of California - San Diego
Summer 2016	Syllabus: <a href="http://bit.ly/2d6lcmv">http://bit.ly/2d6lcmv</a> Course Evaluation (92% recommendation)
Summer 2011	NSF New Computer Science Faculty Teaching Workshop, San Diego, CA <i>Teachers Assistant</i> , Grader, EEL 3135 Introduction to Signals and Systems, University of Florida
Spring 2011	<i>Teachers Assistant</i> , Grader, Lecturer (selected), EEL 3105 Analytical Methods in Electrical Engineering, University of Florida
Fall 2010	<i>Teachers Assistant</i> , Grader, EEL 3135 Programming for Electrical Engineers, University of Florida

## TECHNICAL SKILLS

Programming Languages C and C++, Swift, Java, Python, Objective C, Matlab, Javascript, VB Script, Verilog, Assembly Language, LISP, SQL  
Tools and Systems Xcode, Latex, NS3, VIM, ClearCase, Xilinx  
Hardware FPGA's, Digital Interfacing, Embedded Systems

## HONORS AND AWARDS

2019 [University of Kentucky Inclusive Excellence Award](#)  
2018 - 2020 University of Kentucky Department of Computer Science Faculty Fellowship  
2015 - 2017 University of California Presidents Postdoctoral Fellowship  
2016 NSF New Computing Faculty Teaching Institute (selected)  
2015 The William R. Jones Most Valuable Mentor Award, Florida Education Fund McKnight Program  
2015 Academic Careers Workshop for Underrepresented Participants Workshop (selected)  
2015 Georgia Institute of Technology FOCUS Fellows Workshop (selected)  
2014 University of Michigan NextProf Workshop (selected)  
2014 3<sup>rd</sup> Place Future Faculty and Professional Technical Presentation, GEM Annual Board Meeting and Conference  
2014 3<sup>rd</sup> Place Graduate Poster, ACM Richard Tapia Celebration of Diversity in Computing  
2014 Travel Grant, ACM Richard Tapia Celebration of Diversity in Computing  
2013 Travel Grant, IEEE Military Communications Conference  
2005 - 2006 National Society of Black Engineers Chapter Executive Board Member of the Year

## PRESS/MEDIA



June 2022	Developing in Swift, open-source, and next generation computer science students - A discussion with Swift experts [ <a href="#">Swift Package Index Blog</a> ]
May 2022	Parse-Swift, A Swift framework designed by Baker is discussed in Issue #560 [ <a href="#">iOS Dev Weekly</a> ]
November 2021	UK awarded \$14 million NSF grant to launch world-class cultural heritage lab [ <a href="#">UKNow</a> ]
September 2021	UK completes 8-week Google applied machine learning intensive [ <a href="#">College of Engineering</a> ]
October 2020	Developing iOS healthcare apps with careKit - coding in swift with xcode [ <a href="#">College of Engineering</a> ]
June 2019	UK behind the blue podcast: UK's Corey Baker bridging the gap in computer science [ <a href="#">UKNow</a> , <a href="#">College of Engineering</a> ]
April 2019	Office for Institutional Diversity presents Inclusive Excellence Awards [ <a href="#">UKNow</a> , <a href="#">College of Engineering</a> ]
February 2019	Discovering you - engineering your world [ <a href="#">NBC News Learn</a> ]
February 2019	University of Kentucky professor helping to bridge diversity gap in computer science department [ <a href="#">Spectrum News</a> ]
February 2019	Successfully bridging the diversity gap in computer science [ <a href="#">UKNow</a> , <a href="#">College of Engineering</a> ]
January 2019	Smart investments [ <a href="#">Kentucky Engineering Journal</a> ]
December 2018	WKYT: Mayor Announces METRO C.A.T.S. Program at Charles Young Center [ <a href="#">UKNow</a> , <a href="#">College of Engineering</a> ]
December 2018	Changing the atmosphere: recruiting diverse faculty at UK remains 'intentional' [ <a href="#">Kentucky Kernel</a> ]
March 2018	Baker presenting at the National Society of Black Engineers (NSBE) National Convention to help graduate students succeed [ <a href="#">College of Engineering</a> ]
February 2018	NSF/Mozilla Project selected for Wireless Innovation for a Networked Society Challenges [ <a href="#">Personal</a> ]

## ADVISING (Director of the [Network Reconnaissance \(NetRecon\) Lab](#))

### **PhD Students**

2018 - Present [Alyssa Donawa](#) (PhD Candidate)

### **BS Students**

2023 - Present Destyn Carlton  
 2022 - Present Jayla McCoy  
 2022 - Present Katherine Delgado  
 2022 - Present Jose Cruz

### **Graduated Students**

2022 - 2023, BS (Honors) Julia Stekardis (Mobile Engineer, Expedia)  
 2022 - 2023, BS Kimi Medina-Castellano  
 2022 - 2023, BS Luke Taylor  
 2021 - 2023, BS To'Nia Ray  
 2018 - 2022, PhD, MS [Esther Max-Onakpoya](#)  
 2022 - 2022, MS Nathaniel Church  
 2018 - 2021, MS(Thesis) Oluwafeyisayo Afolabi (Sr. Design Engineer, AMD)  
 2018 - 2021, MS [Alyssa Donawa](#)  
 2018 - 2020, MS [Esther Max-Onakpoya](#)  
 2017 - 2019, MS(Thesis) Oluwashina Madamori (Infrastructure Engineer, Samsara)  
 2016 - 2017, MS, BS Max Xing (Software Engineer, Apple)  
 2021 - 2022, BS Tony Ramirez (PhD Student, The Ohio State University)  
 2021 - 2022, BS Jalen Collins (Software Engineer, Boeing)  
 2021 - 2022, BS Chris Gambrell (Software Engineer, Apple)  
 2019 - 2022, BS Jachi Onuiha (Software Engineer, Microsoft)

2019 - 2022, BS	De'Andre Gibbs
2018 - 2018, BS	Lily Sutton (Web Developer, Vivid Charts)
2018 - 2018, BS	Michelle Imarah
2019 - 2020, BS	Steven Roberts (Software Engineer, Lockheed Martin)
2018 - 2020, BS	Kenton Carrier (Software Engineer, Target)

**Doctoral Committee Member**

Moshaver, Paria, PhD Student, Mechanical Engineering  
 Richie, Maria, PhD Student, Educational Policy Studies and Evaluation

**Doctoral Outside Examiner**

Labrado, Carson, PhD (2020), Electrical Engineering

**Former Post docs**

2019 - 2019, Postdoc Inema Orukari, PhD (MD/PhD at Washington University in St. Louis)

**FELLOWSHIPS**

2015 - Present	University of California Presidents Postdoctoral Fellowship	(\$130K)
2014 - 2015	Florida Education Fund McKnight Dissertation Fellow	(\$ 24K)
2012 - 2013	NSF SEAGEP Scholarship	(\$ 5K)
2011 - 2012	NSF SEAGEP Scholarship	(\$ 5K)
2010 - 2015	The National GEM Consortium Ph.D Fellowship	(\$125K)
2010 - 2015	Intel Scholar (Included in GEM Fellowship)	
2008 - 2010	NSF LSAMP Bridges to the Doctorate Fellowship	(\$ 80K)
2008 - 2010	The National GEM Consortium MS Fellowship (Selected, didn't accept)	
2008 - 2009	National Society of Black Engineers Silicon Valley Scholarship	(\$ 2K)
2004 - 2008	The Hewlett Packard Scholarship	(\$ 40K)

**OUTREACH, MENTORING, AND DIVERSITY RELATED SERVICES**

**Workshops**

- [U 23] Baker C, "Maximizing your degree: preparing for academia or industry," University of Kentucky, Audience: Undergraduate, July 2022
- [U 22] Baker C, "Voices from the field," The National GEM Consortium, University of Tennessee Knoxville, Audience: Undergraduate & graduate, September 2021
- [U 21] Baker C, "Maximizing your degree: preparing for academia or industry," University of Kentucky, Audience: Undergraduate, July 2021
- [U 20] Baker C, "Maximizing your degree: preparing for academia or industry," University of Kentucky College of Engineering Graduate Campus Visit Program, Audience: Graduate, February 2020
- [U 19] Baker C, "Voices from the field," The National GEM Consortium, University of Tennessee Knoxville, Audience: Undergraduate & graduate, September 2019
- [U 18] Baker C, "Maximizing your degree: preparing for academia or industry," University of Kentucky College of Engineering Graduate Campus Visit Program, Audience: Graduate, January 2019
- [U 17] Baker C, "Maximizing your degree: preparing for academia or industry," National Society of Black Engineers Region 6, Audience: Graduate, November 2018
- [U 16] Baker C, "Maximizing your degree: preparing for academia or industry," University of Kentucky Graduate School, Audience: Undergraduate & Graduate, October 2018
- [U 15] Baker C, "Maximizing your degree: preparing for academia or industry," The National Society of Black Engineers, Region 6 Fall Regional Conference, Audience: Undergraduate & graduate, November 2017
- [U 14] Baker C, Calhoun E, "How to apply to graduate school," The National GEM Consortium, University of California San Diego, Audience: Undergraduate & graduate, October 2017
- [U 13] Baker C, Grant C, "Maximizing your degree: preparing for academia or industry," ACM Richard Tapia Conference for Diversity in Computing, Audience: Graduate & Postdoc, September 2017

- [U 12] **Baker C, Grant C**, “Maximizing your degree: preparing for academia or industry,” The National GEM Consortium, Annual Board Meeting, Audience: Graduate, September 2017
- [U 11] **Baker C**, “#MajorKeys to writing a phenomenal research abstract,” The National Society of Black Engineers, Region 6 Fall Regional Conference, Audience: High School, November 2016
- [U 10] **Baker C, Berhe A**, “How to fund graduate school,” The National GEM Consortium, University of California Irvine, Audience: Undergraduate, October 2016
- [U 9] **Baker C**, “Maximizing your degree: preparing for academia or industry,” National Society of Black Engineers, Region Six Leadership Conference, Audience: Undergraduate, August 2016
- [U 8] **Baker C, Grant C**, “Maximizing your degree: preparing for academia or industry,” The National GEM Consortium, Annual Board Meeting, Audience: Graduate, August 2016
- [U 7] **Baker C**, “Closer to your dreams: pursuing college and choosing engineering,” California Alliance of Minority Participation, Qualcomm Institute, Audience: Undergraduate, July 2016
- [U 6] **Baker C**, “Closer to your dreams: pursuing college and choosing engineering,” University of California San Diego TRiO Program, San Diego High School, Audience: High School, July 2016
- [U 5] **Baker C**, “Closer to your dreams: pursuing college and choosing engineering,” Nevada State College TRiO Program, Qualcomm Institute, Audience: High School, July 2016
- [U 4] **Baker C**, “Closer to your dreams: pursuing college and choosing engineering,” Pathways in Education, University of California San Diego, Audience: High School, June 2016
- [U 3] **Baker C**, “Closer to your dreams: pursuing college and choosing engineering,” California Student Opportunity and Access Program (Cal SOAP), San Diego Unified School District, Audience: High School, March 2016
- [U 2] **Baker C**, “Why graduate school?,” The National GEM Consortium, University of South Carolina, Audience: Undergraduate, October 2015
- [U 1] **Baker C**, “Preparing for graduate school: Conducting undergraduate research,” The National Society of Black Engineers, University of California San Diego Chapter, Audience: Undergraduate, October 2015

### ***Blogs***

- [B 11] **Baker C**, “Bridge to the doctorate: where to apply for 2015,” Road To PhD, <http://coreyebaker.com/blog>, April 2015
- [B 10] **Baker C**, “Conducting a literature search: becoming familiar with your research area,” The National GEM Consortium, <http://www.gemfellowship.org/author/coreybaker/>, April 2015
- [B 9] **Baker C**, “March madness: deciphering admission letters & selecting the right graduate school,” The National GEM Consortium, <http://www.gemfellowship.org/author/coreybaker/>, March 2015
- [B 8] **Baker C**, “The blue chip graduate student: making the most of your campus visitation,” The National GEM Consortium, <http://www.gemfellowship.org/author/coreybaker/>, February 2015
- [B 7] **Baker C**, “Publishing: Targeting the right conferences and journals,” The National GEM Consortium, <http://www.gemfellowship.org/author/coreybaker/>, January 2015
- [B 6] **Baker C**, “Selecting your top 10 graduate schools: apply and conquer,” The National GEM Consortium, <http://www.gemfellowship.org/author/coreybaker/>, December 2014
- [B 5] **Baker C**, “’Tis the season to apply for funding,” The National GEM Consortium, <http://www.gemfellowship.org/author/coreybaker/>, November 2014
- [B 4] **Baker C, Dunnivant J**, “How leaks in the Black engineering pipeline affects diversity in industry,” Blacks in Engineering, <http://coreyebaker.com/blog>, August 2014
- [B 3] **Baker C**, “Selecting a graduate school,” Road To PhD, <http://coreyebaker.com/blog>, May 2014
- [B 2] **Baker C**, “Inspiring our youth,” Mentoring Our Future, <http://coreyebaker.com/blog>, April 2014
- [B 1] **Baker C**, “Dissertation advice,” Road To PhD, <http://coreyebaker.com/blog>, April 2014

### ***Leadership Positions***

2022 - Present	Region Six (West Coast) Advisory Board Chairperson, National Society of Black Engineers
2015 - 2022	Region Six (West Coast) Finance Zone Advisor, National Society of Black Engineers
2016 - 2017	National Treasurer Emeritus, National Society of Black Engineers
2014 - 2015	Convention Planning Committee Finance Zone Advisor, National Society of Black Engineers
2014 - 2015	National Treasurer Emeritus, National Society of Black Engineers
2012 - 2014	National Treasurer, National Society of Black Engineers <ul style="list-style-type: none"> <li>• Administered operating budget of ~\$10M, additional ~\$10M in reserves, restructured and introduced financial sustainable models, reduced inefficient budgeting by ~\$115K, increased programmatic academic spending by 300% without increasing overall expenses</li> </ul>
2009 - 2010	Region Six (West Coast) Chairperson Emeritus & Parliamentarian, National Society of Black Engineers
2009 - 2010	Chapter Co-Advisor, CAMS NSBE Jr. National Society of Black Engineers
2008 - 2009	Region Six (West Coast) Chairperson, National Society of Black Engineers
2007 - 2008	Region Six (West Coast) Treasurer, National Society of Black Engineers
2007 - 2008	Chairperson, San Jose State University African American Commencement Committee
2006 - 2007	Chapter Pre College Initiative Chair, National Society of Black Engineers
2005 - 2008	Chapter Telecommunications Chair, National Society of Black Engineers
2004 - 2005	Chapter Senator and Historian, National Society of Black Engineers

## **SERVICE**

### ***Organizing Committees***

1. Student Travel Grant Chair, Organizing Committee, ACM International Workshop on Mobile Computing Systems And Applications (HotMobile), Austin, TX (2020)

### ***Technical Committees***

1. Member, Technical Program Committee, IEEE Conference on Pervasive Computing and Communications Conference (PERCOM), Atlanta, GA USA (2023)
2. Member, Technical Program Committee, IEEE Global Communications Conference (GLOBECOM), Rio de Janeiro, Brazil (2022)
3. Member, Technical Program Committee, IEEE International Conference on Computer Communications (INFOCOM), Virtual, (2021)
4. Member, Technical Program Committee, IEEE/IFIP Wireless On-demand Network systems and Services Conference (WONS), Virtual, (2021)
5. Member, Technical Program Committee, American Medical Informatics Association (AMIA) Annual Symposium, San Diego, CA, (2021)
6. Member, Technical Program Committee, IEEE International Conference on Computer Communications (INFOCOM), Dublin, Ireland (2020)
7. Member, Technical Program Committee, Symposium SAC Symposium Social Networking Track, IEEE International Conference on Communications (ICC), Kansas City, MO (2020)
8. Member, Technical Program Committee, IEEE Global Communications Conference (GLOBECOM), Taipei, Taiwan (2020)
9. Member, Technical Program Committee, IEEE/IFIP Wireless On-demand Network systems and Services Conference (WONS), Wengen, Switzerland (2019)
10. Member, Technical Program Committee, IEEE International Conference on Computer Communications (INFOCOM), Paris, France (2019)
11. Member, Technical Program Committee, Symposium SAC Symposium Social Networking Track, IEEE International Conference on Communications (ICC), Shanghai, China (2019)
12. Member, Technical Program Committee, IEEE Local Computer Networks (LCN), Chicago, IL USA (2018)
13. Member, Technical Program Committee, IFIP Wireless On-demand Network systems and Services Conference (WONS), Isola 2000, France (2018)

14. Member, Technical Program Committee, Symposium SAC Symposium Social Networking Track, IEEE International Conference on Communications (ICC), Kansas City, MO (2018)
15. Member, Technical Program Committee, ACM Embedded Wireless Systems and Networks (EWSN), Madrid, Spain (2018)
16. Member, Technical Program Committee, IEEE Local Computer Networks (LCN), Singapore (2017)
17. Member, Technical Program Committee, Symposium SAC Symposium Social Networking Track, IEEE International Conference on Communications (ICC), Paris, France (2017)

***Session Chair/Moderator***

1. Adhoc and Sensor Networks (AHSN2 Vehicular Networks I), IEEE Global Communications Conference (GLOBECOM), San Diego, CA (2015)
2. Security (I-1 Design and Next Generation Networks I), IEEE Global Communications Conference (GLOBECOM), San Diego, CA (2015)
3. Building Pathways that Promote Pursuit/Persistence in Engineering (M540), Minorities in Engineering Division, ASEE 122 Annual Conference & Exposition, Seattle, WA (2015)

***Proposal Review Panels***

1. NSF, 2022
2. NSF, 2022
3. NSF, 2021
4. Great Plains IDeA-CTR Pilot Program, 1/2020
5. NSF, 2020

***Reviewer for Conferences and Journals***

1. IEEE Wireless Communications Magazine (WCM 2017)
2. IEEE International Conference on Communications (ICC 2017), Paris, France
3. IEEE International Conference on Computer Communications (INFOCOM 2017), Atlanta, GA
4. IEEE International Conference on Computer Communications (INFOCOM 2014), Toronto, Canada
5. IEEE Global Communications Conference (GLOBECOM 2013), Atlanta, Georgia
6. IEEE Military Communications (MILCOM 2012), Orlando, FL

***University/Local Community***

2022 - Present	Member, Broadening Participation Committee, Department of Computer Science, University of Kentucky, Lexington, KY
2022 - Present	Member, Media Committee, Department of Computer Science, University of Kentucky, Lexington, KY
2021	Member, Selection Committee for Robley D. Evans Faculty Fellowship in Electrical Engineering, University of Kentucky, Lexington, KY
2020 - 2022	Advisory Board Member, NSF Louis Stokes Alliance for Minority Programs (LSAMP) Bridge to the Doctorate Fellowship, University of Kentucky, Lexington, KY
2020 - 2022	Member, Graduate Studies Committee, Department of Computer Science, University of Kentucky, Lexington, KY
2019 - 2022	Member, Committee on Fellowships & Traineeships, University, University of Kentucky, Lexington, KY
2019 - 2020	Chair, Diversity of Inclusion Subcommittee, College of Engineering, University of Kentucky, Lexington, KY
2019 - 2020	Member, Media Committee, Department of Computer Science, University of Kentucky, Lexington, KY
2018 - Present	Member, Graduate Diversity Advisory Council Committee, Graduate School, University of Kentucky, Lexington, KY
2018 - Present	Advisor, METRO CATS Computer Access to Succeed, City of Lexington & University of Kentucky, Lexington, KY
2018 - 2019	Member, Broadening Participation Committee, Department of Computer Science, University of Kentucky, Lexington, KY

***Memberships***

2018 - Present

Member, Association for Computing Machinery (ACM)

2017 - Present

Member, Institute of Electrical and Electronics Engineers (IEEE)

2009 - Present

Member, Kappa Alpha Psi Fraternity Inc.

2007 - 2008

Member, The Collegiate 100

2004 - 2008

Member, Society of Computer Engineers

2003 - Present

Member, National Society of Black Engineers (NSBE)