

Kenneth Clayton McKell

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Education

University of Hawai'i at Mānoa <i>Doctor of Philosophy in Electrical Engineering</i> – Title: Game Theoretic Communication Strategies over MIMO Interference Channels in the Presence of a Malicious Jammer – Advisor: Prof. Gürdal Arslan	Honolulu, HI 2018
University of California Los Angeles <i>Master of Science in Mechanical Engineering</i> – Advisor: Prof. Jeff Shamma	Los Angeles, CA 2007
University of California Los Angeles <i>Bachelor of Science Summa Cum Laude in Mechanical Engineering</i>	Los Angeles, CA 2006

Work Experience

California Polytechnic State University <i>Lecturer</i>	San Luis Obispo, CA <i>Sep. 2014 - Present</i>
Akamai Workforce Initiative <i>Educational Specialist</i>	Honolulu, HI <i>Jun. - Aug. 2014</i>

Honors and Awards

Cal Poly Northrop Grumman Excellence in Teaching Award	2019
Cal Poly Engineering Student Council Award for Outstanding Faculty	2019
Cal Poly Engineering Student Council Award for Outstanding Lecturer	2019
UH Mānoa College of Engineering Outstanding Teaching Assistant Award	2014
ARCS-Honolulu Kresser Award in Engineering	2010

Teaching Experience

An asterisk (*) denotes courses for which I am the departmental course coordinator. A WiFi symbol (📶) denotes that a course was taught remotely online.

Electric Circuit Analysis I Cal Poly EE 112	<i>Winter, Spring (4×), Fall (3×) 2015</i> <i>Fall (3×) 2014</i>
Electric Circuit Analysis I Cal Poly EE 113	<i>Spring (2×) 2023</i> <i>Spring 2022</i>
Electronics Manufacturing and Circuit Analysis Laboratory Cal Poly EE 143	<i>Spring (2×) 2023</i> <i>Spring (2×) 2022</i>

Electric Circuit Theory

Cal Poly EE 201

*Spring (2×), Fall (2×) 2016***Continuous Time Signals and Systems**

Cal Poly EE 228

*Spring 2023**Spring 2022**Spring (2×) ☞, Fall (2×) 2021**Spring ☞ 2020**Spring (2×), Fall (3×) 2019**Winter, Spring, Fall (2×) 2018**Spring (2×), Fall (3×) 2017**Winter, Fall (2×) 2016***Electric Circuit Analysis Laboratory II**

Cal Poly EE 241

*Winter 2023***Electric Circuits Laboratory**

Cal Poly EE 251

*Summer 2023***Classical Control Systems**

Cal Poly EE 302

*Winter 2023**Winter, Spring, Fall 2022**Winter ☞, Spring ☞ 2021**Winter (2×), Spring ☞ 2020**Winter (2×), Spring 2019**Winter, Spring (2×) 2018**Winter (3×), Spring 2017**Winter, Spring 2016**Winter, Spring 2015***Discrete Time Signals and Systems**

Cal Poly EE 328

*Fall (2×) ☞ 2020**Fall (2×) 2015***Classical Control Systems Laboratory**

Cal Poly EE 342

*Winter (2×) 2023**Winter (6×) 2022**Winter (3×) ☞, Spring ☞ 2021**Winter (4×), Spring (3×) ☞ 2020**Winter (4×), Spring 2019**Winter (4×), Spring (2×) 2018**Winter (3×), Spring (2×) 2017**Winter (4×), Spring (2×) 2016**Winter (5×), Spring (2×) 2015***Semiconductor Device Electronics Laboratory**

Cal Poly EE 346

*Fall 2015**Fall (4×) 2014***Signals and Systems Laboratory**

Cal Poly EE 368

*Fall (2×) 2021**Fall (3×) ☞ 2020**Fall (2×) 2018***Modern Communication Systems***

Cal Poly EE 415

*Fall 2021**Fall 2019**Fall 2017*

Digital Communications Systems*

Cal Poly EE 416

Fall 2022
Fall 📶 2020
Fall 2018
Fall (co-taught) 2016

Senior Project Design Lab I

Cal Poly EE 463

*Winter 2023***Senior Project Design Lab II**

Cal Poly EE 464

*Spring 2023***Advanced Topics in Automatic Control**

Cal Poly EE 514

*Spring 📶 2021***Advanced Digital Communications**

Cal Poly EE 526

Winter 2023
Winter 📶 2021

Research Experience**UH Mānoa Electrical Engineering Dept.***Graduate Assistant*

Honolulu, HI
Aug. 2007 - Jun. 2014

- Advisor: Prof. Gürdal Arslan
- Work on applying game theoretic methods to improve results for distributed network control
- Modeling complex systems and predicting outcomes using game theory

University of Colorado**Electrical, Computer and Energy Engineering Dept.***Visiting Researcher*

Boulder, CO
Jan. 2010 - May 2010

- Sponsor: Prof. Jason Marden
- Applied Shapley value analysis to the graph coloring problem
- Investigated the role of information locality in the efficiency of distributed motion coordination equilibria

California Institute of Technology Computer Science Dept.*Visiting Researcher*

Pasadena, CA
Aug. 2008

- Sponsor: Prof. Adam Wierman
- Investigated methods for determining efficiency of equilibria in Distributed Welfare Games

Peer-Reviewed Publications

K. C. McKell and G. Arslan, “On the Existence and Uniqueness of Nash Equilibria in MIMO Communication Games with a Jammer,” 10th International Conference on Network Games, Control and Optimization (NetGCoOp’20), 2021. doi: 10.1007/978-3-030-87473-5_1

K. C. McKell and A. Danowitz, “Exploring the Effect of Standards-Based Grading on Student Learning,” IEEE Frontiers in Education (FIE), 2020.

A. Danowitz, B. Benson, P. Hummel, J. Callenes, **K. C. McKell**, “In Depth Exploration of Added Course Expenses on Students of Various Socioeconomic Status,” IEEE Frontiers in Education (FIE), 2020.

A. Danowitz, **K. C. McKell**, B. Benson, J. Callenes, P. Hummel, and R. Randall, “Repurposing Retired Faculty Laptops to Make Engineering More Accessible,” in IEEE Frontiers in Education (FIE), 2019.

F. W. DePiero, B. Benson, and **K. C. McKell**, “Learner-centered Design of a Web-based Teaching Tool for Circuit Analysis with Embedded Assessment Features,” in ASEE Annual Conference, 2017.

F. W. DePiero, **K. C. McKell**, and B. Benson, “CATE: A Circuit Analysis Tool for Education,” in ASEE Annual Conference, 2016.

Professional Development

Introduction to Online Teaching and Learning. Online via Cal Poly CTLT, Aug. 2020.

Building Capacity Workshop. Institute for Scientist and Engineer Educators. Monterey, CA, Nov. 2015.

Professional Development Program. Institute for Scientist and Engineer Educators and Akamai Workforce Initiative. Hawaii, 2012.

Workshop: Rethinking Science and Engineering Learning and Teaching. Institute for Scientist and Engineer Educators. Pukalani, HI. Jan, 2009.

Professional Activities

Member of the Institute of Electrical and Electronics Engineers (IEEE)

Member of the American Society for Engineering Education (ASEE)

Professional Service

Referee, 2022 ASEE Annual Conference

Referee, IEEE Frontiers in Education Conference 2020

Referee, 10th International Conference on Network Games, Control and Optimization (NetGCoOp’20)

Referee, First Annual Collaborative Network for Engineering and Computing Diversity Conference (CoNECD)

Volunteer, 51st IEEE Conference on Decision and Control

Referee, 3rd IFAC Workshop on Distributed Estimation and Control in Networked Systems

Referee, 2011 International Conference on Network Games, Control and Optimization

Referee, 2011 International Conference on Social Computing, Behavior-Cultural Modeling & Prediction

Referee, 49th IEEE Conference on Decision and Control

Referee, 2009 IEEE International Conference on Communications

University Service

Lecturer Coordinator, Cal Poly Electrical Engineering Dept. 2021 - Present.

Member, Systems Technical Area Committee, Cal Poly Electrical Engineering Dept. 2014 - Present.

Masters Thesis Supervised

K. Schmutz, “A novel all wheel drive torque vectoring control system applied to four wheel independent drive electric motor vehicles utilizing super twisting and linear quadratic regulator methods,” 2018.

Senior Projects Supervised

An asterisk (*) indicates that a project received a departmental Outstanding Senior Project award.

- N. A. Maley, J. M. Heeren, A. Peña, “CubiCom: Noisy Office Environment Communication Device,” 2023.
- S. Roksic*, “Controller Area Network (CAN) Bus Simulator and Data-logger for In-Vehicle Infotainment Testing,” 2020.
- C. Aguirre, “Underwater Remotely Operated Vehicle Controller with PID Stability Regulation,” 2019.
- A. Bailey, “Remote Cable Gantry,” 2017.
- B. Michener and D. Tsuker, “Make Scents,” 2017.