

Tanja Karp

Education

Ph.D.	Electrical Engineering, Technical University Hamburg-Harburg, Germany	1997
M.S.	Electrical Engineering, Technical University Hamburg-Harburg, Germany	1993

Academic experience

Associate Professor, Texas Tech University, Department of Electrical and Computer Engineering, (2006 - present)

Texas Tech University – Costa Rica, Associate Professor and Engineering Programs Coordinator, 2019-2021

Core Fulbright Scholar, University of South Africa (2016 – present)

Faculty Development Leave (Sabbatical), Ecole Supérieure d'Electricité (SUPELEC), Laboratoire des Signaux et Systèmes, Gif-sur-Yvette, France (2007 - 2008)

Assistant Professor, Texas Tech University, Department of Electrical and Computer Engineering (2000 - 2006)

Visiting Professor, Institute for Computer Engineering, University of Mannheim, Germany (Summers 2001 - 2007)

Visiting Senior Researcher, School of Electrical, Computer, and Telecommunications Engineering, University of Wollongong, Australia (Summer 2001)

Post-Doctoral Research and Teaching Associate, Institute for Computer Engineering, University of Mannheim, Germany (1997 - 2000)

Guest Lecturer, University of Freiburg, Germany (1998 - 2000), part time

Research Scientist, Technical University Hamburg-Harburg, Germany (1993 - 1996)

Non-academic experience: none

Certifications or professional registrations: none

Current membership in professional organizations

Senior Member of IEEE, Member of Signal Processing Society, IEEE Communications Society, IEEE Information Theory Society, IEEE Education Society

Member of Society of Women Engineers (SWE), Namibia Scientific Society

Honors and awards

Texas Tech Teaching Academy Member (2011 – present)

Texas Tech Service Learning Mentor (2010 – present)

Texas Tech Service Learning Fellow (2009 – present)

INSIGHT Into Diversity - Inspiring Women in STEM Award (2015)

Texas Tech Chancellor's Council Distinguished Educator Award (2015)

Texas Tech President's Excellence in Teaching Award (2015)

Texas Tech Integrated Scholar (2014)

Texas Tech Whitacre College of Engineering Butler Distinguished Educator Fellow, Whitacre College of Engineering (2012-2014)

Scholarship recipient of Informal Science Education Association (ISEA) of Texas (2013)

Hewlett-Packard /Harriett B. Rigas Award, IEEE Education Society (2012)

Emerging Community Engagement Scholar(2012)

Honored Participant, 26th Annual Faculty Academic Contributions Exhibit, Seeds of Knowledge (F.A.C.E.) (2010)

Texas Tech Whitacre College of Engineering The Lockheed Martin Aeronautics Company Excellence in Engr. Teaching Award (2009)

Texas Tech Spencer Wells Creativity in Teaching Award, Texas Tech Parent Assoc. (2006)

Texas Tech College of Engineering George T. & Gladys Abell Hanger Faculty Teaching Award (2006)
Texas Tech College of Engineering The Lockheed Martin Aeronautics Company Excellence in Engr.
Teaching Award (2003)
Texas Tech Student Branch of the IEEE Outstanding Faculty Award (2002)

Service activities

University: Fulbright Student Scholarship Committee, Center for Active learning and Undergraduate Engagement (CALUE) Advisory Committee ; Texas Tech Costa Rica Engineering Programs Coordinator (2020-2021)

College: Teaching Awards Committee, Peer Teaching Evaluator

Department: Faculty Search Committee, ABET Committee, Undergraduate Curriculum Committee.

Professional: Reviewer for IEEE/EURASIP journals and conference

Mentoring: Organizer of Get Excited About Robotics (GEAR) competition for elementary schools, organizer of LEGO robotics field trips to Texas Tech University, judge at various robotics competitions, Society of Women Engineers (SWE) faculty advisor; Society of Women Engineers Exchange Program between Costa Rica and the US

Selected publications

T. Karp, R. Gale, M. Tan, and G. Burnham. Hosting a Pipeline of K-12 Robotics Competitions at a College of Engineering – A Review of Benefits and Challenges. International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship, Special Issue: University Engineering Programs That Impact Communities: Critical Analyses and Reflections, pp. 406–423, Fall 2014.

P. Maloney, L. Dent, and T. Karp. A New Method of Assessing the Effects of a Service-Learning Class on Engineering Undergraduate Students. International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship, Special Issue: Opportunities and Barriers to Integrating Service Learning into Engineering Education, pp. 29–47, Fall 2013.

T. Karp and P. Maloney. Exciting Young Students in Grades K-8 About STEM Through an Afterschool Robotics Challenge. American Journal of Engineering Education – Spring 2013 Special Edition, vol. 4, issue 1, pp. 39-54, 2013.

D. Nair, R. Gale, and T. Karp. Total Ionizing Dose Effects on Data Retention Capabilities of Battery-Backed CMOS SRAM. IEEE Transactions on Nuclear Science, issue 99, pp. 1-6, May 2013.

S. Lee, S. Ghanta, and T. Karp. Comparative Study of Retrospective Methods to Reduce Non-uniform Illumination Effects to Bridge coating. Automation in Construction, Elsevier, vol. 22, pp. 537-544, March 2012.

T. Karp, R. Gale, L. Lowe, V. Medina, E. Beutlich. Generation NXT: Building Young Engineers with LEGO's, IEEE Transactions on Education, Special Issue on Outreach to Prospective Electrical, Electronic, and Computer Engineering Students, vol. 53, issue 1, pp. 80-87, February 2010.

Professional development

Regular participant at TTU Teaching, Learning, and Professional Development Center (TLPDC) presentations, Service Learning Mentor and Fellow