TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Mark W. Welker

Title: Associate Professor of Practice

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PhD.	2026	Texas State University	Post Secondary Student Success in literacy and mathematics	A study of undergraduate students' usage of disciplinary literacy constructs when solving engineering problems
MBA	2011	Florida International University	Corporate Business Administration	
MSENG	2002	University of Texas at Austin	Electrical and Computer Engineering	Thesis: "Improving the Human Computer Interface, a replacement for the Keyboard and Mouse"

C. University Experience
Texas State Associate Professor of Practice Sept 2024 - Present
Texas State Lecturer Jan 2018 – Sept 2024

University of Texas at Austin Adjunct 2006 - 2008

D. Relevant Professional Experience

Flex international, Austin, TX (September 2015-April 2018), *Director, Performance and Analysis*
Dell, Inc., Round Rock, TX (2009-2015), *Director, Storage Applications and Solutions, Software Strategist, Android Software Architect*
Advanced Micro Devices, Austin, TX (1999-2009), *SMTS Client Analysis Manager*
Compaq Computer Corporation, Houston, TX (1990-1999) *SMTS Research & Development Manager*

E. Other Professional Credentials (licensure, certification, etc.)
10,031,916 Methods and Systems for virtualizing and managing cloud storage
10,013,228 System and Method for positioning an application window base…

9,779,089 Auto-Storing and synchronizing device content from an information handling system
9,619,299 Synchronization using device pairings with docking stations
9,524,139 Positioning an application window based on usage context for dual screen display device
9,224,133 Establishing interpersonal communication and system
6,686,913 Analog Conditioning circuitry or imagers for a display
6,570,546 Video Display Configuration Detector
6,525,733 Video Graphics Controller with High speed Line draw processor.
6,323,854 Multi-tile video display system with distributed CRTC.
6,308,248 Method and System for allocating memory space using mapping controller…..
6,300,945 Analog conditioning circuitry for imagers for a display.
6,076,139 Multi-media computer architecture with multi-channel concurrent memory access.
6,037,951 Video graphics controller with improved calculation capabilities.
5,892,929 Avoiding non-unique identifiers for bus devices.
5,416,897 Video graphics controller with selectable pattern features for line draws.
5,517,646 Expansion device configuration system having two configurations…
5,613,054 Video graphics controller with improved calculation capabilities.
5,613,053 Video graphics controller with automatic starting for line draws.
5,598,579 System for transferring data between two buses …
5,812,876 DMA controller, which can be controlled by Host and Local Processors.
US 20160125777 A1 Image Sticking Prevention Using an Information Handling System Webcam
US 20150348460 A1 Method and system for monitor brightness control using an ambient light sensor on a mobile device

US 20150373101 A1 Methods and systems for synchronizing data between two geographically disparate locations
US 20150373109 A1 Methods and systems for virtualizing and managing cloud storage sources
CA 2127369 Video graphics controller with improved pattern capabilities
5,978,858 Packet protocol and distributed burst engine
6,128,669 System having a bridge with distributed burst engine to decouple input/output task from a processor

II. TEACHING

A. Teaching Honors and Awards:

B. Courses Taught:

Texas State University:

EE 2420 - DIGITAL LOGIC

EE3320 - MICROPROCESSORS

EE 4321 - DIG SYS DES U HDL

EE 4352 - INTRO TO VLSI DES

EE4390 – SENIOR DESIGN 1

EE 4391 – SENIOR DESIGN 2

University of Texas At Austin:

EE319K – Introduction to Embedded Systems

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

D. Courses Prepared and Curriculum Development:
Texas State University:

EE4321 – Dig Sys Des U HDL
EE3420 – Microprocessors – Transition to RealDigital Blackboard
EE3320 – Microprocessors – Transition to NXP FRDM-MCXN947, Professional Development Environment

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

c. Edited Books: Introduction to Embedded Systems , ISBN: 978- 0495411376

IV. SERVICE

School - EE Senior Design Committee
EE Senior Design Funding and Policy Committee Lead
PhD RDI workshop Committee
IEEE RAS Advisor