

## **Dawn Ellis**

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### **Education:**

**Master of Science in Engineering** August 2010 emphasis in Computational Engineering, The University of Tennessee at Chattanooga, Chattanooga, TN.  
**Advisor:** Dr. Steve Karman

**Master of Science in Computer Science**, May 2003 emphasis in Internet Application Programming, The University of Tennessee at Chattanooga, Chattanooga, TN.  
**Advisor:** Dr. Stephanie Smullen

**Bachelor of Science in Computer Science**, December 2000, with major in Information Systems, The University of Tennessee at Chattanooga, Chattanooga, TN.  
**Advisor:** B.C. Day

**Associate of Science in Computer Science**, May 1997, with major in Information Systems, Dalton College, Dalton, GA.  
**Advisor:** Dr. James Head

### **Honors and Awards:**

Laverne Thompson Memorial Award, April, 2000  
IEEE Computer Society Service Award, April 2001  
IEEE Computer Society Service Award, April 2003  
Outstanding Computer Science Teacher, December 2004  
Outstanding Computer Science Teacher, December 2007

### **Professional Experience:**

August 2003 – Present

Instructor of Computer Science, University of Tennessee at Chattanooga, Chattanooga, TN. Served as coordinator of the freshman sequence “Introduction to Computer Science”. Course taught: Software Engineering, Advanced Data Structures, File Structures, Data Structures and Program Design, Wide Area Networks, Operating Systems. Participates in recruitment/retention activities. Serves on the Computer Science curriculum committee. Advises 25 students per semester. IEEE Computer Society Student Chapter mentor/advisor.

February 2003 – August 2005

Consultant, Law Offices of Richard Banks and Associates, Cleveland, TN. Design and development of a bankruptcy forms package with patented communications module.

August 2002 – May 2003

Graduate Teaching Assistant, Department of Computer Science, University of Tennessee at Chattanooga, Chattanooga, TN.  
CPSC 160, Data Structures and Program Design using Java (undergraduate)

March 2002 – August 2002

Instructor, Community Development, Chattanooga State Community College, Chattanooga, TN. Courses taught: Introduction to Windows (professional), Introduction to Microsoft Word (professional), Introduction to Microsoft Excel (professional), Intermediate Microsoft Excel (professional)

August 2001 – April 2002

Graduate Research Assistant, Department of Computer Science, University of Tennessee at Chattanooga, Chattanooga, TN. Using the open source software, FlightGear, as a starting point, I developed a space shuttle landing simulator for use at the UTC Challenger Center. This resulted in a paper referenced in #1 under publications.

January 2001 – May 2001

Graduate Assistant, Department of Computer Science, University of Tennessee at Chattanooga, Chattanooga, TN.

March 1995 – August 2002

Partner, D&M Auto Glass Specialists, Rock Spring, GA.  
Introduced a new company into the surrounding area by developing a customer base; negotiated with vendors to ensure the most competitive pricing.

### **Publications**

1. Joseph Dumas, Andrew Novobilski, Dawn Ellis, and Mark Paschal. “VR on a Budget: Developing a Flight Simulator in a Small Institution with Off-the-shelf Hardware and Open Source Software”, *Proceedings of the Sixteenth Annual CCSC Southeastern Conference*, 2002.
2. Dawn Ellis, “The Role of Technology in Academic Dishonesty”, *Proceedings of the 2003 Annual Conference of the Tennessee Academy of Science*.
3. Dawn Ellis, Steve Karman, Andrew Novobilski, Robert Haimen. “3D Visualization and Manipulation of Geometry and Surface Meshes”, *AIAA Aerospace Sciences Meeting and Exhibit*, January 2006, Reno, Nevada.
4. Dawn Ellis, Walter Savitch. *Java, An Introduction to Problem Solving & Programming, A Lab Manual*. Pearson, Prentice Hall, Upper Saddle River, NJ. Copyright ©2009.

### **Grants/Contracts**

1. Microsoft Robotics Initiative. Academic year 2005-2006. Received two ER1 Robots to be used in a robotics software engineering course.

2. Center of Excellence for Engineering Applications for \$25,000, for the duration of 2006. Steve Karman, Dawn Ellis. 3D Visualization and Manipulation of Geometry and Surface Meshes.
3. NASA/Langley #NNL07AA28C for \$700,674 for the duration 2007-2010. Steve Karman, Dawn Ellis. Geometry Manipulation and Visualization, Computational Simulation and Design.

### **Technical Development Skills:**

#### Programming Languages

C, C++, C#, Java, Objective-C, Cocoa-Touch, Visual Basic, Perl, PHP, Python, OpenGL, Assembly for the Intel processor, LISP, Pascal, SQL, COBOL, xHTML, XML, CSS.

#### User Interface Tools

Interface Builder, QT, GTK

#### HPC Programming Languages

MPI, OpenMP, POSIX threads using C/C++

#### Operating Environments

UNIX/Linux, Windows 3.1/95/NT/2000/XP/Vista/Windows 7, MS-DOS, Mac-OSX

#### Special Platforms

Matlab, CLIPS Rule-based System, ProEngineer, SolidWorks, CAPRI

### **Professional Societies and Activities**

Faculty Advisor, UTC Student Chapter IEEE Computer Society, 2007-Present

Chair, IEEE Computer Society, Chattanooga Chapter, 2004-Present.

Acting Branch Counselor, UTC Student Branch, IEEE Computer Society, 2003-2004.

Chair, UTC Student Branch, IEEE Computer Society, 2000-2001 and 2002-2003

#### Memberships:

Association of Computing Machinery

Institute of Electrical and Electronic Engineers

IEEE Computer Society

TN Academy of Sciences

Computer Science Teachers Association