

Teaching Interests

My main contribution to teaching has been in the following areas: Human Computer Interaction, Computer Graphics, virtual environments, wearable computing, complex systems, animation, visualization, and 3D Games. I plan to continue teaching graduate and undergraduate level courses in my area of expertise. In addition to teaching several courses in my area, I have taught courses in the area of analysis of algorithms, and introduction to C Programming. My teaching philosophy is to motivate my students so that they excel in my courses by taking initiative. I have developed nine courses resulting in a comprehensive program for both undergraduate and graduate study in my area of expertise since joining UCCS in 1987. I remain committed to looking for ways to improve my teaching as I continue to provide the highest quality of instruction I can, and to enhance the understanding of the subject material, and engage students with novel ideas and challenges. I have worked with, and continue to seek opportunities to work with District schools (K-12) for developing innovative project-based skills, crossover applications, and interdisciplinary interaction with other CU departments including TheatreWorks™.

The MS-CS (McGMI) program is one example of my efforts to form such interdisciplinary team efforts. I am the program coordinator of this new program started in 2007. This program now has about 8-10 students with two graduating every year. I am working with 14 MS students, and 4 PhD students. Such mentoring has been an important aspect of my teaching over the years graduating over seventy students as their thesis/project advisor. Many of my students have joined nationally and internationally recognized research institutions.

Courses Taught

Following is the list of courses taught by me over last five years:

- Introduction to Graphics (CS4800/5800);
- Advanced Computer Graphics (CS5810);
- Computational Geometry (CS5750);
- Animation and Visualization (CS5770);
- HCI and VR (CS6770).
- Wearable computing and complex systems (CS5790)
- 3D Games and Digital Contents Creation (CS5780).
- Design and Analysis of Algorithms (CS4720/5720).

- C Programming Language (CS 2060).
- All CS 7020 (GMI Portfolio).
- PhD, MS CS Thesis and Projects.

I introduced short media-presentations at the end of class covering relevant and current contents from conferences, technical papers, and technical discussions in my classes. Advanced graduate level courses require recent research to be presented from SigGraph, IEEE VR conferences, and many other sources, and all my lectures are continually updated as I bring new research materials to all my classes, and provide a balanced and choreographed view of the material in the class.

The GMI Lab supports term projects and MS and PhD theses. The GMI™ Lab started with an Intel donation \$50,000 (2002) when its name was changed from Graphics and VR Lab. Recently the GMI Lab acquired a projection system for small device such as phones. Other specialized equipment includes: Augmented Reality Eye-glasses, PHANToM force feedback device, magnetic motion tracker, 8 chamber aroma device, and several PCs.