

tunity to share experiences with colleagues from diverse teaching environments, while having access to a variety of software and textual materials. One participant later said that:

*I've made arrangements to introduce class demonstrations using a computer in my numerical analysis class (taught on television) this Fall. Our chair received the software from Arizona: we are discussing how best to use the **Are You Ready For...** programs. Next Spring I'll definitely teach an ODE class using **MDEP** for the computer experiments. My experience at the Workshop has reinforced our intentions to experiment with the use of graphing calculators in Calculus and Phaser in a course on Dynamical Systems this year.* □

Teaching ODEs With Computer Experiments

Cornell Workshop, June 1992
Anne Noonburg

The workshop was held at Cornell University from May 28 to June 3, 1992, and was run by Beverly West, John Hubbard, and Anne Noonburg. It brought together a diverse group of 35 participants, teachers from community colleges, small liberal arts colleges, as well as from large research universities. Their experience varied widely, from some who had never used computers in their teaching to a few who had already writ-

ten sophisticated differential equations software. In spite of this wide variation in background, these people worked extremely well together to produce some exciting new projects for teaching differential equations.

The conference schedule was planned to give the participants the opportunity to: find out what is already available for teaching differential equations with computer experiments; learn how to use the Macintosh platform, and the Cornell software, in particular (*Ed: MacMath 9.0*¹); discuss with the conference organizers and with each other how computers may change the teaching of differential equations; produce -- in small teams -- major projects to be used as computer experiments for their own classes, as well as to serve as ideas for other differential equations instructors not able to attend these conferences.

Several of the participants had backgrounds in scientific fields outside of mathematics, and this led to interesting cross-disciplinary discussions. John Hubbard gave three early morning lectures, and several participants commented that this was one of the best aspects of the conference. In their evaluations collected at the end of the conference, many people expressed the feeling that it was good to meet and exchange ideas with colleagues from across the country. As one participant put it:

For the first time, I was part of a group of teachers of differential equations who overwhelmingly believe in qualitative analysis and in serious efforts to have students understand what differential equations are about.

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