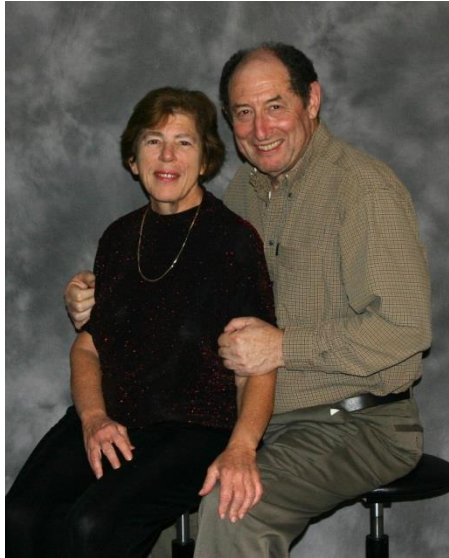


## Ray and Thelma Balbes Scholarship in Mathematics



Appropriately, they met at the pencil sharpener in the hall of the UCLA Math Building. A year and a half later (June 1962) they were married, Ray started graduate school at UCLA and Thelma went to work. Shortly afterwards they started a family. In 1966, Ray completed his Ph.D. in Lattice Theory and Boolean Algebras and accepted an Assistant Professorship at UMSL. Thelma completed her B.A. in mathematics at UMSL in 1968 and an M.A. at Washington U in 1970. For a time Thelma taught at UMSL, and with Cynthia Siegel developed a remedial math program. In the mid 70's Thelma went to work at Southwestern Bell, soon to become SBC. (As a side note, when AT&T was broken up, it was assumed that SBC was the least likely to succeed. But, as the world works, SBC was so successful that it eventually bought AT&T and changed its name to - what else - AT&T).

The next big change in our lives was when, in 1979, Ray bought an Apple II. Here was a "computer" that you didn't have to do any soldering for it to work. It had a keyboard, could use any TV as a monitor, and had two memory areas tied to the graphics screen. Although it had a resolution of 640x400 and only 4 colors, one could now write algorithms to do animation. By 1984, Ray had developed the first animation system for broadcast TV that worked on a PC.

Thelma and Ray retired in 2003 and moved to Southern California. Today Thelma is involved in the Parkinson's Disease community and Ray continues to develop graphics software. He is working on a video to be called "FractaLand".

### Gift

We have set up an endowment for the [Raymond and Thelma Balbes Scholarship in Mathematics](#) to show our support for UMSL Math Majors. We believe that along with the beauty of mathematics itself, it is a key ingredient for solving problems. From relativity to market research, to self-driving cars, if the mathematician can transform the problem into the language of mathematics, solve it there and then translate it back to the language of the original problem, the problem is solved. Ray was once told, by the company he was consulting with, that they liked math majors because "[they can solve problems](#)". Of course computers have changed the world. And at the heart of computing is not just writing software, but developing mathematical algorithms.