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Aimee M. Cloutier* (aimee.cloutier@ttu.edu) and **Jerry F. Dwyer**
(jerry.dwyer@ttu.edu). *Exploration of some dynamics of the iteration of the complex sine function.*

The complex sine function is iterated using Newton's method. The generated fractal images display vertical strips of width π centered at the roots, $n\pi$. Further observation of the images reveals nontrivial dynamics about the boundaries of the basin of attraction of each root. The fractal properties at these boundaries, located at $((2n+1)\pi)/2$, are displayed. The fixed points are classified as attracting or repelling. Some bounds are proven for the basins of attraction of the fixed points. Several symmetries are verified around the x and y axes as well as symmetry about the roots and fractal boundaries. These properties are compared to those obtained through iteration of other common trigonometric functions. (Received September 22, 2015)