The term "numerical linear algebra" explains itself; it is the study of numerical methods that use linear algebra. Hence, a foundation in linear algebra is strongly recommended, but not required, for understanding the contents of this interactive book. I review ideas from linear algebra that are used in this material, but I omit their derivations for brevity.

Why visual and interactive?

Most of the inspiration is derived from "Visual Complex Analysis," an influential mathematics book that easily presents complex ideas through visualization.

*More likely than not, when one opens a random modern mathematics text on a random subject, one is confronted by abstract symbolic reasoning that is divorced from one's sensory experience of the world,* despite *the fact that the very phenomena one is studying were often discovered by appealing to geometric (and perhaps physical) intuition.*

(Needham, 1997)

Numerical linear algebra in particular lends itself easily to visualization; if many linear algebra texts are visual, it should then follow that algorithms based on such ideas can also be visualized.

To use this medium to its full potential, I add interactivity to the graphics. I believe that it breathes life into my work.