

## **Geometric Expression: Tools for Visual Mathematics**

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I have been fascinated with the means of generating mathematical imagery for over two decades. Tools for making mathematical images and outputs must balance accuracy, aesthetics and ease of use, as well as the intended audience. The images produced may be primarily vehicles for communicating ideas, or they may be an essential part of the mathematical reasoning and process. In this talk I offer a personal perspective on different methods of creating geometric illustrations ranging from hand drawn diagrams and physical embodiments to a wide range of computer-generated techniques. I will discuss the impact of these methods on my work, and some ideas about what these methods offer the practice of mathematics more broadly. I will also consider what mathematicians might learn from architects when producing mathematical imagery.