

“Making Light of Mathematics”

A strongly visual presentation, describing many ‘mathematical phenomena’ that find application and sometimes spectacular physical illustration in the physics of light. Concepts such as fractals, catastrophe theory, knots, infinity, zero, and even when $1+1$ fails to equal 2, are needed to understand rainbows, twinkling starlight, sparkling seas, oriental magic mirrors, and simple observations on interference, polarization and focusing. The lecture is nontechnical but intellectual.