

# PUBLIC LECTURE



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## **The Physics of Light in Eighty Pictures**

*Classical optics is an ancient subject. But only now have we discovered a library of 'elementary forms', that describe light in our everyday world. Rainbows, twinkling stars, sunlight sparkling on water, and the dancing lines of light on the bottoms of swimming-pools, can be understood in a unified way using modern geometry. On fine scales, where wave interference must be considered, different geometry describes the secret lines of light's darkness, and the fingerprints of polarisation in the blue sky - invisible to us but perceived by bees. Poets and novelists, as well as painters, have sometimes represented optical phenomena in ways surprisingly close to those of physicists. The talk is nontechnical and entirely visual.*