Geometrically, zeroes of a gaussian analytic function are intersection points of an analytic curve in a Hilbert space with a randomly chosen hyperplane. Mathematical physics provides another interpretation as a gas of interacting particles. In the last decade, these interpretations influenced the progress in understanding statistical patterns in the zeroes of gaussian analytic functions, and led to discovery of models with a remarkably unique invariance of the zero distribution. We shall discuss some of recent results in this area.