

## **Analysis on singular spaces**

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Many different classes of 'singular spaces' arise in Mathematics, including quotient spaces, algebraic varieties, moduli spaces and (the compactifications of) non-compact spaces. In this talk I will describe a strategy, essentially the resolution strategy from algebraic geometry, intended to allow analysis to be performed on a large subclass of these spaces, more or less as it has been carried out on smooth compact manifolds. Together with some of the successes, I will try to indicate the limitations and my current expectations of these methods. I will place particular emphasis on the signature operator.