Elliptic operators on compact manifolds with simple strata

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Abstract: I’ll give an overview of results concerning several aspects of the analysis of elliptic operators on compact stratified manifolds with a single stratum. In the realm of conical singularities I’ll discuss the general asymptotics of the resolvent of an elliptic operator assuming only existence of rays of minimal for the principal symbols, and recent results on the nature of domains of elliptic complexes. In connection with boundary value problems for higher dimensional strata, I’ll describe the bundle of traces (the bundle of Cauchy data), some aspects of the analysis on these, and a result on the domain of the Friedrichs extension (from its minimal domain) of an elliptic semi-bounded second order operator. The results to be presented were obtained in collaboration with Juan Gil or Thomas Krainer or both.