

RESOLVENT OPERATORS ON COMPLETE GEODESIC SPACES AND THEIR PROPERTIES

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To analyze the properties of convex functions, the resolvent operator is one of the most crucial tools in nonlinear analysis. We can apply it to various approximation methods to a minimizer of the function, related to convergence results to a fixed point of nonlinear operators.

This talk considers convex functions defined on complete geodesic spaces with curvature bounded above. There are several different types of resolvents according to the geometric structures of the underlying space. We survey their properties and apply them to some convergence theorems to a solution of convex minimization problems.

Moreover, we know that it is possible to define a resolvent operator for a bifunction of an equilibrium problem. We also discuss this topic and recent developments.

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