Abstract

About 30 years ago, Gromov initiated the study of the fill-in problem. In recent years, he has posed several questions and conjectures regarding extension and fill-in problems involving scalar curvature. In this talk, I will first discuss some results related to these scalar curvature problems, based on joint work with Prof. Yuguang Shi and Guodong Wei. Then, I will present some recent results on the extension problem under conditions of positive Ricci curvature or negative sectional curvature, based on joint work with Jintian Zhu.