

论文

THE IRREGULAR OBLIQUE DERIVATIVE PROBLEM FOR NONLINEAR ELLIPTIC SYSTEMS OF SECOND ORDER

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摘要 This paper deals with the irregular oblique derivative boundary value problem for nonlinear elliptic systems of second order equations in multiply connected domains. Firstly the well-posedness of the irregular oblique derivative problem and an a priori estimate of solutions for the modified boundary value problem are given, afterwards the existence of solutions for the modified boundary value problem is proved by using the above estimates of solutions and the Schauder fixed-point theorem. Finally the solvability conditions of the original boundary value problem can be derived.

关键词 [Irregular oblique derivative problem, elliptic systems of second order, multiply connected domains](#)

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Abstract This paper deals with the irregular oblique derivative boundary value problem for nonlinear elliptic systems of second order equations in multiply connected domains. Firstly the well-posedness of the irregular oblique derivative problem and an a priori estimate of solutions for the modified boundary value problem are given, afterwards the existence of solutions for the modified boundary value problem is proved by using the above estimates of solutions and the Schauder fixed-point theorem. Finally the solvability conditions of the original boundary value problem can be derived.

Key words [Irregular oblique derivative problem](#) [elliptic systems of second order](#) [multiply connected domains](#)

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