Lagrange duality and saddle point optimality conditions for multiobjective semi-infinite mathematical programming problems with equilibrium constraints

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Abstract: This paper is planned to examine multiobjective semi-infinite programming problems with equilibrium constraints (MSIPEC). We firstly formulate both scalar Lagrange dual problems and vector Lagrange dual problems for MSIPEC and explore duality relations under convexity assumptions. Then, the saddle point optimality conditions for MSIPEC are considered. Some examples are also proposed to illustrate the main results.

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