MATHEMATICAL PROGRAMS WITH EQUILIBRIUM CONSTRAINTS: A REVIEW

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A mathematical program with equilibrium constraints (MPEC) is an optimisation problem that includes variables, which satisfy an optimality or equilibrium condition, typically modelled via a parametric variational inequality or complementarity problem. We will present an overview of the state-of-the art in equilibrium-constrained programming, focussing on local optimisation of MPECs with nonlinear data functions. The talk will cover illustrative applications, optimality conditions, and will give an overview of numerical approaches.