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Stability of elliptic systems of PDEs

I will discuss the question of stability (and instability) of systems of elliptic PDEs on compact Riemannian manifolds of the form

$$\Delta_g U + AU = |U|^{2^*-2} U,$$

where $2^* = \frac{2n}{n-2}$, $U : M \mapsto \mathbb{R}^p$ and A is a symmetric $p \times p$ matrix, under small perturbations of this interaction matrix A . The aim is to recover the effects of the conformal almost-invariance of the lines of the system (which already appear in the study of the stability of one single equation) and to discover the effects of the interaction matrix A .