Hilbert's 16th problem in regularized PWS systems

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The main goal of this talk is to give a simple criterion (in terms of zeros of slow divergence integral) for the existence of sliding limit cycles in linearly regularized PWS visible-invisible two-folds. As a consequence of this criterion, we can find a PWS quadratic system such that for any k>0 the linear regularization has at least k limit cycles, for a suitable monotone transition function. This is related to Hilbert's 16th problem.