Evans function, parity and nonautonomous bifurcation

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We provide an approachable and yet flexible sufficient condition for the bifurcation of bounded entire solutions to nonautonomous ordinary differential equations. This requires to relate the parity, which is a crucial tool in the abstract bifurcation theory of nonlinear Fredholm operators to the Evans function, an established concept for the stability analysis of traveling waves to evolutionary differential equations.

Our approach covers both single and multiparameter problems. Based on topological methods, in the latter case we additionally obtain information concerning the Lebesgue covering dimension of the parameter set yielding bifurcations.

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