Forcing results for travelling waves in a cylinder through CAPs for equilibria

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Travelling waves form a prominent feature in the dynamics of scalar reaction-diffusion equations on unbounded cylinders. A topological invariant, based on a Floer homology construction, gives insight into the structure of the solutions of the reaction-diffusion equations. It encodes relations between connecting orbits on the one hand and equilibria, enhanced with (relative) index information, on the other. This leads to forcing theorems for travelling wave solutions. These theorems can be made effective by finding equilibria and their indices through computer-assisted proofs.