

*Ninth Workshop Dynamical Systems Applied
to Biology and Natural Sciences DSABNS 2018
Turin, Italy, February 7-9, 2018*

STATIONARY FRONTS IN COMPETITION-DIFFUSION MODELS

Merlin Christopher Köhnke* and Horst Malchow

Institute of Environmental Systems Research,
School of Mathematics/Computer Science, Osnabrück University

merlin.koehnke@uos.de (*corresponding author), malchow@uos.de

The spatio-temporal intra- and interspecific competition of two diffusing similar populations is considered. The growth of both populations is either logistic or shows an Allee effect. Local steady state solutions are identified. Conditions of spatial segregation without mixing are investigated. Furthermore, the impact of environmental noise is studied. The obtained results are associated with a biological case study related to the competition of weeds.