

Positive solutions of some parabolic system with cross-diffusion and nonlocal initial conditions

[Christoph Walker](#)

(Submitted on 15 Nov 2010)

The paper is concerned with a system consisting of two coupled nonlinear parabolic equations with a cross-diffusion term, where the solutions at positive times define the initial states. The equations arise as steady state equations of an age-structured predator-prey system with spatial dispersion. Based on unilateral global bifurcation methods for Fredholm operators and on maximal regularity for parabolic equations, global bifurcation of positive solutions is derived.

Subjects: **Analysis of PDEs (math.AP)**

Cite as: [arXiv:1011.3334v1](#) [math.AP]

Submission history

From: Christoph Walker [[view email](#)]

[v1] Mon, 15 Nov 2010 10:34:55 GMT (22kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

math.AP

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1011](#)

Change to browse by:

[math](#)

References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

