



*“Gheorghe Asachi” Technical University of Iasi, Romania*



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## **THE ALGAE BLOOMS PHENOMENON - A MATHEMATICAL MODEL**

**Laura Ungureanu\*, Laura Ștefănescu**

*“Spiru Haret” University, 4 Brazda lui Novac Street, 200690, Craiova, Romania*

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### **Abstract**

Pollution with sources from towns and industrial centres affect considerable the ecosystem waters. An accumulation of nutrients favourable to the growth of certain tiny marine organisms called phytoplankton stimulates their rapid reproduction in the water. These plankton blooms appear as patches on the surface of the water. The consequence of this process is the diminishing of the amount of oxygen from water (in the process of decompose the algae), the decease of aquatic animal and the multiply of bacterium, which produce the hydrogen sulphide. In this paper this phenomenon was analyzed using mathematical modelling. It is assumed that the dynamics of the algae blooms is governed by a Cauchy problem for system of two nonlinear ordinary equations with three parameters. The bifurcation diagram for the liniarized case is studied.

*Key words:* dynamic system, evolution, model, T pollution

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\* Author to whom all correspondence should be addressed: e-mail: [ungureanu@lycos.com](mailto:ungureanu@lycos.com)