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<b>Computer-aided modeling with <i>Mathematica</i>: modeling the fight of species for territory with cellular automata</b>	
<p>Simulation is the only effective tool for the study of several problems in biomedical modeling. Hence, computing and visualization tools became unavoidable. There are several – either general or special - computer software programs available designed for different kind of problems, such as Mathematica, Maple, Matlab, Modelica, Anylogic, etc.</p> <p>In our talk, we consider stochastic cellular automata as tools in ecological research. After a short introduction to cellular automata, we briefly study the spatio-temporal development of some single species territory-based models. Then we consider competition of several species fighting for territory. We can find simulations can give us a lot of information on special properties such as aggregation, diffusion, role of neighbors in colonization of empty cells or extinction of the species from a cell.</p>	