ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

20. Special Activities of the ICM 1998

1991 MS Classification: 68

Maddocks, John, Paffenroth, Randy, EPF Lausanne, Switzerland

VBM Visualization of Bifurcation Manifolds and Modelling DNA mini-circles

The solution sets of many parameter dependent problems can be represented as bifurcation diagrams, i. e. piece-wise smooth manifolds with local dimension equal to the number of parameters. This talk will describe a 3D graphics and steered-computation package called VBM (Visualization for Bifurcation Manifolds) that allows an interactive exploration and computation of various projections of bifurcation diagrams into four dimensional space. The software will be demonstrated in the context of an application involving models of short DNA molecules.