Amoebae in Motion and Optimal Vesicle Shapes: Shape Deformations under Global Constraints

Alfred Bruckstein
Computer Science Department, The Technion, Israel

The issue of shape deformations under multiple global constraints received relatively little attention in the literature. An amoeba moves around, with relatively minor variations in volume and surface area, and vesicles in a cell flow toward optimal shapes in the sense of minimizing some integral curvature constrains while keeping their surface and volume nearly the same. In this talk I shall describe some recent work we have done on such issues, with Y. Goldin and J.M. Delosme.