ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

9. Ordinary Differential Equations and Dynamical Systems

1991 MS Classification: 39, 51, 70, 93
Boese, F. G., Max-Planck-Institut, Garching, Germany
Unilluminable Rooms
Imagine you are in a lit room whose walls, floor and ceiling are completely covered with mirrors – and you cannot see yourself. Such a room and your standpoint in it are called *unilluminable*. In the planar case, formulated in terms of billiards, one has to do with a pool shot which never returns to the starting point. A class of polygonal tables is presented which have such points. The long problem history is briefly sketched. The results were obtained jointly with G. Tokarsky, Edmonton, Canada.
Reference: G. W. Tokarsky, Polygonal rooms not illuminable from every point, *Amer. Math. Monthly* **102** (1995), 867-879.