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Darboux curves on surfaces

In 1872, Gaston Darboux defined a family of curves on surfaces in the 3-dimensional Euclidean space \mathbb{R}^3 which are preserved by the action of the Möbius group and share many properties with geodesics. In this talk the Darboux curves will be considered under a dynamical viewpoint and described globally in special canal surfaces, quadrics and some Darboux cyclides. It will be based, mainly on the paper by R. Garcia; R. Langevin; P. Walczak, Darboux curves on surfaces II. Bull. Braz. Math. Soc. (N.S.) 47 (2016). Some open problems will be posed.