1053-53-254 **Stéphane Sabourau*** (sabourau@lmpt.univ-tours.fr), LMPT, Université de Tours, Parc de Grandmont, 37200 Tours, France. *Curvature-free inequalities on surfaces and the minimax principle on the one-cycle space.*

The existence of a closed geodesic on every Riemannian two-sphere can be obtained using a minimax principle on the loop space. This principle extends to the one-cycle space of every surface and yields a closed geodesic in this case too. We will present various curvature-free relationships between the length of this closed geodesic and the area or the diameter of closed Riemannian surfaces. (Received September 07, 2009)