1116-37-1797 **Chris Cox*** (ccox@math.wustl.edu) and **Renato Feres**. *No-slip Billiards in Dimension Two.*

In no-slip billiards the specular reflections of standard billiards are replaced by conservative collisions which nonetheless allow an exchange between linear and angular momentum. This interchange may result in bounded orbits and provides a new mechanism for periodicity, distinct from the purely geometric periodicity of standard billiards. We extend boundedness results and characterize periodic orbits for the wedge and circle. Additionally, we consider the intricately patterned phase portraits and what they suggest about ergodicity. (Received September 21, 2015)