Wecken property and boundary preserving coincidences

Michael Kelly

Loyola University New Orleans

`kelly@loyno.edu`

A result of B. Jiang divides all surfaces into two groups depending on the realizability of the Nielsen number. A surface is said to be Wecken if each homotopy class of self-maps has a representative which realizes the Nielsen number. It turns out that all non-Wecken surfaces admit a sequence of maps for which the difference tends to infinity. The setting of boundary preserving self-maps has a relative Nielsen number. The analogous problem was then studied in a series of papers by B. Brown, B Sanderson and M. Kelly, resulting in a slightly different classification. Here, there are two non-Wecken surfaces for which the difference remains bounded.

This talk considers this same problem, but now in the setting of coincidences for a pair of maps using the corresponding Nielsen numbers for coincidence. The results obtained are joint work with Leticia Silva and Joao Vieira (UNESP-Rio Claro, Brasil). We focus on the boundary preserving case and as a result produce a class of pairs of bounded surfaces which satisfy the Wecken property.