

1035-57-1417

Emille K. Davie* (davie@math.ucsb.edu), Department of Mathematics, University of California, Santa Barbara, 6607 South Hall, Santa Barbara, CA 93106-3080. *Characterizing Right-Veering Surface Homeomorphisms using the Burau Representation.*

Let S be a compact, oriented surface with nonempty boundary, and let $\text{Mod}(S, \partial S)$ denote the (relative) mapping class group of S . By recent work of Honda-Kazez-Matic, a contact structure (M, ξ) is tight if and only if all of its open-book decompositions are such that $h \in \text{Veer}(S, \partial S) \subset \text{Mod}(S, \partial S)$, the monoid of *right-veering* diffeomorphisms of S . I will start by defining $\text{Veer}(S, \partial S)$ and describing the Burau representation of the braid group, B_n . I will also give a report on results characterizing $\text{Veer}(S, \partial S)$ when S is a surface of genus equal to one with one boundary component via the Burau representation of B_3 . (Received September 19, 2007)