1023-57-1050 **Emille K. Davie*** (davie@math.uga.edu). *Right-Veering Diffeomorphisms of Bordered Surfaces and the Burau Representation of B_3.*

Let S be a compact, orientable surface with nonempty boundary, and let $Mod(S, \partial S)$ denote the group of isotopy classes of orientation preserving diffeomorphisms of S which restrict to the identity on the boundary of S. It is a well-known result of Giroux that given a class $h \in Mod(S, \partial S)$, there is a one-to-one correspondence between equivalence classes of open-book decompositions (S, h) of a 3-manifold M and isotopy classes of contact structures (M, ξ). 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 $h \in Veer(S, \partial S)$, the submonoid of $right-veering$ diffeomorphisms. I will start by defining $Veer(S, \partial S)$ and by giving criteria for an element of $Mod(S, \partial S)$ to be right-veering based on its fractional Dehn twist coefficent. I will also give a preliminary report on results related to characterizing $Veer(S, \partial S)$ when S is a surface of genus equal to one with one boundary component via the (reduced) Burau representation of B_3, as well as motivate future work in this relatively new field of study. (Received September 24, 2006)