1099-53-48 **Christina Wiis Tonnesen-Friedman*** (`tonnesec@union.edu`), Department of Mathematics, Union College, Schenectady, NY 12308. *Sasaki join, admissible constructions and constant scalar curvature Sasaki metrics.* Preliminary report.

My talk is based on joint work in progress with Charles Boyer. Combining the Sasaki join construction for quasi-regular contact structures with the transverse admissible Kähler constructions (established by the joint work with Vestislav Apostolov, David Calderbank, and Paul Gauduchon) we have obtained irregular as well as quasi-regular constant scalar curvature (CSC) Sasaki metrics on a large family of manifolds in all dimensions. More specifically, we will show that for the join of a weighted 3-sphere with a regular CSC Sasaki manifold there exists a Reeb vector field in the Sasaki cone such that (up to isotopy) the corresponding ray of Sasakian structures has CSC. We will also consider some special examples, where more information can be obtained on the homotopy, homeomorphism, and diffeomorphism types. (Received January 16, 2014)