1147-57-135   **Yi-Jen Lee*** (`yjlee@ims.cuhk.edu.hk`). *Holomorphic curves and Seiberg-Witten invariants for 4-dimensional cobordisms.*

We will discuss a variant of SW $\to$ Gr theorem in the context of a 4-manifold with cylindrical ends, equipped with a nontrivial harmonic 2-form. This harmonic 2-form is allowed to be asymptotic to 0 on some (but not all) of its ends, and may have nondegenerate zeros along 1-submanifolds. Corollaries include various positivity results; some simple special cases of these constitute a key ingredient in the proof of HM = HF. The aforementioned general theorem is motivated by (potential) extensions of the HM = HF and the HM = PFH theorems. This research is partially supported by RGC grant GRF-14316516. (Received January 01, 2019)