

---

**EUGENE POLETSKY**, Syracuse University

*Filling holes in Riemann domains*

Let  $W$  be a domain in a complex manifold  $M$  and let  $S(W, M)$  is the space of all analytic disks in  $M$  whose boundary lies in  $W$ . We say that  $W$  has a dent if there is  $f \in S(W, M)$  that does not lie in  $W$  but can be contracted in  $S(W, M)$  to a point. B. Jorricke showed that when  $M$  is Stein the dents can be filled and the result is the envelope of holomorphy of  $W$  which has no dents by its definition.

We say that  $W$  has a hole if there is  $f \in S(W, M)$  that does not lie in  $W$  and cannot be contracted in  $S(W, M)$  to a point. In our talk we will discuss how to fill holes and (sub)extend (plurisubharmonic) and holomorphic functions to the fillings.

This is a joint work with D. Dharmasena and F. Larusson.