Northern California
Symplectic Geometry Seminar
BERKELEY – DAVIS – SANTA CRUZ – STANFORD

MONDAY, NOVEMBER 3, 2008
BERKELEY, 736 Evans Hall

2:30–3:30
Richard Melrose (MIT, Chancellor’s Professor UCB/MSRI)
Morse points and quantization

3:30–4:00
Tea break in 1015 Evans Hall

4:15–5:15
Joel Fish (Stanford)
Target-local Gromov-compactness and degenerating connected sums in symplectic field theory

A pseudo-holomorphic curve in a compact symplectic manifold is often regarded as a special type of harmonic map. Consequently, the various versions of Gromov-compactness require curves to have bounded topology and to map boundaries to prescribed Lagrangian sub-manifolds. In this talk, we regard pseudo-holomorphic curves as a special class of minimal surfaces, and we prove a Gromov-type compactness theorem for curves with bounded area and genus (but not necessarily bounded topology) which map their boundary to the boundary of a symplectic manifold. As applications of this local result, we build up a compactness theorem in a family of symplectic manifolds which lack a uniform energy threshold, and we also prove an SFT-type compactness theorem in the connected sum of contact manifolds in which the connecting handle degenerates to a point.

Please contact alanw@math.berkeley.edu to arrange parking.
There will be a dinner at 6pm.

—Y. Eliashberg
D. Fuchs
V. Ginzburg
E. Ionel
R. Montgomery
A. Weinstein