

# Northern California Symplectic Geometry Seminar

BERKELEY – DAVIS – SANTA CRUZ – STANFORD

Monday, April 14, at **Stanford**

2:30–3:30, room 383N, **Sam Lisi (Stanford)**

## “Energy quantization for bubbling-off of generalized pseudoholomorphic curves”

**Abstract:** For any choice of contact form, tight  $S^3$  admits a finite energy foliation by pseudoholomorphic punctured spheres, whose projections to  $S^3$  are transverse to the Reeb vector field. This has many dynamical consequences for the Reeb flow. In order to obtain such a finite energy foliation by curves with genus, it is necessary to modify the pseudoholomorphic curve equation by introducing a harmonic form. The resulting equation gives a nice Fredholm problem, but requires a new compactness theory. We will see some examples of the ways in which these curves behave differently from pseudoholomorphic curves. We will show an energy threshold result, a first step towards a description of the compactness properties of these curves.

This is joint work with Casim Abbas and Helmut Hofer.

3:30–4:00 — Tea Break, 2nd floor lounge

4:00–5:00, room 383N, **Henrique Bursztyn (IMPA)**

## “Reduction in generalized complex geometry”

**Abstract:** Generalized complex structures, introduced by Hitchin in 2003, interpolate between symplectic and complex structures. In this talk, I will discuss a reduction procedure for these geometrical structures unifying symplectic/Hamiltonian reduction and holomorphic quotients. In general, this reduction procedure presents new features that will be illustrated in examples (e.g., the generalized reduction of a symplectic structure can be complex, and 3-form twists can appear in the quotient).

If time permits, I will also discuss generalized Kahler reduction, as well as a super-geometric viewpoint to generalized reduction.

Please contact [ionel@math.stanford.edu](mailto:ionel@math.stanford.edu) to arrange parking.

There will be a dinner at 6pm.

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