

# New York Area Symplectic Seminar

*at Columbia University*

**Friday, February 28, 2008**  
**Math Bldg, Rm 507**

**1:00pm** Dusa McDuff (Stony Brook/Barnard)

*Symplectic Embeddings of 4-dimensional Ellipsoids and Farey Numbers*

**2:15pm** Ko Honda (USC)

*Contact Structures, Heegaard Floer Homology and Triangulated Categories*

**Abstract:** The goal of this talk is to associate a category  $\mathcal{C}(\Sigma)$  to a surface  $\Sigma$ , called the contact category and constructed from contact structures on  $\Sigma \times [0, 1]$ . The category  $\mathcal{C}(\Sigma)$  satisfies many of the axioms of a triangulated category, and, in particular, has distinguished triangles which we call the *bypass exact triangles*. We then describe an "exact" functor from  $\mathcal{C}(\Sigma)$  to the category of vector spaces, via Heegaard/sutured Floer homology.