Professor Yan Soibelman will be teaching MATH 991, Non-archimedean geometry and mirror symmetry, in the fall semester of 2005. The book for the course is: Fresnel and van der Put, Rigid analytic geometry and its applications.

Along with standard theorems, the course will include:

1) Introduction to rigid analytic geometry

2) Manifolds with integral affine structures: integrable systems

3) Manifolds with integral affine structure: non-archimedean Calabi-Yau manifolds

4) Comparison of 2) and 3)

5) Reconstruction of non-archimedean Calabi-Yau manifold from a manifold with integral affine structure

6) Application to mirror symmetry: metric version of the Strominger-Yau-Zaslow conjecture and Homological Mirror Symmetry.

Prerequisites for the course are: basic notions of algebra (groups, rings, algebras, etc. and geometry: manifolds). Details about the course, please see Professor Soibelman.