1019-81-59	**Anton Kapustin*** (`kapustin@theory.caltech.edu`), 1200 E. California Blvd., Pasadena, CA 91125. *Geometric Langlands duality, gauge theory, and mirror symmetry.*

I outline a physical explanation of the geometric Langlands program. It involves Montonen-Olive duality of four-dimensional super-Yang-Mills theory and homological mirror symmetry. The talk is based on a joint paper with Edward Witten. (Received August 03, 2006)