Mirror Symmetry Mario Garcia Fernandez Abstract

This course will build on most of the other courses dispensed in this school to present the main ideas involved in the mirror symmetry conjecture. This predicts that three-dimensional Calabi-Yau manifolds ought to fall into pairs (X, Y) such that the complex structures on X (as they are captured by the Kuranishi family consisting in the small deformations of X) correspond, via a local biholomorphism called the mirror map, to the Kähler structures on Y (parametrised by the complexified Kähler cone of Y).