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**Y.P. Lee, Nathan Priddis and Mark Shoemaker\*** ([markshoe@math.utah.edu](mailto:markshoe@math.utah.edu)). *A proof of the Landau-Ginzburg/Calabi-Yau correspondence via the crepant resolution conjecture.*

Let  $W$  be a homogeneous degree-five polynomial in five variables. We may view  $W$  as defining a quintic hypersurface in  $\mathbb{P}^4$  or, alternatively, as defining a singularity in  $[\mathbb{C}^5/\mathbb{Z}_5]$ , where the group action is diagonal. In the first case, one may consider the Gromov-Witten invariants of  $\{W = 0\}$ . In the second case one considers the FJRW invariants of the singularity. The LG/CY correspondence conjectures a relationship between these two sets of invariants. In this talk I will explain this correspondence, and its relation to a much older conjecture, the crepant resolution conjecture. We prove that the crepant resolution conjecture in fact implies the LG/CY correspondence in many cases using a generalization of the “quantum Serre-duality” of Coates-Givental. (Received August 25, 2014)