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Manuel L. Reyes* (reyes@bowdoin.edu), Department of Mathematics, Bowdoin College, Brunswick, ME 04011-8486, and **Daniel Rogalski** and **James J. Zhang**. *Skew Calabi-Yau triangulated categories and Frobenius Ext-algebras*.

Modules over a graded Calabi-Yau algebra enjoy a kind of Serre duality, which has famously been encoded in the axioms of a Calabi-Yau triangulated category. Skew (or “twisted”) Calabi-Yau algebras generalize Calabi-Yau algebras in such a way as to include many well-known algebras from noncommutative algebraic geometry, especially Artin-Schelter regular algebras. Do these algebras enjoy a “twisted” version of Serre duality? We answer this question affirmatively, introducing *skew Calabi-Yau triangulated categories* in order to axiomatize the appropriate duality. As an application, we show that the Nakayama automorphism of a noetherian Artin-Schelter regular algebra determines the Nakayama automorphism of its Ext-algebra. (Received January 14, 2015)