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Ye-Lin Ou* (yelin.ou@tamuc.edu). *Some recent work on biharmonic submanifolds and biharmonic maps.*

Biharmonic maps are generalizations of biharmonic functions and harmonic maps. Biharmonic submanifolds are submanifolds whose defining isometric immersions are biharmonic maps. Biharmonic submanifolds generalize the notion of geodesic and minimal submanifolds. In this talk we will start with a review on some basic concept, examples and fundamental problems in the study of biharmonic maps, and then we will talk about some recent work on Chen's conjecture and the generalized Chen's conjecture on biharmonic submanifolds, and the classifications and constructions of proper biharmonic maps from a 2-sphere. (Received January 05, 2015)