

*In this talk we focus on the mathematical rigorous derivation of (the time dependent) von-Karman (vK) plate theory from an atomistic interaction model. We assume that the dynamics of the atomistic particle system obeys Newton's second law of motion. Starting with these time dependent, atomistic mappings we obtain solutions to the time-dependent von-Kármán equations. We distinguish between thin films and ultrathin films consisting only of a few layers. This talk is based on joint work with Bernd Schmidt.*