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*Evolution equations in epitaxial growth*

Evolution equations modeling epitaxial growth with elasticity on vicinal surfaces was first proposed by Duport, Politi and Villain, and by Tersoff, Phang, Zhang and Lagally in the discrete case. Continuum models have been studied by E, Xu and Xiang for rigid substrates, and by Tekalin and Spencer for elastic substrates. Such equations are generally 4th order, non-local, non-linear, parabolic equations. In this talk, I will present some new results about existence, uniqueness and regularity of weak/strong solutions of these equations. Joint works with Davoli, Fonseca and Leoni.