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Saulo Orizaga* (sorizaga@math.duke.edu). *Modeling and computation of phase separation models*. Preliminary report.

In this talk we discuss the computational challenges involved while solving phase field models. We present a new efficient numerical algorithm that has the energy decreasing property. The numerical method is then modified to treat gradient flow problems with variable mobility. The effectiveness of the methods for solving thin film type of problems is presented discussed. (Received September 26, 2017)