1145-49-643   **Irene Fonseca*** (`fonseca@andrew.cmu.edu`), 221 Conover Road, Pittsburgh, PA 15208, and **Riccardo Cristoferi**, **Adrian Hagerty** and **Cristina Popovici**. *A Homogenization Result in the Gradient Theory of Phase Transitions.*

A variational model in the context of the gradient theory for fluid-fluid phase transition with small scale heterogeneity is studied. In particular, the case where the scale of the small homogeneities is of the same order of the scale governing the phase transition is considered. In the limit, as the parameter scale tends to zero, there is an interaction between the homogenization and the phase transition process. (Received September 12, 2018)