1030-49-410 **Cristina Popovici*** (`cristina.popovici@ndsu.edu`), Department of Mathematics, 300 Minard Hall, North Dakota State University, Fargo, ND 58105. *Coupled Singular Perturbations and Periodic Homogenization in Phase Transitions.* Preliminary report.

Γ-convergence results for coupled singular perturbations and homogenization in the gradient theory of phase transitions are presented. (Received August 07, 2007)