1014-35-152 **Marian Bocea*** (bocea@math.utah.edu), University of Utah, Department of Mathematics, 155 South 1400 East, JWB Room 233, Salt Lake City, UT 84112. *Partial differential equations related to dielectric breakdown and polycrystal plasticity.*

We discuss several examples of highly nonlinear partial differential equations and systems of PDEs which arise naturally in a Γ-convergence analysis for a general class of power law functionals in the context of dielectric breakdown and polycrystal plasticity. (Received August 03, 2005)