JONATHAN MATTINGLY, Department of Mathematics, Duke University, Durham, NC Challenges in the analysis of degenerately forced stochastic PDEs

I will give a few example of degenerately forced PDEs which might be of modeling interest, such as reaction diffusion or fluid equations. Then I will discuss the mathematical difficulties which arise in the stochastic PDE setting which do not arise for stochastic ODEs. Then I will give some cases where we can circumvent these difficulties, either by direct calculation or by some new mathematical tools.