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**Kavita Ramanan\*** (kavita\_ramanan@brown.edu) and **Pooja Agarwal**  
(pooja\_agarwal@brown.edu). *Ergodicity of Stochastic Partial Differential Equations arising as  
Diffusion Approximations of Stochastic Networks*. Preliminary report.

We consider a class of stochastic partial differential equations (SPDEs) that arise as diffusion approximations of many-server stochastic networks. These SPDEs are defined on a domain and satisfy non-standard boundary conditions. We establish existence and uniqueness of the stationary distribution of such an SPDE. The proof of ergodicity entails the construction of a novel asymptotic (equivalent) coupling, which may be of independent interest. This is joint work with Pooja Agarwal. (Received January 23, 2018)