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**Robert G Smits\*** ([rsmits@nmsu.edu](mailto:rsmits@nmsu.edu)). *Modelling Initial Biofilm Formation with Stochastic Differential Equations*. Preliminary report.

The onset of biofilm formation often begins with a complex attachment process of motile bacteria adhering to a surface, where the attachment is governed by a weak potential. The attachment and detachment process can be modelled as a PDE with generalized Wentzell boundary conditions, sometimes referred to as slowly adhering or sticky. A stochastic differential equation corresponding to the PDE will be discussed along with its numerical simulation. (Received September 07, 2019)