

1058-35-250

**Anna L Mazzucato\***, Department of Mathematics, Penn State University, University Park, PA 16802, and **Wen Cheng, Nicola D Costanzino** and **Victor Nistor**. *An approximate Green-function algorithm for solving Fokker-Planck equations.*

We discuss an algorithm to compute solutions of certain Fokker-Planck equations in terms of approximate Green's function, based on Dyson series, Taylor expansions, and exact commutator formulas. The algorithm gives approximate solutions that are accurate to arbitrary order in time in the short-time limit. Part of this work is also joint with Radu Costantinescu and John Liechty. (Received February 16, 2010)