

1106-VG-1677      **Richard Vasques\*** ([richard.vasques@fulbrightmail.org](mailto:richard.vasques@fulbrightmail.org)). *Stochastic Transport Theory and Applications*.

In this work we examine the mathematical modeling of subatomic particles interacting with a random background medium, motivated by important applications in the fields of nuclear medicine, atmospheric sciences, and reactor physics. We describe some of the approaches that are currently used to tackle these problems, and present the mathematical tools that model the physical processes taking place. Finally, we discuss the range of topics in this area that are appropriate for undergraduate (and masters level) research. (Received September 14, 2014)