1023-60-149   **Brian D. Sutton*** (`bsutton@rmc.edu`), Department of Mathematics, Randolph-Macon College, PO Box 5005, Ashland, VA 23005, and **Alan Edelman**. *From Random Matrices to Stochastic Operators.*

We propose that classical random matrix models are properly viewed as finite difference schemes for stochastic differential operators. Three particular stochastic operators commonly arise, each associated with a familiar class of local eigenvalue behavior. The stochastic Airy operator displays soft edge behavior, associated with the Airy kernel. The stochastic Bessel operator displays hard edge behavior, associated with the Bessel kernel. The article concludes with suggestions for a stochastic sine operator, which would display bulk behavior, associated with the sine kernel. (Received August 13, 2006)