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Rahul A Gidwani* (rahul@stat.ucla.edu), 8125 Math Sciences Bldg, Los Angeles, CA 90095, **Nicolas Christou**, Los Angeles, CA 90095, and **Ivo D Dinov**. *Generating Functions: Web-based SOCR Applets and Computational Library Interfaces*.

The Statistics Online Computational Resource (www.SOCR.ucla.edu) develops, disseminates and validates interactive tools for pedagogical utilization in probability and statistics classes. These resources include online probability distribution calculators and graphing tools for over 50 probability distributions. A new component of the SOCR Distribution package allows for the computation and visualization of moment generating functions (MGFs) and probability generating functions (PGFs). MGFs are useful in uniquely identifying a distribution. Applications of MGFs include the analysis of signal and noise propagation in radiographic screen-film systems and the approximation of passage time distributions in ion channel models which incorporate time interval omission. MGFs and PGFs are very valuable in establishing recurrence relations and studying the asymptotic behavior of sequences, evaluating infinite sums and solve enumeration and combinatorial problems. SOCR is the first free resource on the web, which provides the user with the capability to compute and visualize a large number of moment and probability generating functions: SOCR provides human (HTML/Applet) and machine (computational JAR library) interfaces to the MGFs and PGFs of many common distributions. (Received September 20, 2007)