We investigate a computably-invariant restriction of asymptotic density, and observe that it has strong connections to both randomness and classical computability theory. In particular, we use it to define a new immunity property, recognize a new form of stochasticity, and find an unexpected connection to functions avoiding weak computable approximation. We also apply similar ideas to create computably-invariant restrictions of the generic-case computability defined by Jockusch and Schupp, and prove a generalization of Rice’s Theorem as a lower bound on their strength.