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**Renling Jin\*** ([jinr@cofc.edu](mailto:jinr@cofc.edu)), Department of Mathematics, College of Charleston, 66 George Street, Charleston, SC 29424. *Nonstandard methods on density problems.*

Densities on an infinite set of non-negative integers are measurements of the asymptotic “size” of the set. Solving a problem on densities often requires a sequence of asymptotic arguments. Therefore, the density problems are good research subjects where nonstandard methods can be found to be powerful tools. In this talk the presenter will survey some of his achievements on the applications of nonstandard methods to the density problems. (Received November 25, 2011)