1090-03-56   **Stephen G. Simpson*** (`simpson@math.psu.edu`), Department of Mathematics, McAllister Building, Pollock Road, Pennsylvania State University, University Park, PA 16802. *Combining basis theorems.* Preliminary report.

A *basis theorem* is a theorem saying that every nonempty effectively closed set in Euclidean space has at least one member which is, in some specific sense, close to being computable. Some well known basis theorems are the Cone Avoidance Basis Theorem, the Low Basis Theorem, the Hyperimmune-Free Basis Theorem, the R.E. Basis Theorem, and the Randomness Preservation Basis Theorem. Less well known is the recent Partial Randomness Preservation Basis Theorem due to Higuchi, Hudelson, Simpson, and Yokoyama. We discuss the possibilities for combining these basis theorems. A new result due jointly to Simpson and Frank Stephan says that we can combine cone avoidance with randomness preservation if and only if the cone to be avoided is non-K-trivial. (Received February 07, 2013)

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