

1064-03-219

Joseph S. Miller* (jmillermath@math.wisc.edu), Madison, WI. *Revisiting Cooper's jump inversion theorem.* Preliminary report.

Cooper showed that every degree above $\mathbf{0}'$ is the jump of a minimal degree. We give a fairly easy proof of this result, using a simple method to force the jump on partial trees. The method allows us to extend Cooper's result by showing that every $S \geq_{tt} \emptyset'$ is actually truth-table equivalent to the jump of a minimal (Turing) degree. In particular, there is a superhigh minimal degree. The method also allows us to construct a minimal GL_1 degree that is not weakly jump traceable, giving a new proof that downward GL_1 does not imply weak jump traceability.

These results are joint with Steffen Lempp, Keng Meng Ng and Liang Yu. (Received September 09, 2010)