1063-26-50   **Ciprian Demeter*** (`demeterc@indiana.edu`), Indiana University, Rawles Hall, 831 East 3rd St, Bloomington, IN 47405. *Proof of the HRT conjecture for special configurations.*

The strong HRT conjecture asserts that the time-frequency translates of any nontrivial function in $L^2(\mathbb{R})$ are linearly independent. The weak HRT conjecture has the same formulation, but this time for Schwartz functions. Prior to our work, the only result of a reasonably general nature was Linnell's proof in the case when the translates belong to a lattice. I will first describe an alternative argument to Linnell's (joint work with Zubin Gautam), inspired by the theory of random Schrödinger operators. Then I will explore both some solo and joint work (with Zaharescu) involving a number theoretical approach to the HRT conjecture, for some special 4 point configurations. (Received July 27, 2010)