▶ JOOST J. JOOSTEN, *Hyperarithmetical Turing progressions.*

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Turing progressions arise by iteratedly adding consistency statements over a sound base theory. Schmerl employed Turing progressions over a weak base system in [2] to gauge the (consistency) strength of certain substantially stronger formal systems thus giving rise to ordinal analyses for these systems. Beklemishev showed in [1] how such analyses can be presented and in large part performed within polymodal provability logics. Beklemishev's method employed arithmetic consistency notions only. In this talk we dwell on new techniques that have been developed to take this further to include hyperarithmetical consistency notions.

[1] BEKLEMISHEV, L. D., *Provability algebras and proof-theoretic ordinals, I*, **Annals of Pure and Applied Logic**, vol. 128 (2004), no. 1–3, pp. 103–124.

[2] SCHMERL, U. R., *A fine structure generated by reflection formulas over primitive recursive arithmetic*, **Stud. Logic Foundations Math., Logic Colloquium '78** (Mons, 1978), vol. 97, Publisher North-Holland, Year 1979, pp. 335–350.