

- ▶ EMANUELE FRITTAION, *The uniform reflection principle in second order arithmetic*. School of Mathematics, University of Leeds.
E-mail: emanuelefrittaion@gmail.com.

I will discuss the full uniform reflection principle in the context of second order arithmetic. I will show how by formalizing a minimum of infinitary proof theory (ω -logic) in a sufficiently strong fragment of second order arithmetic, such as the reverse mathematics base system known as RCA_0 (recursive comprehension axiom), one can give a proof of the following folklore result. Let T_0 be a finitely axiomatizable subsystem of second order arithmetic as strong as RCA_0 . Then adding the uniform reflection principle $\text{RFN}(T_0)$ is equivalent to adding full induction. On the other hand, adding the uniform reflection principle $\text{RFN}(T)$, where T is T_0 together with full induction, is equivalent to adding full transfinite induction up to ε_0 .

[1] GEORG KREISEL AND AZRIEL LÉVY, *Reflection principles and their use for establishing the complexity of axiomatic systems*, **Mathematical Logic Quarterly**, 14(7-12):97–142, 1968.

[2] GRIGORI MINTS, *Finite investigations of transfinite derivations*, **Journal of Soviet Mathematics**, 10(4):548–596, 1978.