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 RCA₀ (recursive comprehension axiom), one can give a proof of the following folklore result. Let $T₀$ be a finitely axiomatizable subsystem of second order arithmetic as strong as RCA₀. Then adding the uniform reflection principle RFN($T₀$) is equivalent to adding full induction. On the other hand, adding the uniform reflection principle RFN($T$), where $T$ is $T₀$ together with full induction, is equivalent to adding full transfinite induction up to $\varepsilon₀$.
