1096-55-2082 **Johanna Stromberg*** (johanna.strmbrg@gmail.com). *On Braids and the Jones Polynomial.* Preliminary report.

In V.G. Turaev's 1988 paper 'The Yang-Baxter equation and invariants of links' so-called enhanced Yang-Baxter operators are introduced, consisting of a Yang-Baxter operator $R : V^{\otimes 2} \to V^{\otimes 2}$, an isomorphism $\mu : V \to V$ and $\alpha, \beta$ invertible elements of V. These are such that

1. $\mu \otimes \mu$ commutes with $R$
2. $Sp_2(R \circ (\mu \otimes \mu)) = \alpha\beta\mu$ and $Sp_2(R^{-1} \circ (\mu \otimes \mu)) = \alpha^{-1}\beta\mu$

Together they define a braid invariant $T_s(\sigma) = \alpha^{-w(\sigma)}\beta^{-n}Sp(b_R(\sigma) \circ \mu^{\otimes n})$, where $w(\sigma)$ is the writhe of the braid, $n$ is the order of the braid and $Sp$ is the standard trace. Explicit constructions are given for the EYB-operators. This paper explicitly demonstrates explicitly that $T_s(\sigma)$ with the given constructions is yield the same polynomial as the construction of the Jones polynomial through Kauffman brackets. (Received September 17, 2013)