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## Wilson loops in 4d SYM and in 2d YM

*Thursday 27 September 2007 17:00 (30 minutes)*

I will present some new results about supersymmetric Wilson loops in four dimensional YM. First I will present a large class of operators preserving  $1/2$ ,  $1/4$ ,  $1/8$  and  $1/16$  of the supersymmetries of the vacuum. Then I will show a possible relation between some of those loops, following an arbitrary curve on an  $S^2$  subspace of  $R^4$  to Wilson loops in two dimensional YM. To the extent that we've been able to calculate, there is a precise agreement, suggesting another connection between certain operators in  $N=4$  SYM and low dimensional solvable models.

### Based on preprint

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