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Talk 4: Simone Giacomelli

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Title: T-branes, monopole operators and S-duality

T-branes are exotic bound states of D-branes, characterized by mutually non-commuting vacuum expectation values for the worldvolume scalars. We study T-branes in M-theory by probing the geometry with an M2-brane, finding that the effect of a T-brane is to deform the membrane worldvolume superpotential with monopole operators. The dynamics of the resulting theory can be studied using a dual description involving conventional superpotential terms and (the dimensional reduction of) class S trinion theories. The S-dual description of $N=2$ $SU(N)$ SQCD with $2N$ flavors in four dimensions plays a crucial role in our construction.