

DEPARTMENTS OF MATHEMATICS AND PHYSICS  
UNIVERSITY OF UTAH

# STRING GEOMETRY SEMINAR

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Orbifolding matrix theory and deconstructing type II string

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In this talk I will try to convince the audience of the following statements:

- (1) A class of quiver mechanics models results from orbifolding Matrix Theory *a la* BFSS with some surviving supersymmetries.
- (2) At its large  $N$  limit, quiver mechanics provides a (de)construction of low dimensional super Yang-Mills theory.
- (3) Matrix String, hence IIA string, is a consequence of  $Z_N$  orbifold.
- (4) IIB string is a consequence of  $Z_N^2$  orbifold.
- (5) A target-worldsheet(volume) duality is shown from different angles, including a deduction in terms of discrete calculi.
- (6) At intermediate step, a world volume geometry can be identified, whose significance is still to be clarified.

This is all joint work with Yong-Shi Wu.

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Thursday, October 23, 2003

3:00 PM — LCB 323