

# Integrability in $N = 4$ Gauge Theory, Matrix Models, and Rotating Superstrings

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## **Abstract**

We explain recent progress in dynamically testing the AdS/CFT correspondence. The emphasis is on the gauge side of the correspondence, where integrable super spin chain methods are applicable. We explain the great similarity between Bethe ansatz techniques and matrix models. Our results strongly hint at the complete integrability of planar  $N = 4$  gauge theory.