

INSTANTON PARTITION FUNCTIONS OF  $\mathcal{N} = 2$  QUIVER  
GAUGE THEORIES AND INTEGRABLE SYSTEMS

**Vasily Pestun**, Nikita Nekrasov

*Institute for Advanced Study, Simons Center for Geometry and Physics*

I will review the recent work on the equivariant partition functions of  $\mathcal{N} = 2$  quiver gauge theories in four dimensions and their relation with Seiberg-Witten theories and algebraic integrable systems.

*Keywords:* quiver gauge theories,  $\mathcal{N} = 2$  supersymmetry, Seiberg-Witten theories, instanton partition functions