

INTEGRABILITY IN AdS/CFT

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S u m m a r y

This work provides a detailed review of recent developments in the field of AdS/CFT correspondence for a particular subject of the correspondence between type IIB superstring on $AdS_5 \times S_5$ and the $\mathcal{N} = 4$ super Yang–Mills theory. Through analyzing the bound states of Bethe roots for the corresponding $PSU(2,2|4)$ spin chain, it is shown how the lattice system of functional equations, called Y-system, appears.