

# On the state-sum invariants of 3-manifolds constructed from the $E_6$ and $E_8$ linear skeins

Kenta Okazaki

RIMS, Kyoto University

**Abstract.** The state-sum invariants of 3-manifolds, introduced by Turaev and Viro and generalized by Ocneanu, are formulated as a state-sum on triangulations of 3-manifolds derived from certain 6j-symbols. In this talk, we give elementary and self-contained constructions of the state-sum invariants of 3-manifolds derived from 6j-symbols of the  $E_6$  and  $E_8$  subfactors. We give such constructions by introducing  $E_6$  and  $E_8$  linear skeins, motivated by the  $E_6$  and  $E_8$  planar algebras.