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Quantum Hall hierarchy wave functions from conformal field theory SUSANNE VIEFERS, University of Oslo, Norway, EMIL BERGHOLTZ, HANS HANSSON, MARIA HERMANNS, ANDERS KARLHEDE, Stockholm University — It has long been known that Laughlin's wave functions, describing the fractional quantum Hall effect at filling fractions $\nu = 1/(2k+1)$, can be obtained as correlation functions in conformal field theory. We show how to generalize this approach to construct explicit trial wave functions for all states in the quantum Hall hierarchy corresponding to quasiparticle (as opposed to quasihole) condensates, including the recently observed state at $\nu = 4/11$. At the filling fractions $\nu = n/(2np+1)$ this construction exactly reproduces Jain's composite fermion wave functions. An explicit connection is made to Wen's topological classification of FQH states.

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