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Quantum Hall transition on a triangular lattice; network model and analytical renormalization-group treatment[1] VAGHARSH MKHITARYAN, MIKHAIL RAIKH, Department of Physics, University of Utah, Salt Lake City, UT 84112 — Common approach to the theoretical study of the quantum Hall transition is the Chalker-Coddington network model on the square lattice. We introduce a new version of the network model formulated on the triangular lattice, where the scattering at the sites is described by 3×3 matrix. Extending renormalization-group description of the classical site percolation to the quantum case, we derive a closed equation for the distribution function of conductance. Solving this equation numerically, we get for the critical exponent of the correlation radius $\nu \approx 2.3 \div 2.76$ in good agreement with established value $\nu = 2.33$.

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