1172-81-257   **Ramona Wolf*** (`rawolf@phys.ethz.ch`), Institut fuer Theoretische Physik, HIT-K-31.2, Wolfgang-Pauli-Str. 27, 8093 Zurich, Switzerland. *From Subfactors to Conformal Field Theories via Physical Models.*

There is a long-standing conjecture, initially formulated by Vaughan Jones in the 1990s, that to every subfactor, there exists a corresponding conformal field theory. Although a considerable body of evidence has been collected since then, the general statement has not yet been proven or disproven. In the study of this correspondence, it might be helpful to lend methods from physics: Since every subfactor gives rise to two (unitary) fusion categories, one can imagine attempting to construct counterpart CFTs via physical models built directly from these categories. These models can then be examined for critical points, which in turn correspond to CFTs. I will explain this construction and discuss problems and challenges that occur when performing it for relevant examples. This includes the Haagerup subfactor, which is (in some sense) the smallest subfactor for which no counterpart CFT is known. (Received August 30, 2021)