Modular properties of false theta functions

11.02 | **Caner Nazaroglu**
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Abstract: False theta functions are functions that closely resemble classical theta functions, which despite this similarity do not have the modular properties that theta functions possess. They appear, for example, in the context of link invariants, W-algebras and also are closely related to mock modular forms. In this talk, I will describe modular properties of false theta functions and give a modular completion analogous to modular completions of mock modular forms. Finally, I will give an application of this machinery to derive a Rademacher type exact expression for the number of unimodal sequences and extend earlier work on their asymptotic properties.