

ALGEBRA
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Kac-Wakimoto characters and mock theta functions

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Abstract: In this talk I will discuss the role of certain "strange" functions called "mock theta functions" as a liaison between two different areas of mathematics: modular forms, which are complex analytic functions with certain symmetries, and the representation theory of a large class of lie algebras. Despite their "strange" appearance, the mock theta functions in their most classical guises date back to the first part of the 20th century, however their roles in mathematics were not well understood. Only within the last 7 years have we finally begun to understand and develop a greater theory around the mock theta functions in mathematics - relating modular forms and representation theory is just one of their many interesting facets. This talk is intended to be an introduction to this theory.

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