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**Lyda Pamela Urresta\*** ([lurresta@nd.edu](mailto:lurresta@nd.edu)). *Overview of the Geometric Model of Propagating Strings in String Theory and Possible Generalizations.*

String theory is a physics theory that models particles as one-dimensional strings propagating through space-time. In this picture, the strings sweep out a surface, so we can use tools in topology and complex analysis to study these strings and their interactions. This yields an algebraic structure on the space of particle states, called a vertex operator algebra (VOA). In the 1990s, Yi-Zhi Huang constructed a geometric model designed to provide a rigorous geometric underpinning of the notion of a VOA. Building upon Huang's work, we present some possible extensions and generalizations of his geometric model and the algebraic structures that arise as a consequence. (Received September 17, 2019)