Post-Lie algebra structures on the Witt algebra. (English summary)
17A30 (17B68 17D25)

In this paper, the author characterizes the graded post-Lie algebra structures and a class of shifting post-Lie algebra structures on the Witt algebra $W$, which is the well-known centerless Virasoro algebra. The homogeneous Rota-Baxter operators and a class of non-homogeneous Rota-Baxter operators of weight 1 on the Witt algebra $W$ are stated in Theorem 5.3 and Theorem 5.4.

{Reviewer's remark: Since there are uncountably many infinite-dimensional simple Lie algebras, the terminology for naming these algebras should be well-chosen for further research on related topics, even though the classification of them may seem impossible.}
Reviewed by Ki-Bong Nam

References