

## Relative Rota–Baxter operators of arbitrary weight on Leibniz algebras and post-Leibniz algebra structures

By APURBA DAS (Kharagpur)

**Abstract.** Leibniz algebras are a non-skewsymmetric analogue of Lie algebras. In this paper, we consider relative Rota–Baxter operators of arbitrary weight on Leibniz algebras. We define cohomology of such operators and as an application, we study their deformations. Finally, we introduce and study post-Leibniz algebras as the structure behind relative Rota–Baxter operators of arbitrary weight.

APURBA DAS  
DEPARTMENT OF MATHEMATICS  
INDIAN INSTITUTE OF TECHNOLOGY  
KHARAGPUR 721302, WEST BENGAL  
INDIA

---

*Mathematics Subject Classification:* 17A32, 17A36, 17B56, 16S80.

*Key words and phrases:* Leibniz algebra, Rota–Baxter operator of arbitrary weight, cohomology, deformation, post-Leibniz algebra.