

## ON SOME STRUCTURAL PROPERTIES OF DIASSOCIATIVE ALGEBRAS

**Ikrom M.Rikhsiboev & Isamiddin S.Rakhimov**

*Laboratory of Theoretical Studies, Institute for Mathematical Research &  
Department of Mathematics, Faculty of Science,  
Universiti Putra Malaysia  
E-mail: [ikromr@gmail.com](mailto:ikromr@gmail.com), [risaiddin@gmail.com](mailto:risaiddin@gmail.com)*

### **Abstract**

The paper deals with diassociative algebras (or simply dialgebras) introduced by Loday at the end of last century. The motivation to study comes from the following fact: there are links between them and classical algebras like associative, Lie algebras and recently discovered new classes of algebras named Leibniz, Zinbiel, Dendriform by Loday. As for the classical case there are well developed structural theories and appropriate results of classifications. However, for these new classes of algebras case there is no such structural results. The paper can be considered as an effort to introduce certain structural concepts and to study their properties. Here we introduce the notions of nilpotency, simplicity and study some properties of nilpotent and simple diassociative algebras. Complete classification of the so-called nullfiliform diassociative algebras over complex numbers will also be given.