



Einstein Type Curvature Tensors and Einstein Type Tensors of Generalized Riemannian Space in the Eisenhart Sense

Miroslav D. Maksimović^{id} and Milan Lj. Zlatanović

Abstract. By using decomposition of curvature tensors of generalized Riemannian space in the Eisenhart sense, the Einstein type curvature tensors and Einstein type tensors of that space are determined and defined. All these tensors vanish if the corresponding Ricci tensors also vanish in the observed space. All these tensors are traceless tensors and their properties of symmetry and anti-symmetry were examined. We proved that the Einstein type curvature tensors of the second kind, of the fourth kind and of the fifth kind are algebraic curvature tensors. The Einstein type tensors of the second kind, of the fourth kind and of the fifth kind are symmetric tensors.

Mathematics Subject Classification. 53B05, 53A55.

Keywords. Decomposition of curvature tensor, Einstein curvature tensor, Einstein tensor, Equitortion conformal mapping, General relativity, Generalized Riemannian space.