

**E. Moutafi**

***On the Endo curvatute tensor of a  $(\kappa, \mu, \nu)$  - manifold***

In a  $(\kappa, \mu, \nu)$ -contact metric manifold  $M^3(\eta, \xi, \phi, g)$  the curvature tensor  $R$  satisfies for any  $X, Y \in X(M)$  the condition

$$\begin{aligned} R(X, Y)\xi &= \kappa(\eta(Y)X - \eta(X)Y) + \mu(\eta(Y)hX - \eta(X)hY) \\ &\quad + \nu(\eta(Y)\phi hX - \eta(X)\phi hY), \end{aligned}$$

where  $\kappa, \mu, \nu$  are smooth functions on  $M^3$ . For such a manifold we introduce the Endo curvature tensor  $B^{es}$  first introduced by H. Endo [1] for a contact metric manifold. We study the tensor  $B^{es}$  in  $(\kappa, \mu, \nu)$ -contact metric manifolds and we classify them under certain curvature conditions on this tensor.

## References

- [1] : Endo H., *On an extended contact Bochner curvature tensor on contact metric manifolds*, Colloq. Math. **65**(1993), 33-41.