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Almost product and almost complex structures generated by polynomial structures. (English) [Zbl 0582.53032](#)

Zesz. Nauk. Uniw. Jagielloń. 661, Pr. Mat. 24, 27-31 (1984).

The author investigates a tensor field f of type $(1,1)$ on a differentiable manifold M satisfying the equation $P(f) = 0$, where $P(z) = a_0(x)z^n + a_1(x)z^{n-1} + \dots + a_n(x)$ is a polynomial over the ring $C^\infty(M)$. She proves that under some additional assumptions about the polynomial P a tensor field f satisfying $P(f) = 0$ induces on M an almost product structure and a polynomial structure J satisfying $J^3 + J = 0$. These results represent a generalization of results of the reviewer [Kodai Math. Semin. Rep. 27, 42-50 (1976; Zbl 0326.53050)].

Reviewer: [J.Vanzura](#)

MSC:

[53C15](#) General geometric structures on manifolds (almost complex, almost product structures, etc.)

[15B57](#) Hermitian, skew-Hermitian, and related matrices

Cited in **2** Documents

Keywords:

almost product structure; polynomial structure