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On the \mathcal{A} -continuity of real functions. (English) Zbl 0880.26006
Istanb. Üniv. Fen Fak. Mat. Derg. 53(1994), 61-66 (1996).

Let A be a regular matrix. A function $f : \mathbb{R} \rightarrow \mathbb{R}$ is said to be A -continuous at $x_0 \in \mathbb{R}$ provided that $A\text{-}\lim x_n = x_0$ implies $A\text{-}\lim f(x_n) = f(x_0)$ [cf. *J. Antoni* and *T. Šalát*, *Acta Math. Univ. Comenianae* 39, 159-164 (1980; [Zbl 0519.40006](#))]. In connection with the A -continuity of functions, the authors introduce the concept of \mathcal{A} -continuity of functions replacing the matrix A by a sequence $\mathcal{A} = (A^i)$ of matrices. In the paper, sufficient conditions are given for usual continuity, linearity and constancy of functions that are \mathcal{A} -continuous at a point $x_0 \in \mathbb{R}$.

Reviewer: [T.Šalát \(Bratislava\)](#)

MSC:

[26A15](#) Continuity and related questions (modulus of continuity, semicontinuity, discontinuities, etc.) for real functions in one variable Cited in 9 Documents

Keywords:

\mathcal{A} -continuity; linearity; constancy