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Boolean valued analysis: background and results. (English) [Zbl 07437842](#)

Kusraev, Anatoly G. (ed.) et al., Operator theory and differential equations. Selected papers based on the presentations at the 15th conference on order analysis and related problems of mathematical modeling, Vladikavkaz, Russia, July 15–20, 2019. Cham: Birkhäuser. Trends Math., 91-105 (2021)

Boolean valued analysis addresses various areas of mathematics by using Boolean valued models $\mathbb{V}^{\mathbb{B}}$ of set theory. It started with [*E. I. Gordon*, Sov. Math., Dokl. 18, 1481–1484 (1977; [Zbl 0406.03064](#)); *G. Takeuti*, Lect. Notes Math. 753, 714–731 (1979; [Zbl 0427.03046](#))]. This paper provides a brief overview of Boolean valued analysis.

For the entire collection see [[Zbl 1470.47003](#)].

Reviewer: [Hirokazu Nishimura \(Tsukuba\)](#)

MSC:

[06F25](#) Ordered rings, algebras, modules
[46A40](#) Ordered topological linear spaces, vector lattices

Keywords:

[vector lattice](#); [Kantorovich's principle](#); [Gordon's theorem](#); [Boolean valued analysis](#); [Boolean valued representation](#)

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