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## **Z**-matrix

Canonical name Zmatrix

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Author kshum (5987) Entry type Definition Classification msc 15A57 A square matrix is called a Z-matrix if all off-diagonal entries are less than or equal to zero.

Z-matrix arises naturally in solving Dirichlet problem numerically, and linear modeling of economy.

## Reference:

- M. Fiedler, Special matrices and their applications in numerical mathematics, 1986, Martinus Nijhoff Publishers, Dordrecht.
- R. A. Horn and C. R. Johnson, *Topics in matrix analysis*, 1991, Cambridge University Press, United Kingdom.
- R. B. Bapat and T. E. S. Raghavan, *Nonnegative matrices and applications*, 1997, Cambridge University Press, United Kingdom.