

# On the Cardinal of the Support of Walsh for Functions of few Variables

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Boolean functions play a crucial role in cryptography and error-correcting codes due to their diverse applications and rich mathematical properties. One such property, the Walsh transform, is a Fourier-Hadamard transform that provides valuable insights into the spectral behavior of Boolean functions. The Walsh support of a Boolean function, defined as the set of points where the Walsh transform is nonzero, offers further structural information. Despite its significance, the Walsh support remains relatively underexplored.