

2.15 Integer lattices literature

There are many reasons why one needs to compute an “orbit Jacobian matrix” Hill determinant $|\text{Det } \mathcal{J}|$, in fields ranging from number theory to engineering, and many methods to accomplish that:

- discretizations of Helmholtz [58] and screened Poisson [59, 80, 96, 97] (also known as Klein–Gordon or Yukawa) equations

- Green’s functions on integer lattices [5, 8, 24, 33, 37, 40, 63, 67, 78, 92, 93, 115–117, 135, 140, 143, 149, 150, 159, 180, 196]

- Gaussian model [71, 111, 139, 172]

- linearized Hartree-Fock equation on finite lattices [121]

- quasilattices [29, 69]

- circulant tensor systems [33, 37, 146, 164, 166, 200]

- Ising model [19, 88, 89, 98, 100, 103–105, 128, 136, 141, 153, 161, 199], transfer matrices [154, 199]

- lattice field theory [108, 144, 148, 151, 168, 175, 176, 192]

- modular transformations [34, 205]

- lattice string theory [77, 157]

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