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**Title:** The strange topology of the discretization of some standard differential operators

**Abstract:** Discretizations by finite differences of some semilinear elliptic equations lead to maps  $F(u) = Au - f(u)$ ,  $A$  symmetric positive,  $f$  asymptotically linear convex, between Euclidean spaces, which admit topological turbulence: the images of the critical components are surfaces with substantial winding around the half-line of vectors with negative coordinates. As a consequence, for  $v \ll 0$ , the equation  $F(u)=v$  admits a surprisingly high number of solutions, once the extreme values of  $f'$  enclose large portions of the spectrum of  $A$ .