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## A physics approach to ecological networks

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An ecological network is typically a system of nutrient transfer between groups of species in an ecosystem. In common with physics, energy and mass are conserved, and transfer across the ecosystem boundaries are tracked. Furthermore, ecologists are concerned with macroscopic variables that characterise the system, including an analogy of entropy to measure the degree of order. Mathematically, a static network is a combination of constraints and degrees of freedom. A prominent method of solution is a linear inverse model that finds a solution space that includes unphysical negative flows which must be excluded. An alternative approach is to ensure from the outset that all flows are positive. Ecological networks are important in themselves, and also serve as models for efficient networks in other domains such as energy distribution.

### Apply to be considered for a student ; award (Yes / No)?

No

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N/A

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