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**AKPhil 4: Statistical Mechanics**

Zeit: Dienstag 14:00–14:45

Raum: KGI-HS 1015

**Hauptvortrag**                      AKPhil 4.1    Di 14:00    KGI-HS 1015  
**Taking algebra too seriously. On the illusion of irreversible behaviour in statistical dynamics** — ●JOS UFFINK — Institute for History and Foundations of Science, Universiteit Utrecht

An influential approach to the foundations of statistical mechanics (by authors like Oliver Penrose, Nico van Kampen Michael Mackey, and Ray Streater) claims to obtain a satisfactory description of irreversible

behaviour by characterising the evolution of macroscopic physical systems as a Markov process, or more abstractly, in terms of a semigroup of non-invertible evolution operators. The general formalism developed in this approach, sometimes called "statistical dynamics", can in fact be obtained from a variety of physical motivations. Nevertheless, I will argue that this claim is illusionary and due to a misleading analogy to linear algebra.