

Ergodicity of infinite particle systems and applications

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I am going to discuss algebraic structure which naturally appears in the study of ergodicity of certain degenerate infinite dimensional sub-elliptic generators. I will show different applications of the structure (which is extension of Jordan-Schwinger map) to algebra (i.e. construction of explicit representations of finite and infinite dimensional algebras) and analysis (i.e. construction of new quantisation) and present some open problems and open directions of research.

(based on joint works with B. Zegarlinski, J. Inglis, W. Bock, V. Futorny).