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Abstracts of Short Communications and Posters

Section:

8. Analysis

1991 MS Classification: 46, 47
Frank, Michael, University of Houston, USA.
Conditional expectations of finite index and discrete group actions.
Comparing three existing notions for conditional expectations $E : M \to N \subseteq M$ to be (weakly, strongly) of finite index we show the two topological ones to coincide and separate the algebraic one by C*- and W*-examples. If there exists a number $K \geq 1$ warranting $(K \cdot E - \mathrm{id}_M)$ to be positive E can be shown to commute with projections to W*-types, among other properties. We investigate the Jones tower construction and the index value(s) in the C*-case. General properties of conditional expectations of finite index on $\mathrm{C}(X)$ are obtained in case they arise from discrete group actions on compact spaces X.
The presented work is joint work with E. Kirchberg (J. Oper. Theory, 1998) and with V. M. Manuilov and E. V. Troitsky (Zeitschr. Anal. Anwend. v. 16(1997)).