

Zeitschrift: L'Enseignement Mathématique
Herausgeber: Commission Internationale de l'Enseignement Mathématique
Band: 44 (1998)
Heft: 1-2: L'ENSEIGNEMENT MATHÉMATIQUE

Artikel: ON CONNES' JOINT DISTRIBUTION TRICK AND A NOTION OF AMENABILITY FOR POSITIVE MAPS
Autor: POPA, Sorin

Bibliographie
DOI: <https://doi.org/10.5169/seals-63896>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. [Siehe Rechtliche Hinweise.](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. [Voir Informations légales.](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. [See Legal notice.](#)

Download PDF: 19.01.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

“Sur certaines propriétés spectrales du laplacien sur les graphes”, University Paul Sabatier, Toulouse, thesis 1996). He proved this result by using different methods than ours. Note that Zuk’s result generalized (unknowingly!) our previous similar statement which only covered the particular graphs coming from subfactors ([Po2,3,4]). On the other hand, our Corollary 0.2 in the present paper proves (by using Connes’ distribution trick) an equivalence between Kesten and Følner type amenability conditions that is sensibly more general than all these prior results.

REFERENCES

- [C] CONNES, A. Classification of injective factors. *Ann. of Math.* 104 (1976), 73–115.
- [F] FØLNER, E. On groups with full Banach mean value. *Math. Scand.* 3 (1955), 243–254.
- [GHJ] GOODMAN, F., P. DE LA HARPE and V. F. R. JONES. *Coxeter Graphs and Towers of Algebras*. Math. Sci. Res. Inst. Publ., vol. 14. Springer-Verlag, 1989.
- [Gr] GREENLEAF, F. *Invariant Means on Topological Groups*. Van Nostrand Math. Studies. New York-Toronto-London-Melbourne, 1969.
- [Hi] HIAI, I. Minimizing indices of conditional expectations onto a subfactor. *Publ. R.I.M.S.* 24 (1988), 673–678.
- [J] JONES, V. F. R. Index for subfactors *Invent. Math.* 72 (1983), 1–25.
- [K] KESTEN. Full Banach mean values on countable groups. *Math. Scand.* 7 (1959), 145–156.
- [PiPo] PIMSNER, M. and S. POPA. Entropy and index for subfactors. *Ann. Sci. École Norm. Sup.* 19 (1986), 57–106.
- [Po1] POPA, S. Classification of amenable subfactors of type II. *Acta Math.* 172 (1994), 163–255.
- [Po2] ——— Classification of subfactors and their endomorphisms. *CBMS Lecture Notes* 86 (1995).
- [Po3] ——— Approximate innerness and central freeness for subfactors: a classification result. In *Subfactors*. World Scientific (Singapore-New Jersey-London-Hong Kong), 1994, 274–293.
- [Po4] ——— Symmetric enveloping algebras, amenability and AFD properties for subfactors. *Math. Res. Lett.* 1 (1994), 409–425.
- [Po5] ——— Some properties of the symmetric enveloping algebra of a subfactor, with applications to amenability and property T. Preprint (1997).
- [Po6] ——— An axiomatization of the lattice of higher relative commutants of a subfactor. *Invent. Math.* 120 (1995), 427–445.

- [PS] POWERS, R. and E. STØRMER. Free states of the canonical anticommutation relations. *Comm. Math. Phys.* 16 (1970), 1–33.

(Reçu le 9 décembre 1997)

Sorin Popa

Université de Genève

Section de Mathématiques

Case postale 240

CH-1211 Genève 24

Switzerland

e-mail: Sorin.Popa@math.unige.ch