

Zeitschrift: L'Enseignement Mathématique
Herausgeber: Commission Internationale de l'Enseignement Mathématique
Band: 16 (1970)
Heft: 1: L'ENSEIGNEMENT MATHÉMATIQUE

Artikel: NAIVELY CONSTRUCTIVE APPROACH TO BOUNDEDNESS PRINCIPLES, WITH APPLICATIONS TO HARMONIC ANALYSIS
Autor: Edwards, R. E. / Price, J. F.
Bibliographie
DOI: <https://doi.org/10.5169/seals-43866>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. 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. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

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. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

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. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 03.07.2025

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

We thus obtain explicit examples of functions θ satisfying (A.23) which are not Fourier-Stieltjes transforms.

Note that, if every c_n is real and nonzero, an (unbounded) ψ can be chosen so as to make $\text{Ran } \theta = \{-1, 1\}$; this yields explicit examples of ± 1 -valued functions θ which are not Fourier-Stieltjes transforms. (These are, of course, also obtainable by starting with functions $\text{sgn } \hat{h}$, where $h \in C(G)$, $\hat{h}$ is real-valued and $\hat{h} \notin l^1(\Gamma)$.)

BIBLIOGRAPHY

- [1] BRAINERD, B. and R. E. EDWARDS, Linear operators which commute with translations. Part 1: Representation theorems. *J. Australian Math. Soc.* 6 (1966), 289-327.
- [2] EDWARDS, R. E., *Functional Analysis: Theory and Applications*. Holt, Rinehart and Winston, New York (1965).
- [3] EDWARDS, R. E. and E. HEWITT, Pointwise limits for sequences of convolution operators. *Acta Math.* 113 (1965), 181-218.
- [4] FIGA-TALAMANCA, A. and G. I. GAUDRY, Multipliers and sets of uniqueness of L^p . *Michigan Math. J.* 17 (1970), 179-191.
- [5] GAUDRY, G. I., Bad behaviour and inclusion results for multipliers of type (p, q) . *Pacific J. Math.* 35 (1970), 83-94.
- [6] GEL'FAND, I. M. and G. E. SHILOV, *Generalized Functions, Volume I*. Academic Press, New York (1964).
- [7] HEWITT, E. and K. A. ROSS, *Abstract Harmonic Analysis, Vols. I, II*. Springer-Verlag, Berlin (1963, 1970).
- [8] HEWITT, E. and H. S. ZUCKERMAN, On a theorem of P. J. Cohen and H. Davenport. *Proc. Amer. Math. Soc.* 14 (1963), 847-855.
- [9] PRICE, J. F., Some strict inclusions between spaces of L^p -multipliers. To appear in *Trans. Amer. Math. Soc.* 152 (1970).
- [10] RUDIN, W., *Fourier Analysis on Groups*. Interscience, New York (1962).
- [11] ZYGMUND, A., *Trigonometric Series, Vols. I & II*. Cambridge University Press (1959).
- [12] HOLLAND, Samuel S., Jr. A Hilbert space proof of the Banach-Steinhaus theorem. *Amer. Math. Monthly* 76 (1969), 40-41.
- [13] HALMOS, P. *A Hilbert space problem book*. Van Nostrand, Princeton, N.J. (1967).
- [14] HÖRMANDER, L., Estimates for translation invariant operators in L^p spaces. *Acta Math.* 104 (1960), 93-140.
- [15] BOURBAKI, N., *Espaces Vectoriels Topologiques, Ch. I, II*. Hermann et Cie, Paris (1953).
- [16] BROOKS, J. K. and J. MIKUSIŃSKI., On some theorems in functional analysis. *Bull. Acad. Pol. Sci.* (3) XVII (1970), 151-155.
- [17] DUNKL, C. F. and D. E. RAMIREZ, L^p Multipliers on Compact Groups. To appear.