

Peter Dierolf; Jürgen Voigt

Convolution and S' - Convolution of Distributions

In: Zdeněk Frolík (ed.): Abstracta. 7th Winter School on Abstract Analysis.
Czechoslovak Academy of Sciences, Praha, 1979. pp. 19.

Persistent URL: <http://dml.cz/dmlcz/701140>

Terms of use:

© Institute of Mathematics of the Academy of Sciences of the Czech Republic,
1979

Institute of Mathematics of the Czech Academy of Sciences provides access to digitized documents strictly for personal use. Each copy of any part of this document must contain these *Terms of use*.



This document has been digitized, optimized for electronic delivery and stamped with digital signature within the project
DML-CZ: The Czech Digital Mathematics Library <http://dml.cz>

E TH WINTER SCHOOL (1979)

Convolution and $\mathcal{S}'$ -Convolution of Distributions

Peter Dierolf and Jürgen Voigt

Mathematisches Institut der Universität München, Theresienstr. 39,
D - 8000 München 2, Bundesrepublik Deutschland

Abstract. In the first section of this paper we prove a characterization of integrable distributions which shows that the two definitions for the convolution of distributions given by L. SCHWARTZ and W.S. WLADIMIROW are equivalent. In the second section we consider the corresponding situation for the $\mathcal{S}'$ -convolution which was introduced by Y. HIRATA and H. OGATA. We then give an example of two tempered measures whose convolution is a non-tempered measure. This answers a question of R. SHIRAISHI.

AMS Subj. Class.: Primary 46 F 10
Secondary 46 F 05, 42 A 96

Key words and phrases: Convolution of distributions, $\mathcal{S}'$ -convolution for tempered distributions, integrable distributions, exchange formula for the Fourier transformation.