

**KAN EN FUNKSJON OG DENS FOURIER TRANSFORM BEGGE HA
KOMPAKT STØTTE? OG ANDRE SPØRSMÅL MED SAMME SVAR.**

MAGNUS B. LANDSTAD
NTNU

It is well known that there are no non-zero continuous functions on \mathbb{R} with the property that both the function and its Fourier transform have compact support. If we replace \mathbb{R} with a locally compact abelian group, is the same thing true?

One version of the Heisenberg uncertainty principle is that a convolution operator and a multiplication operator on $L^2(\mathbb{R})$ never commute unless one of them is trivial. We shall look at this question (and some others) for a general locally compact group and see that they all have the same solution.