DECONVOLUTION OF MULTI-SENSOR PROBLEMS

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Meisters and Peterson gave an equivalence condition under which the deconvolution problem has solutions when convolvers are given as two characteristic functions on intervals. The solvability of this problem depends only on the ratio of the length of the intervals. In this talk we find the conditions that the deconvolution of multi-sensor problems are solvable. And then we extend the result to the space of Gevrey distributions and we prove that every linear operator S , from Gevrey differentiable function with compact support onto itself, which commutes with translations can be represented as convolution with a unique Gevrey distribution T of compact support. Finally we find explicit formula of deconvolvers when convolvers are satisfying conditions weaker than the equivalence conditions using nonperiodic sampling method.