1015-46-161 **Irina Asekritova*** (`ias@msi.vxu.se`), School of Mathematics and Systems Engineering, Vaxjo University, SE-351 95 Vaxjo, Sweden. *Some New Results in Interpolation of Vector-Valued Spaces and Applications.*

It was shown by M. Cwikel that Lions-Peetre's formula for interpolation of a couple of vector-valued spaces is not valid in the non-diagonal case. However, it turns out that if we consider more than two spaces it is possible to obtain an analog of Lions-Peetre's formula even in the non-diagonal case.

We will discuss some results of real interpolation of a tuple of vector-valued spaces and their applications to interpolation of tuples of Besov, Sobolev, or weighted Lebesque spaces. (Received February 03, 2006)