

P. Vitse, **Few more remarks on the operator valued corona problem**, *Acta Sci. Math. (Szeged)*, 69 (2003), 831–852.

**Abstract**

As is known, the corona theorem is in general not true for a  $H^\infty$  function  $F$  (that is, bounded and holomorphic on the unit disc  $\mathbf{D}$ ) taking values in the space  $L(H)$  of bounded operators on an infinite dimensional separable Hilbert space  $H$ . Combined with a relatively compact range  $F(\mathbf{D})$ , the Grothendieck approximation property (AP), either in  $H^\infty$  or in  $L(H)$ , provides functions satisfying the corona theorem, see [ViCor]. Here we prove by counterexamples that these two methods are independent. We also give some new examples of subspaces of  $L(H)$  and quotient spaces  $H^\infty/BH^\infty$  satisfying (AP). To finish, we give a version of the corona theorem for functions in the operator Nevanlinna class having a relatively compact range.