

# Factorizations of maximal sectorial relations

H. Winkler

Sectorial operators or relations have maximal sectorial extensions. It is shown that some special extensions, namely the Kreĭn-von Neumann and Friedrichs extensions, can be characterized in terms of factorizations. Furthermore, all extremal maximal sectorial extensions of a sectorial relation are characterized in terms of analogous factorizations. As in the case of nonnegative relations, the factorizations of the Kreĭn-von Neumann and Friedrichs extensions lead to a novel approach to the transversality and equality of the extreme extensions and to the notion of positive closability (the Kreĭn-von Neumann extension being an operator). In particular, all extremal maximal sectorial extensions of a bounded sectorial operator are characterized.

The talk is based on a joint work with S. Hassi, A. Sandovici and H. de Snoo.