

THE MAXIMAL SUBSEMIGROUPS  
OF THE IDEALS OF SOME SEMIGROUPS  
OF PARTIAL INJECTIONS

ILINKA DIMITROVA

*Faculty of Mathematics and Natural Science*  
*South-West University "Neofit Rilski"*  
*Blagoevgrad, 2700, Bulgaria*

**e-mail:** [ilinka\\_dimitrova@yahoo.com](mailto:ilinka_dimitrova@yahoo.com)

AND

JÖRG KOPPITZ

*Institute of Mathematics, Potsdam University*  
*Potsdam, 14469, Germany*

**e-mail:** [koppitz@rz.uni-potsdam.de](mailto:koppitz@rz.uni-potsdam.de)

**Abstract**

We study the structure of the ideals of the semigroup  $IO_n$  of all isotone (order-preserving) partial injections as well as of the semigroup  $IM_n$  of all monotone (order-preserving or order-reversing) partial injections on an  $n$ -element set. The main result is the characterization of the maximal subsemigroups of the ideals of  $IO_n$  and  $IM_n$ .

**Keywords:** finite transformation semigroup, isotone and monotone partial transformations, maximal subsemigroups.

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