

## ENVELOPING SEMIGROUPS AND GRAPHICITY OF TRANSFORMATION GROUPS

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In topological dynamics the notion of the enveloping semigroup of a transformation group has been introduced by R. Ellis, and the graphic flow has been defined by J. Auslander and N. Markley.

In the present thesis, we define the u.c. enveloping semigroup of a transformation group  $(X, T, \pi)$  as the closure of the set  $\pi^T$  of all maps  $\pi^t$  with  $t \in T$  for the uniform convergence topology on  $X^X$  having a semigroup structure. We also introduce the notion of the graphic flow into general transformation groups. The main purpose of this thesis is to find some properties on the u.c. enveloping semigroups and the equicontinuity of transformation groups, and to extend the graphicity to general transformation groups. In this thesis, by a graphic transformation group we mean a totally minimal transformation group  $(X, T)$  (i. e., all transformation groups  $(X, S)$  with  $S$  nontrivial subgroup of  $T$  are minimal) such that the only minimal subsets of the product transformation group  $(X \times X, T)$  are the graphs  $I'_t = \{(x, xt) \mid x \in X\}$  with  $t \in T$ .

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