REPRESENTATIONS OF TOPOLOGICAL ALGEBRAS BY PROJECTIVE LIMITS

MATI ABEL[1]

Communicated by Z. A. Lykova

ABSTRACT. It is shown that a) it is possible to define the topology of any topological algebra by a collection of F-seminorms, b) every complete locally uniformly absorbent (complete locally A-pseudoconvex) Hausdorff algebra is topologically isomorphic to a projective limit of metrizable locally uniformly absorbent algebras (respectively, A-(k-normed) algebras, where $k \in (0, 1]$ varies, c) every complete locally idempotent (complete locally m-pseudoconvex) Hausdorff algebra is topologically isomorphic to a projective limit of locally idempotent Fréchet algebras (respectively, k-Banach algebras, where $k \in (0, 1]$ varies) and every m-algebra is locally m-pseudoconvex. Condition for submultiplicativity of F-seminorm is given.

[1] INSTITUTE OF MATHEMATICS, UNIVERSITY OF TARTU, 2 J. LIIVI STR., ROOM 614, 50409 TARTU, ESTONIA.
E-mail address: mati.abel@ut.ee