

# EXISTENCE RESULTS OF PSEUDO-ALMOST AUTOMORPHIC SOLUTIONS OF SEMILINEAR EVOLUTION EQUATIONS

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## ABSTRACT

The present paper introduces and studies a new class of functions called  $\mathcal{S}^{\{p,q(x)\}}$ -pseudo-almost automorphic functions. The construction of these new spaces makes extensive use of Lebesgue spaces with variable exponents  $\mathcal{S}^{\{p,q(x)\}}$ . Properties of these spaces are investigated including some composition theorems. The existence of pseudo-almost automorphic solutions to some differential equations with  $\mathcal{S}^{\{p,q(x)\}}$ -pseudo-almost automorphic coefficients will also be studied.

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