

# Potential theoretics notions with respect to a multivalued operator II

Emil MOLDOVEANU\*

September, 2011

## Abstract

In the previous paper ([7]), we presented in the framework of a functional space and, for a monotone operator (more precisely, for a monotone operator with a compact primitive) we have defined potentials and have proved some properties of them, especially connected with contractions. In this second part we continue with the presentation of some principles of Potential Theory which are satisfied in this framework: Condenser Principle and Balayage Principle. We also prove that a good capacity can be defined. In the introduction, we recall without proof, some notions and results from ([7]). Section 2 is dedicated to condenser principle and to balayage principle. We end with a section in which we define a good capacity.

**2010 Mathematics Subject Classification:** Primary 31C45, 31A15; Secondary 31E99, 47H05.

**Key words and phrases:** potential, convex functional, monotone operator, subdifferential, condenser principle, balayage principle, capacity.

## 1 Introduction

For the convenience of the reader, we recall the main notions and conditions we used in [7].

---

\*Department of Mathematics and Computer Sciences, University of Pitesti, 1 Târgu din Vale Street, 110040 Pitești, România, [emil.moldoveanu@upit.ro](mailto:emil.moldoveanu@upit.ro)