

**Nicu Boboc: Resistance forms on a set.**

**Abstract:** We introduce the notion of Green potentials and Green co-potentials associated with a given resistance form on a set  $X$ .

If the metric space  $(X, d)$  is separable where  $d$  is the distance associated with the given resistance form on  $X$  then for any finite measure  $\mu$  which charges any non-empty open set and integrates the distance function we associate two subMarkovian resolvent of kernels  $\mathcal{G}^\mu, {}^*\mathcal{G}^\mu$  on  $X$  which are in duality with respect to  $\mu$  such that the excessive (resp. co-excessive) functions with respect to the given resistance form coincides with the excessive (resp. co-excessive) functions with respect to  $\mathcal{G}^\mu$  (resp.  ${}^*\mathcal{G}^\mu$ ).

We give also a characterization of the resistance form on  $X$  such that these subMarkovian resolvents  $\mathcal{G}^\mu$  and  ${}^*\mathcal{G}^\mu$  are associated with two right Markov processes in duality with respect to  $\mu$ .