

Φ -Harmonic Functions on Graphs

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Let Φ be a function with some special properties. Properly speaking, it is an N-function. In our talk we will consider a number of aspects of Φ -harmonic analysis on graphs. In particular, we will introduce the key definitions and will reveal that the ones in question are well-defined. Also we will give an overview of our results that bring discrete analogs of classical theorems for harmonic function in the usual sense: uniqueness theorem, Harnack's inequality, Harnack's principle. Our work generalizes results obtained in [1].

References

- [1] I. Holopainen, P. Soardi, p-harmonic functions on graphs and manifolds. *Manuscripta mathematica* **94(1)** (1997) 95–110.