**The Cones of monoton functions generated by generalized potentials**

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(joint work with Amiran Gogatishvili and Abek Azhar)

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**Abstract**

We present characterizations of the relations of the cones of monotone functions generated by generalized potentials modeled upon weighted Lorentz spaces. We will obtained O’Neil type inequality, using these estimates we will study boundedness of generalised potentials in weighted Lorents spaces. This problem is redusing to study boundedness of Cesaro and Copson operators in weighted Lebesgue spaces restricted on the cone of monoton functions. Aslo we will consider restrictions on the cone of double monoton functions (quasicoancave functions). We will used results obtained by Gogatishvili and Stepanov [1]. Gogatishvili and Neves [2], W.D. Evans, A. Gogatishvili and B. Opic [3]

**Keywords:** Cones of monoton functions, generalized potentials, Lorentz space, O’Neil type inequality, Cesaro and Copson operators

**References:**

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