1145-35-1298 **Dorina Mitrea*** (`mitread@missouri.edu`). *Fatou's Theorem, Poisson's Integral, and Local Maximum Principle for second order systems.*

Let L be a second order, homogeneous, constant (complex) coefficient system satisfying the Legendre-Hadamard ellipticity condition in $\mathbb{R}^n$. Then any null-solution u of L in the upper-half space $\mathbb{R}^n_+$ subject to the subcritical growth condition $\int_1^\infty \big(R^{-2} \sup_{B^+(0,R)} |u|\big)\, dR < \infty$ has a non-tangential boundary trace at a.e. point on $\mathbb{R}^{n-1} \equiv \partial\mathbb{R}^n_+$, the function u may be expressed as the convolution of its boundary trace with the Poisson kernel associated with L in $\mathbb{R}^n_+$, and u satisfies a suitable Maximum Principle. The above growth condition is in the nature of best possible.

In particular, these results may be employed to establish the well-posedness of the Dirichlet boundary value problem for L in $\mathbb{R}^n_+$ with boundary datum in a class of functions allowed to have sublinear growth at infinity. (Received September 20, 2018)