1038-32-128 **Marciniak Aneta Malgorzata*** (mammw3@mst.edu), Mathematics&Statistics Department, 202 Rolla Building, 400 W. 12th Street, Rolla, MO 65409-0020. *Holomorpic extensions in toric varieties.*

Combinatorial structure of toric varieties allows a reasonable approach to classical analysis problems on complex manifolds. During my talk I will discuss the following holomorphic extension phenomena: We say that the Hartogs phenomenon holds in a noncompact complex manifold X if for every compact set $K \subset X$ and for every holomorphic function f on $X \setminus K$, there exists a holomorphic extension of f on X. It is possible to determine which smooth toric varieties allow or do not allow the Hartogs phenomena. We say that the Hartogs-Bochner phenomenon holds for a domain D in a compact complex manifold X if every smooth Cauchy-Riemann function f on the boundary of D can be extended holomorphically to D and smoothly up to the boundary. If the Hartogs-Bochner phenomenon holds for every domain $D \subset X$, then we say that it holds in X. It is possible to describe which smooth compact toric varieties the Hartogs-Bochner phenomenon holds or does not hold for. And it is possible to characterize the domains which it holds or does not hold for. (Received February 04, 2008)