1056-35-661 **Andras Domokos***, Department of Mathematics and Statistics, California State University at Sacramento, Sacramento, CA 95819. *Subelliptic regularity in non-nilpotent cases.*

In this talk we will present results regarding the regularity of weak solutions for subelliptic quasilinear PDE's of the form

$$\sum_{i=1}^{n} X_i^* \left(a_i(x, \mathfrak{X}u)\right) = 0\,, \text{ in } \Omega \subset \mathbb{R}^N\,, \tag{1}$$

where $n \leq N$ and $\mathfrak{X} = \{X_1, ..., X_n\}$ is a Hörmander system of vector fields. We will focus on nonlinear and non-nilpotent cases which were the least studied. (Received September 15, 2009)