Meeting: 1000, , EBENFELT,

1000-32-2 **Peter Ebenfelt*** (pebenfel@math.ucsd.edu), Department of Mathematics, University of California, San Diego, La Jolla, CA 92093. *Analytic and geometric properties of CR manifolds and their mappings.*

Let M be a (suitably generic) real submanifold of N-dimensional complex euclidian space $\mathbb{C}^N$ (or, more generally, of an N-dimensional complex manifold). The complex structure of the ambient space induces a partial complex structure, a so-called CR structure, on M. CR structures in general are much more rigid than complex structures, and even their local classification is far from understood. One way to a better understanding of these real submanifolds is to study properties of mappings between them. In this talk, we shall discuss some recent results and open problems on analytic (e.g. finite jet determination, regularity) and geometric (e.g. transversality) properties of CR mappings. (Received August 19, 2004)