1000-53-135 **Christine Escher*** (`tine@math.orst.edu`), Department of Mathematics, Oregon State University, Corvallis, OR 97331, and **Wolfgang Ziller**. *The topology of Eschenburg spaces and 3-Sasakian manifolds.* Preliminary report.

In this talk we describe in detail the topology of an infinite family of seven dimensional spaces of positive sectional curvature. This family, introduced by Eschenburg in 1982, specializes to various previously known families for which the topological techniques simplify significantly. We will describe a complete set of topological invariants. These invariants will then be used to portray interesting phenomena within this family of positively curved manifolds. (Received August 22, 2004)