

# ON A QUESTION OF ARHANGEL'SKII ABOUT $G_\delta$ COVERS OF COMPACT SPACES

SANTI SPADARO

*This talk is based mainly on joint work with Paul Szeptycki from York University.* In his invited talk at the 1970 International Congress of Mathematicians in Nice, France, Arhangel'skii asked whether every  $G_\delta$ -cover of a compact space has a continuum sized subcollection with a  $G_\delta$ -dense union. We will sketch a counterexample to that question. We will also speak about related positive results and their applications to cardinal estimates for homogeneous compacta.

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE, UNIVERSITY OF CATANIA, CITTÁ UNIVERSITARIA, VIALE A. DORIA 6, 95125 CATANIA, ITALY