1031-03-35 **Ilijas Farah*** (`ifarah@yorku.ca`), Department of Mathematics and Statistics, York University, Toronto, Ontario M6G 1N5, Canada. *Open colorings and automorphisms of the Calkin algebra.*

Consider a separable infinite-dimensional complex Hilbert space H. Let B(H) be its algebra of bounded linear operators and K(H) its ideal of compact operators. The quotient is a C*-algebra known as the Calkin algebra. The Open Coloring Axiom implies that all automorphisms of the Calkin algebra are inner. Together with a 2006 Phillips–Weaver construction of an outer automorphism using the Continuum Hypothesis, this gives a complete solution to a 1977 problem of Brown–Douglas–Fillmore. In this talk I will concentrate on the role of the Open Coloring Axiom in the proof. (Received July 24, 2007)