

1067-AF-1545 **Alexander Soifer*** (asoifer@uccs.edu), University of Colorado, Boulder, CO 80309. *Chromatic Number of the Plane: Yesterday, Today & Tomorrow.*

This is my favorite open problem in mathematics. In its 60 years of existence, the problem has withstood all assaults, using combinatorial, geometry, abstract algebra, topology, measure theory, graph theory, and set theory. This history of the problem (Yesterday) resembles that of the Four Color Problem. Yet, we cannot even confidently conjecture the answer among the four candidates: 4, 5, 6, or 7. The 60 years have not been wasted: we have a good number of exciting results (Today) — and we have challenging conjectures (Tomorrow).

Much of my recent “The Mathematical Coloring Book,” Springer, New York, 2009, has been dedicated to this problem. In this talk, I will present some of the problem’s Yesterday, Today, and Tomorrow. (Received September 21, 2010)