1086-05-2101 **Nancy Eaton**, **Adam Gilbert** and **A. M. Heissan*** (mia@math.uri.edu). *A coil G on n vertices is four-colorable.* Preliminary report.

Let G be a planar, inner-triangulated graph on n vertices whose depth-first search tree (DFS) is the path $(v_1, v_2, \ldots, v_n)$. We call such a graph a *coil*. We define the *coil edges* to be the edges of the form (v_i, v_{i+1}). All other edges of G are *crossing edges*. The *up-neighborhood* of v_i is the non-empty set of vertices with indices all less than $i-1$. If m is the number of crossing edges and β is the number of up-neighborhoods in G, we show that G is four-colorable with at least $4 \cdot 3^{n-1} \left(\frac{2}{3}\right)^m \left(\frac{3}{4}\right)^{\beta-1}$ distinct colorings. (Received September 24, 2012)