Stan Dziobiak* (smdziobi@olemiss.edu), Department of Mathematics, University of Mississippi, Hume Hall 305, University, MS 38677-1848, and Guoli Ding (ding@math.lsu.edu), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803-4918.

Obstructions for Apex-Series-Parallel Graphs. Preliminary report.

The famous Graph Minor Theorem of Robertson and Seymour states that every minor-closed class $C$ of graphs can be characterized by a finite list of minor-minimal non-members, called obstructions of $C$, and denoted by $\text{ob}(C)$. Given a minor-closed class of graphs $C$ and its obstruction set $\text{ob}(C)$, the problem of determining $\text{ob}(C^*)$ (where $C^*$ denotes the class of graphs that contain a vertex whose deletion leaves a graph in $C$) is already very hard if $C$ is the class of planar graphs, has only been solved (completely) for a few non-trivial minor-closed classes of graphs $C$. In this talk, we report on the progress towards the solution for series-parallel graphs. (Received January 27, 2014)