

1116-S5-1045 **Peter A. Loeb*** (ploeb@illinois.edu). *Integration and local maximal functions.*

Differentiation and absolute continuity are difficult topics for students in a course on integration. The talk outlines a simplified approach that has cut almost in half the time previously spent by the speaker in covering these topics. The simplified approach uses a local maximal function. The advantage gained with this device is that many limit results can be established just by proving them for sets where the relevant input vanishes. The discussion also employs the Radó-Aldaz optimal covering theorem for the real-line. (Received September 16, 2015)