



## Analysis Seminar

**Title:** A strong form of Plessner's theorem I

**Speaker:** S. Gardiner

**Date:** Tue 11th February 2020 at 4:20PM

**Location:** Seminar Room SCN 1.25

**Abstract:** Let  $f$  be a holomorphic, or even meromorphic, function on the unit disc. Plessner's theorem then says that, for almost every boundary point  $\zeta$ , either (i)  $f$  has a finite nontangential limit at  $\zeta$ , or (ii) the image  $f(S)$  of any Stolz angle  $S$  at  $\zeta$  is dense in the complex plane. This paper shows that statement (ii) can be replaced by a much stronger assertion. This new theorem and its analogue for harmonic functions on halfspaces also strengthen classical results of Spencer, Stein and Carleson.

(This is joint work with Myrto Manolaki.)