

**Analysis Seminar Thursday March 28, 2013**

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**Title:** *Weighted composition operators from Besov spaces into  $H_\mu^\infty$*

**Abstract:** Let  $\mu$  denote a positive continuous function on the open unit disk  $\mathbb{D}$  and  $H_\mu^\infty$  the space of analytic functions on  $\mathbb{D}$  such that  $\sup_{z \in \mathbb{D}} \mu(z)|f(z)| < \infty$ . We characterize the bounded weighted composition operators from the Besov spaces  $B_p$  ( $1 \leq p < \infty$ ) into  $H_\mu^\infty$  and determine precisely their operator norms. Moreover we derive an approximation of the essential norm that yields a characterization of the compact weighted composition operators. In the case  $p = 2$ , where  $B_2$  is the Dirichlet space  $\mathcal{D}$ , we obtain an explicit formula for the essential norm. This is joint work with Flavia Colonna.