1035-05-1659 **Jeong Ok Choi*** (jchoi@math.uiuc.edu), 250 Altgeld Hall 1409 W.Green, Urbana, IL 61801.
Forbidden characterization of the fractional weak discrepancy of posets.

For a finite poset $P = (X, \prec)$ the fractional weak discrepancy (denoted by $wd_F(P)$) is defined as the minimum value t for which there is a function $f : X \longrightarrow \mathbb{R}$ such that $(1) f(x) + 1 \leq f(y)$ whenever $x \prec y$ and $(2) |f(x) - f(y)| \leq t$ whenever $x \| y$ in P. It is known that $wd_F(P) < 1$ if and only if P is a semiorder. In other words, using a forbidden characterization of semiorders $wd_F(P) < 1$ if and only if P does not contain either $\mathbf{2} + \mathbf{2}$ or $\mathbf{1} + \mathbf{3}$ as its subposet. In this talk, for every nonnegative integer m we will provide a family of forbidden subposets of P as an equivalent condition of being that $wd_F(P) < m$. (Received September 20, 2007)