1108-42-378 **Leonid Slavin*** (leonid.slavin@uc.edu) and **Vasily Vasyunin**. *Inequalities for BMO on α-trees.*

We develop technical tools that enable the use of Bellman functions for BMO defined on α-trees, which are structures that generalize dyadic lattices. As applications, we prove the integral John–Nirenberg inequality and an inequality relating L^1- and L^2-oscillations for BMO on α-trees, with explicit constants. When the tree in question is the collection of all dyadic cubes in $\mathbb{R}^n$, the inequalities proved are sharp. We also reformulate the John–Nirenberg inequality for the continuous BMO in terms of special martingales generated by BMO functions. The tools presented can be used for any function class that corresponds to a non-convex Bellman domain. (Received January 19, 2015)