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R Banaelos* (banaelos@purdue.edu), Department of Mathematics, Purdue University, West Lafayette, IN 47907, **D Kim**, IN , and **M Kwaśnicki**, IN. *Martingale Transforms and discrete singular integrals*. Preliminary report.

We discuss a class of discrete singular integral that arise from conditional expectations of martingale transforms of Doob-h processes in the upper half-space of R^d , $d \geq 1$. The goal is to obtain sharp ℓ^p norm inequalities for these operator from the corresponding inequalities for martingales. For $d = 1$ these singular integral include the discrete Hilbert transform. This case was treated in a 2018 paper of Banaelos and Kwaśnicki proving a long-standing conjecture concerning its ℓ^p norm. (Received January 13, 2020)