1116-05-2166　　　　　**Hélène Barcelo*** (`hbarcelo@msri.org`), 17 Gauss Way, Berkeley, CA 94720. *Discrete Homotopy and Homology Groups.*

Discrete homotopy theory is a (refined) discrete analogue of homotopy theory, associating a (bigraded) sequence of groups to a simplicial complex, capturing its combinatorial structure, rather than its topological structure. It can be defined for graphs, resulting in algebraic invariants that differ substantially from the classical homotopy groups. One can also define discrete homology groups in analogy to the continuous case. We will review these notions and discuss a surprising application. (Received September 22, 2015)