

1113-05-175

Bruno Benedetti*, Department of Mathematics, University of Miami, Coral Gables, FL 33124,
and **Frank H Lutz** and **Karim A Adiprasito**. *Optimal discrete Morse vectors are not unique.*

In classical Morse theory, for any given manifold there is always a unique optimal Morse vector (=the vector counting the number of critical points of index $0,1,\dots$, up to the dimension). It turns out that in Forman's discrete version of Morse theory, this is no longer the case. I will sketch how to construct a contractible 3-complex on which the 'best' discrete Morse vectors are $(1,0,1,1)$ and $(1,1,1,0)$, because $(1,0,0,0)$ is unreachable. (Received August 20, 2015)