Deformation Theory and Operads

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July 9, 2012

[Review. Not many notes on a very clear exposition because I cut my finger.]

Definition 1 $CH_\cdot(A,M) = Tor_\cdot^{A^e}(A,M)$
$CH^\cdot(A,M) = Ext^\cdot_{A^e}(A,M)$

There are identifications of $CH_n(A,M) = A^{\otimes n+2} \otimes_{A^e} M$ with $A^{\otimes n} \otimes M$ and $CH^n = Hom(A^{\otimes n+2}, M)$ with $Hom(A^{\otimes n}, M)$.

For TV you have the small resolution $TV \otimes V \otimes TV \to TV \otimes TV$. This is a resolution of TV as a $TV \otimes TV^{op}$ module. We need to show that $TV \otimes V \otimes TV \to TV \otimes TV \to TV$ is exact. The nonobvious map is $b'(v_1, \ldots, v_n) \otimes w \otimes (u_1, \ldots, u_m)) = (v_1, \ldots, v_n, w) \otimes (u_1, \ldots, u_m) - (v_1, \ldots, v_n) \otimes (w, u_1, \ldots, u_m)$