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Amanda I Beecher* (amanda.beecher@usma.edu), D/Math, USMA, West Point, NY 10996,
and **Timothy B.P Clark** and **Alexandre Tchernev**. *Describing a multigraded resolution from
a lattice*. Preliminary report.

This talk will discuss a construction of a free resolution of a multigraded module from the so-called lattice of T-flats. We will focus on the differentials, since the free modules have previously been shown to be canonically isomorphic to those of the T-resolution constructed by Tchernev. We utilize a homotopy equivalence of Ziegler which relates the free modules to the order complex of part of the lattice of T-flats. This enables us to use a construction first introduced in a paper by Clark to map these complexes along a certain Mayer-Vietoris sequence. We use the basis found by Beecher in the description of the free modules to map the elements directly. The strategy has been an attempt to describe the differentials of the T-resolution combinatorially. (Received September 03, 2009)