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Vaughn Climenhaga (vclimenh@math.utoronto.ca) and **Daniel J Thompson***
(thompson@math.psu.edu). *Uniqueness of Equilibrium States: Constructive Techniques in a
Non-Uniform, Non-Markov Setting.*

This work establishes uniqueness of equilibrium states for

1) a large class of shift spaces which includes every beta-shift; 2) a large class of potential functions which strictly includes those with the Bowen property.

As an application, our method yields new results in the theory of thermodynamic formalism for piecewise monotonic interval maps. Our method allows us to handle a variety of systems without a Markov structure, and it covers a class of potentials that are well behaved away from a 'small' set; for example, an indifferent fixed point or a point of discontinuity. Under a mild additional hypothesis, we establish (weighted) equidistribution results for the periodic orbits of the space. Our results can also be formulated so that they apply to some higher dimensional examples of geometric interest. (Received September 19, 2011)