1131-43-164 **W Spencer Leslie*** (lesliew@bc.edu). A Generalized Theta lifting and CAP Representations. Theta representations are fundamental automorphic representations on covers of reductive groups which generalize Jacobi's theta function, as well as the oscillator (Weil) representation used in the theory of the theta correspondence. In this talk, we study the theta representation on the four-fold cover of the symplectic group, and use it to construct a new lifting of automorphic forms on covering groups. This construction fits nicely into a conjectured extension of Arthur's conjectures to covering groups, and produces the first examples of CAP representations on higher covers. (Received July 12, 2017)