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Analysis of the Dynamical Cluster Approximation for the Triangular Lattice Hubbard Model CHRISTOPHER VARNEY, RICHARD SCALETTAR, University of California, Davis, MARK JARRELL, ALEXANDRU MACRIDIN, University of Cincinnati, BRIAN MORITZ, University of Waterloo — The behavior of correlated electrons on triangular lattices is attracting increasing interest driven by experimental systems such as the cobaltates. To facilitate understanding of these correlations, we study the Hubbard model using Determinant Quantum Monte Carlo and the Dynamical Cluster Approximation. The spin, charge and pairing response functions obtained with the two methods are compared as a function of spatial lattice and cluster size, respectively, and the one particle spectrum is calculated.

		Christopher Varney
X	Prefer Oral Session	cnvarney@ucdavis.edu
	Prefer Poster Session	University of California, Davis

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