1056-05-1806 **M Amin Bahmanian*** (amin.b@auburn.edu), Auburn University, Department of Mathematics, Roosevelt Drive, Parker Hall 221, Auburn, AL 36849-0001, and **C A Rodger** (rodgec1@auburn.edu), Auburn University, Department of Mathematics, Roosevelt Drive, Parker Hall, Auburn, AL 36849. *Multigraph Detachments, Hamiltonian Decompositions and Graph Embeddings.*

In this talk we present some recent progresses we have made on detachments of multigraphs using edge coloring techniques. We then show that these imply necessary and sufficient conditions for $K(a_1, \ldots, a_n, \lambda_1, \lambda_2)$ to be decomposable into Hamilton cycles or to be decomposable into Hamilton cycles and a single 1-factor, where $K(a_1, \ldots, a_p; \lambda_1, \lambda_2)$ is a graph with p parts, the i^{th} part having size a_i, in which the multiplicity of each pair of vertices in the same part (in different parts) is λ_1 (λ_2, respectively). An attempt to generalize this decomposition result will be given thereafter with a relevant conjecture. Finally, if time permits, we use our detachment technique to prove some graph embedding problems. (Received September 22, 2009)