1035-05-88 **Tim Hsu** (hsu@math.sjsu.edu), Department of Mathematics, San Jose State University, San Jose, CA 95192-0103, and **Katherine Shelley*** (kshelley10408@msn.com), Department of Mathematics, San Jose State University, San Jose, CA 95192-0103. *Matchwebs and their enumeration.* Preliminary report.

A bipartite graph Λ with vertex set $X \cup Y$ is said to be *normalized matching* if $\frac{|\Gamma(A)|}{|A|} \geq \frac{|Y|}{|X|}$ for any nonempty $A \subseteq X$, where $\Gamma(A)$ denotes the set of neighbors of A in Y. (In other words, Λ is normalized matching if it satisfies a proportional version of the Hall Marriage criterion.) A *matchweb* is a connected normalized matching bipartite graph Λ that is minimal in the sense that if any edge of Λ is removed, then Λ is no longer normalized matching. Matchwebs first appeared in work of West, Harper, and Daykin on normalized matching (LYM) posets, and have been used in recent work of Hsu, Logan, and Shahriari in the same area.

In this talk, after giving basic background, definitions, and results on matchwebs, we describe our ongoing efforts to reduce the enumeration of matchwebs to the enumeration of *core graphs* (essentially, marked trees). Specifically, using flow-theoretic techniques, we show how to recover a matchweb from its core, and prove uniqueness theorems stating that, for example, at most one matchweb of a given size can have a given core. We also discuss open problems in this area. (Received August 13, 2007)