1114-57-56 Louis H Kauffman* (kauffman@uic.edu), Louis H Kauffman, Math UIC, 851 South Morgan Street, Chicago, IL 60607-7045, and Allison Henrich (henricha@seattleu.edu), Allison Henrich, Department of Mathematics, Seattle University, Seattle, WA 98122. *Rigid Vertex Graph Embeddings and Pseudo-Knots.*

This talk will discuss how the formulation of 4-valent rigid vertex graph embeddings in three-dimensional space is related to the concept of pseudo-knots. A pseudo-knot diagram is a knot diagram where certain crossings are marked as 'ambiguous', that is, without a decision about whether the crossing is an over-crossing or an under-crossing. The naturally motivated set of moves (analogous to the Reidemeister moves) for pseudo-knots is formally the same as adding one move to the set of moves for rigid-vertex graphs. (One allows the addition or removal of a trivial loop at a 4-valent vertex.) Thus we have a mapping from rigid vertex link diagrams to pseudo link diagrams by replacing 4-valent vertices by pseudo-crossings. This mapping respects the moves in these categories and is many to one on the equivalence classes. By using this correspondence we discuss methods for obtaining invariants of both rigid-vertex graph embeddings and invariants of pseudo-knots. (Received August 03, 2015)