1053-57-74   **Allison K Henrich*** (`henricha@seattleu.edu`), 901 12th Ave., Seattle, WA 98122.
Pseudodiagrams of classical and virtual knots. Preliminary report.

Recently, Ryo Hanaki introduced the concept of a pseudodiagram of a knot. A pseudodiagram is a knot diagram containing only partial crossing information. A natural question to ask is how much crossing information is needed in a given pseudodiagram to determine whether the knot is indeed knotted. Building on Hanaki's idea, we propose an analogous theory for virtual knots. (Virtual knot theory is a generalization of knot theory due to Lou Kauffman.) Given a virtual pseudodiagram, how much crossing information is needed to determine whether the diagram represents a classical or non-classical virtual knot? We have begun to address these questions and have used our results to find new bounds for classical and virtual unknotting numbers as well as classical knot genus. This is joint work with students from the Virtual Knot Theory group in the 2009 SMALL REU. (Received August 12, 2009)

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