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Allison Henrich* (henricha@seattleu.edu), 901 12th Ave, Seattle, WA 98118, and **Alissa Crans** and **Sam Nelson**. *Virtual Knot Invariants from the Alexander Biquandle: A Groebner Basis Approach*.

The Alexander virtual biquandle of a virtual knot or link is a module over a 2-variable Laurent polynomial ring which is an invariant of virtual knots and links. The elementary ideals of this module are then invariants of virtual isotopy which determine both the generalized Alexander polynomial (also known as the Sawollek polynomial) for virtual knots and the classical Alexander polynomial for classical knots. For a fixed monomial ordering $<$, the Groebner bases for these ideals are computable, comparable invariants which fully determine the elementary ideals and which generalize and unify the classical and generalized Alexander polynomials. We will look at examples and discuss future directions for this work. (Received January 13, 2012)