1161-05-178   **Yuanan Diao**, **Gabor Hetyei** and **Van Anh Pham***, 9201 University City Blvd, Department of Mathematics and Statistics, Charlotte, NC 28223. *Writhe-like invariants for alternating link diagrams derived from Seifert graphs.* Preliminary report.

In this paper, we introduce quantities that are derived from Seifert graphs of reduced alternating link diagrams. We prove that they are "writhe-like" invariants; that is to say, they are invariant among reduced alternating link diagrams. The determination of these invariants are elementary and non-recursive, so they are easy to calculate. We demonstrate that different alternating links can be easily distinguished by one of these new invariants. As an application, we also derive an if-and-only-if condition for a strongly invertible rational link. (Received August 16, 2020)