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Benoît Guerville-Ballé* (benoit.guerville-balle@math.cnrs.fr), Department of Mathematics, Tokyo Gakugei University, Koganei-shi, Tokyo, 184-8501, Japan. *Linking invariant of line arrangements.*

We construct a topological invariant of line arrangements, which is in some sense an adaptation of the linking number of knot theory. As an application, we show that this invariant distinguishes a new Zariski pair of line arrangements (ie a pair of arrangements having same combinatorics, yet different topology). Futhermore, this example provides the first example of arithmetic Zariski pair with non-isomorphic fundamental group. (Received January 25, 2016)