Consider including A-C of 2011-05/Handout as of May 20

The Pure Virtual Braid Group is Quadratic

Let $k$ be an algebra over a field $F$ with char $F = 0$, and let $\pi: F \to F$ be an "augmentation ideal"; $k/\pi = F$.

Definition: We say that $k$ is quadratic if its associated graded $gr_k = \oplus \pi^n k$ is a quadratic algebra. Alternatively, let $A = Q(k) = \langle \pi^0 \rangle / \ker(\pi_0: \pi^0 k \to \pi^0 F)$ be the "quadratic approximation" to $k$ ($Q$ is a locally functor). Then $k$ is quadratic if the obvious $\pi: A \to gr_k$ is an isomorphism.

Why care for quadraticity?

* In abstract generality, $gr_k$ is a simple algebra version of $k$, and if it is quadratic, it is as simple as it may be with being silly.

* For some concrete of-thortic cases, $A$ is a space of universal Lie algebraic forms, and the "primary approach" to proving quadraticity can be very useful for...

&include many refs.
Work presented to the great algebra masters of the Oregon school, in humble pursuit of their wisdom and advice, in humble acceptance that they knew all and have seen all, and in humble dread that we will inflict boredom upon them.

Footnotes
1. The following is an (im)perfect paper and thesis by Peter Lee. [See ____________]

References

all serious work here is his, page design by DBV.