Knots and links as closed braids in $\mathbb{R}^3$, handlebodies and thickened surfaces

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In this seminar, we will delve into the study of knots and links as closed braids in $\mathbb{R}^3$, handlebodies and thickened surfaces. Building on the foundations presented in recent work, we will approach the subject from a more algebraic perspective. The seminar will explore the equivalence between standard and plat closures of braids in the three settings. A greater focus will be given to the mixed braids in handlebodies, along with a detailed examination of the problem of giving a good definition of standard closure for braids in thickened surfaces. By combining these algebraic tools with geometric intuition, we aim to shed light on the intricate relationships between braids, handlebodies, and their topological properties.