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Title:	Commutator subgroups of singular braid groups
Authors:	Gongopadhyay, Krishnendu (/jspui/browse?type=author&value=Gongopadhyay%2C+Krishnendu)
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Abstract:	The singular braids with n strands, $n \geq 3$, were introduced independently by Baez and Birman. It is known that the monoid formed by the singular braids is embedded in a group that is known as singular braid group, denoted by SG_n . There has been another generalization of braid groups, denoted by GVB_n , $n \geq 3$, which was introduced by Fang as a group of symmetries behind quantum quasi-shuffle structures. The group GVB_n simultaneously generalizes the classical braid group, as well as the virtual braid group on n strands. We investigate the commutator subgroups SG'_n and GVB'_n of these generalized braid groups. We prove that SG'_n is finitely generated if and only if $n \geq 5$, and GVB'_n is finitely generated if and only if $n \geq 4$. Further, we show that both SG'_n and GVB'_n are perfect if and only if $n \geq 5$.
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