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| Title:                  | Commutator subgroups of virtual and welded braid groups  |
| Authors:                | Gongopadhyay, Krishnendu (/jspui/browse?type=author&value=Gongopadhyay%2C+Krishnendu)  |
| Keywords:               | Virtual braid<br>Welded braid<br>Commutator subgroup<br>Perfect group  |
| Issue Date:             | 2019   |
| Publisher:              | World Scientific   |
| Citation:               | International Journal of Algebra and Computation, 29(3),pp. 507-533.   |
| Abstract:               | Let $VB_n$ , respectively $WB_n$ denote the virtual, respectively welded, braid group on $n$ -strands. We study their commutator subgroups $VB'_n=[VB_n,VB_n]$ and $WB'_n=[WB_n,WB_n]$ , respectively. We obtain a set of generators and defining relations for these commutator subgroups. In particular, we prove that $VB'_n$ is finitely generated if and only if $n \geq 4$ , and $WB'_n$ is finitely generated for $n \geq 3$ . Also, we prove that $VB'_3/VB''_3 = \mathbb{Z}_3 \oplus \mathbb{Z}_3 \oplus \mathbb{Z}_3 \oplus \mathbb{Z}^\infty$ , $VB'_4/VB''_4 = \mathbb{Z}_3 \oplus \mathbb{Z}_3 \oplus \mathbb{Z}_3$ , $WB'_3/WB''_3 = \mathbb{Z}_3 \oplus \mathbb{Z}_3 \oplus \mathbb{Z}_3 \oplus \mathbb{Z}$ , $WB'_4/WB''_4 = \mathbb{Z}_3$ , and for $n \geq 5$ the commutator subgroups $VB'_n$ and $WB'_n$ are perfect, i.e. the commutator subgroup is equal to the second commutator subgroup. |
| Description:            | Only IISERM authors are available in the record.   |
| URI:                    | <a href="https://www.worldscientific.com/doi/abs/10.1142/S0218196719500127">https://www.worldscientific.com/doi/abs/10.1142/S0218196719500127</a><br>( <a href="https://www.worldscientific.com/doi/abs/10.1142/S0218196719500127">https://www.worldscientific.com/doi/abs/10.1142/S0218196719500127</a> )<br><a href="http://hdl.handle.net/123456789/2081">http://hdl.handle.net/123456789/2081</a> ( <a href="http://hdl.handle.net/123456789/2081">http://hdl.handle.net/123456789/2081</a> )  |
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