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Title:	Graded Betti numbers of some families of circulant graphs
Authors:	Roy, Amit (/jspui/browse?type=author&value=Roy%2C+Amit)
Keywords:	Betti numbers Buchsbaum Castelnuovo–Mumford regularity circulant graphs
Issue Date:	2021
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Citation:	Rocky Mountain Journal of Mathematics, 51(6).
Abstract:	Let $G$ be the circulant graph $C_n(S)$ with $S \subseteq \{1, 2, \dots, \lfloor n/2 \rfloor\}$ , and let $I(G)$ denote the edge ideal in the polynomial ring $R = K[x_0, x_1, \dots, x_{n-1}]$ over a field $K$ . In this paper we compute the $N$ -graded Betti numbers of the edge ideals of three families of circulant graphs $C_n(1, 2, \dots, \lfloor n/2 \rfloor)$ , $C_{lm}(1, 2, \dots, \lfloor n/2 \rfloor, \lfloor l/2 \rfloor, \dots, \lfloor m/2 \rfloor)$ and $C_{lm}(1, 2, \dots, \lfloor n/2 \rfloor, \lfloor l/2 \rfloor, \dots, \lfloor m/2 \rfloor)$ . Other algebraic and combinatorial properties like regularity, projective dimension, induced matching number and when such graphs are well-covered, Cohen–Macaulay, sequentially Cohen–Macaulay, Buchsbaum and $S_2$ are also discussed.
Description:	Only IISER Mohali authors are available in the record.
URI:	<a href="https://doi.org/10.1216/rmj.2021.51.1919">https://doi.org/10.1216/rmj.2021.51.1919</a> ( <a href="https://doi.org/10.1216/rmj.2021.51.1919">https://doi.org/10.1216/rmj.2021.51.1919</a> ) <a href="http://hdl.handle.net/123456789/4332">http://hdl.handle.net/123456789/4332</a> ( <a href="http://hdl.handle.net/123456789/4332">http://hdl.handle.net/123456789/4332</a> )
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