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Title:	Monomial ideals induced by permutations avoiding patterns
Authors:	Kumar, Chanchal (/jspui/browse?type=author&value=Kumar%2C+Chanchal)
Keywords:	Minimal Cellular Resolution
Issue Date:	2019
Publisher:	Springer Link
Citation:	Proceedings of the Indian Academy of Sciences: Mathematical Sciences, 129(1).
Abstract:	Let S (or T) be the set of permutations of $[n]=\{1, \dots, n\}$ avoiding 123 and 132 patterns (or avoiding 123, 132 and 213 patterns). The monomial ideals $IS=(x\sigma=\prod_{i=1}^n x_{\sigma(i)}: \sigma \in S)$ and $IT=(x\sigma: \sigma \in T)$ in the polynomial ring $R=k[x_1, \dots, x_n]$ over a field k have many interesting properties. The Alexander dual $I[\mathbf{n}]S$ of IS with respect to $\mathbf{n}=(n, \dots, n)$ has the minimal cellular resolution supported on the order complex $\Delta(\Sigma_n)$ of a poset Σ_n . The Alexander dual $I[\mathbf{n}]T$ also has the minimal cellular resolution supported on the order complex $\Delta(\tilde{\Sigma}_n)$ of a poset $\tilde{\Sigma}_n$. The number of standard monomials of the Artinian quotient $R/I[\mathbf{n}]S$ is given by the number of irreducible (or indecomposable) permutations of $[n+1]$, while the number of standard monomials of the Artinian quotient $R/I[\mathbf{n}]T$ is given by the number of permutations of $[n+1]$ having no substring $\{l, l+1\}$.
Description:	Only IISERM authors are available in the record.
URI:	https://link.springer.com/article/10.1007/s12044-018-0453-9 (https://link.springer.com/article/10.1007/s12044-018-0453-9) http://hdl.handle.net/123456789/2227 (http://hdl.handle.net/123456789/2227)
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