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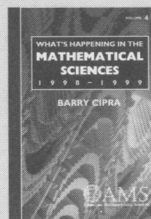


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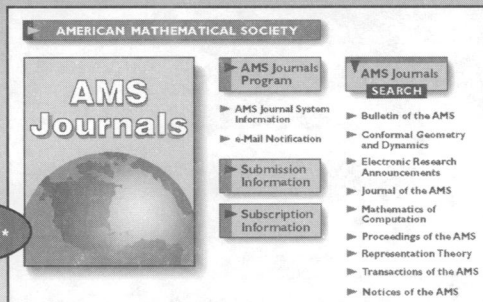
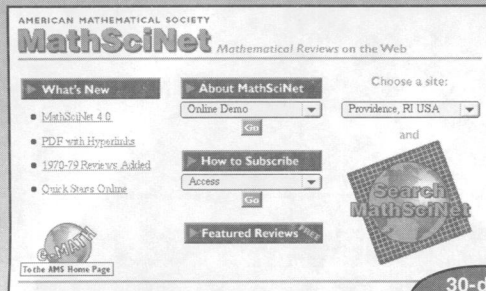
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- [2] 98k:28020 Maslen, David K.; Rockmore, Daniel N. Generalized FFTs—a survey of the recent results. *Groups and computation, II (New Brunswick, NJ, 1995)*, 183-237, DIMACS Ser. Discrete Math. Theoret. Comput. Sci., 28, Amer. Math. Soc., Providence, RI, 1997. (Reviewer: D. F. Holt) 20C:40 (65T20)
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The efficient computation of Fourier transforms on the symmetric group
David K. Maslen

Abstract. This paper introduces new techniques for the efficient computation of Fourier transforms on symmetric groups and their homogeneous spaces. We replace the matrix multiplications in Clausen's algorithm with sums indexed by combinatorial objects that generalize Young tableaux, and write the result in a form similar to Horner's rule. The algorithm we obtain computes the Fourier transform of a function on S_n in no more than $\frac{3}{2}n(n-1)|S_n|$ multiplications and the same number of additions. Analysis of our algorithm leads to several combinatorial problems that generalize path counting. We prove corresponding results for inverse transforms and transforms on homogeneous spaces.

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87j:32067 32G15 (20H05, 30F40)
Bers, Lipman (1-CLMB)
Holomorphic families of isomorphisms of Möbius groups.
J. Math. Kyoto Univ. 26 (1986), no. 1, 73-76.

In this short note the author again uses the idea of a harmonic Beltrami differential to give a new proof and a slight extension of a result of Sullivan. He generalizes the context of "\$\Lambda\$-lemma" so that one has a holomorphic family of injections of a set \$S\$ which depend on a parameter \$\lambda\$ which varies in an arbitrary domain \$D\$ in the plane. If \$S\$ is a subgroup of \$S^2\$ (the complex plane) leaving \$\Lambda\$ invariant and \$\Lambda\$ is a member of the family, \$\Lambda\$ induces an isomorphism \$S \to \Lambda\$ which is a member of the family. Using results of joint work with Royden and the continuity method, the author proves that if \$\Lambda\$ is induced by a quasiconformal self-map of the Riemann sphere for some \$\lambda \in D\$, then so are all \$\Lambda\$ in \$D\$. As an application of this result, the author proves a structural stability theorem for a very general class (including infinitely generated ones) of Kleinian groups.

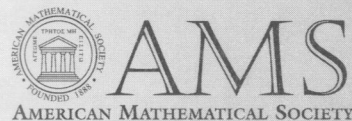
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