

Siam Journal on Applied Mathematics

VOLUME 22, NUMBER 2, MARCH 1972

- A Distributed RC Active Delay Line *D. Hazony and R. Sobecks*  
 Isoperimetric Inequality for Some Eigenvalues of an Inhomogeneous, Free Membrane  
*Catherine Bandle*

On the Impulsive Flow of a Viscous Liquid Past a Semi-infinite Flat Plate *S. H. Smith*  
 Monotonicity and the Generalized Inverse *Abraham Berman and Robert J. Plemmons*  
 Multiplicity Considerations in Linear Least Mean-square Estimation  
*A. Ephremides and J. B. Thomas*

Existence and Uniqueness of Solutions for the Equations of Nonlinear DC Networks  
*I. W. Sandberg and A. N. Willson, Jr.*

On the Tree Graph of a Matroid *Carlos A. Holzmann and Frank Harary*  
 On the Existence and Uniqueness of a Random Solution to a Perturbed Random Integral  
     Equation of the Fredholm Type *J. Susan Milton, W. J. Padgett and Chris P. Tsokos*  
 Pulse Propagation in a Nonlinear Viscoelastic Rod of Finite Length  
*Michael P. Mortell and Brian R. Seymour*

Path Length of Binary Search Trees *T. C. Hu and K. C. Tan*  
 A Perturbation Method for Hyperbolic Equations with Small Nonlinearities  
*S. C. Chikwendu and J. Kevorkian*

Local Theorems for Nonidentically Distributed Lattice Random Variables *J. David Mason*

## C O N T E N T S

	PAGE
ROOM, T. G. The combinatorial structure of the Hughes plane. II . . . . .	135
RAE, A. Local systems and Sylow subgroups in locally finite groups. I . . . . .	141
BARNETT, S. Regular greatest common divisor of two polynomial matrices . . . . .	161
SNAITH, V. P. On the Kunneth formula spectral sequence in equivariant $K$ -theory . . . . .	167
DAVIES, R. O. Partitioning the plane into denumerably many sets without repeated distances . . . . .	179
ANTONELLI, P. L. On the $h$ -enclosability of spheres . . . . .	185
ROBERTS, R. S. Equivariant integrality theorems for differentiable manifolds . . . . .	189
FISHER, B. The product of the distributions $x^{-r}$ and $\delta^{(r-1)}(x)$ . . . . .	201
LARMAN, D. G. and McMULLEN, P. Arcs with increasing chords . . . . .	205
COOK, R. J. The fractional parts of an additive form . . . . .	209
LLOYD, N. G. On the non-autonomous van der Pol equation with large parameter . . . . .	213
ARTHURS, A. M. and COLES, C. W. Complementary variational principles for a class of differential equations . . . . .	229
MORAN, P. A. P. Maximum-likelihood estimators with known incidental parameters . . . . .	233
MORRIS, ROSA M. and PRICE, W. G. Extension of the Curie principle and constitutive relations for fluids with antisymmetric stress . . . . .	243
NORBURY, J. A steady vortex ring close to Hill's spherical vortex . . . . .	253
BURMAN, R. Coupled fields in inhomogeneous warm plasmas with static pressure gradients. I . . . . .	285
LEVINE, L. E. Entropy and simple waves in multidimensional gas flow . . . . .	299
SMITH, P. Some extremum principles for magnetohydrodynamic flow in conducting pipes . . . . .	303
ANDERSON, N., ARTHURS, A. M. and HALL, R. R. Extremum principle for a nonlinear problem in magneto-elasticity . . . . .	315
PORTER, J. R. Peeling and conservation laws in the Born-Infeld theory of electromagnetism	319

© The Cambridge Philosophical Society, 1972

*Printed in Great Britain at the University Printing House, Cambridge*