

A DIRECT SOLUTION OF POISSON'S EQUATION IN A THREE-DIMENSIONAL FIELD-EFFECT TRANSISTOR STRUCTURE. Donald Reid, Andrew Chan, and Mustafa Al-Mudares. *The University, Glasgow G12 8QQ, Scotland.*

To solve Poisson's equation in a three-dimensional field-effect transistor structure we use the "finite strip" method. This allows us to treat the problem as a set of two-dimensional planes which can be analysed in parallel. We describe a method to treat each plane using a direct algorithm and report the comparative timing of two-dimensional and three-dimensional models.

SIXTH-ORDER LIE GROUP INTEGRATORS. Étienne Forest. *Lawrence Berkeley Laboratory, Berkeley, California 94720, USA.*

In this paper we present the coefficients of several sixth-order symplectic of the type developed by R. Ruth. To get these results we fully exploit the connection with Lie groups. This integrator, as well as all the explicit integrators of Ruth, may be used in any equation where some sort of Lie bracket is preserved. In fact, if the Lie operator governing the equation of motion is separable into two solvable parts, the Ruth integrators can be used.

## NOTES TO APPEAR

A STUDY OF STATIONARY, AXIALLY SYMMETRIC SPACE-TIME GEOMETRIES SATISFYING MODIFIED DOUBLE DUALITY EQUATIONS USING THE EXTERIOR CALCULUS PACKAGE X<sup>T</sup>R FOR REDUCE. T. Derili and G. Üçoluk. *Universität Karlsruhe, D-7500 Karlsruhe 1, Germany.*

RANDOM ACCESS TO A RANDOM NUMBER SEQUENCE. E. H. Canfield, Jr., and J. A. Viecelli. *Lawrence Livermore National Laboratory, Livermore, California 94550, USA.*

TWO-POINT QUASI-FRACTIONAL APPROXIMATIONS TO THE AIRY FUNCTION  $Ai(x)$ . Pablo Martín. *Universidad Simón Bolívar, Apartado 89000, Caracas 1086, Venezuela*; Ricardo Pérez. *Instituto Universitario de Tecnología, "Dr. Federico Rivero Palacio," Apartado 40347, Caracas 1040, Venezuela*; Antonio L. Guerrero. *Universidad Simón Bolívar, Apartado 89000, Caracas 1086, Venezuela.*

SOLUTION OF THE SHALLOW WATER EQUATIONS USING HYBRID GRIDS. J. Steppeler. *National Meteorological Center, Washington, DC 20233, USA.*