

# Communications in Mathematical Physics

Volume 160 Number 2 1994

- S. Chanillo, M. Kiessling Rotational Symmetry of Solutions of Some Nonlinear Problems in Statistical Mechanics and in Geometry 217
- T. Chan, D. S. Dean, K. M. Jansons, L. C. G. Rogers On Polymer Conformations in Elongational Flows 239
- G. Felder, A. P. Veselov Shift Operators for the Quantum Calogero–Sutherland Problems via Knizhnik–Zamolodchikov Equation 259
- C. H. C. Moreira, R. S. Schor On the Critical Behaviour of Dyson’s Quantum Hierarchical Models 275
- L. Takhtajan On Foundation of the Generalized Nambu Mechanics 295
- J. de Boer, T. Tjin The Relation Between Quantum  $W$  Algebras and Lie Algebras 317
- E. Kissin Superderivations of  $C^*$ -Algebras Implemented by Symmetric Operators 333
- L. Glangetas, F. Merle Concentration Properties of Blow-Up Solutions and Instability Results for Zakharov Equation in Dimension Two. Part II 349
- M. R. Niedermaier GLM Equations, Tau Function and Scattering Data 391

Indexed in *Current Contents*  
Evaluated and abstracted for *PHYS* on *STN*  
CMPHAY 160 (2) 217–430  
February (II) 1994  
Printed on acid-free paper



Springer International



# Springer L<sup>A</sup>T<sub>E</sub>X and plain-T<sub>E</sub>X macros

We can use your T<sub>E</sub>X files directly for phototypesetting if you have used our macros. Makropackages are available for the following journals:

***LJour1*** L<sup>A</sup>T<sub>E</sub>X styles for Acta Informatica, Applicable Algebra in Engineering, Communication and Computing, Archive for Mathematical Logic, Astronomy & Astrophysics Reviews, Calculus of Variations, Communications in Mathematical Physics, Continuum Mechanics and Thermodynamics, Economic Theory, Inventiones mathematicae, Journal of Evolutionary Economics, Journal of Mathematical Biology, Manuscripta mathematica, Mathematische Annalen, Mathematische Semesterberichte, Mathematische Zeitschrift, Numerische Mathematik, Probability Theory and Related Fields, Statistical papers, Theoretica Chimica Acta

***PJour1g*** global plain T<sub>E</sub>X packages for all journals mentioned above; ***PJour 1*** may also still be used. All packages are available via mailserver, FTP server or on DOS diskettes.

## Mailserver

Send an e-mail message to [svserv@vax.ntp.springer.de](mailto:svserv@vax.ntp.springer.de) which must contain one (several) of the following commands:

***LJour1*** `get /tex/latex/ljour1.zip`  
***PJour1g*** `get /tex/plain/pjour1g.zip`

In order to be transmitted ungarbled via the net, the files are pkzipped and uuencoded. The line `get /tex/help-tex.txt` in your e-mail to [svserv](mailto:svserv) will send you a file explaining how to unpack the files you receive. Please do not send regular e-mail to this address.

## FTP server

The internet address is 192.129.24.12 ([trick.ntp.springer.de](http://trick.ntp.springer.de)) The username is FTP or ANONYMOUS and the files are in the directory `/pub/tex`

## Diskettes

To get the macro files and the AMS fonts (when needed) on 3.5" DOS diskettes please write to:

Springer-Verlag, Journal Production,  
Tiergartenstr. 17  
D-69121 Heidelberg, Germany  
e-mail: [springer@vax.ntp.springer.de](mailto:springer@vax.ntp.springer.de)  
FAX number: x 49 6221 487625

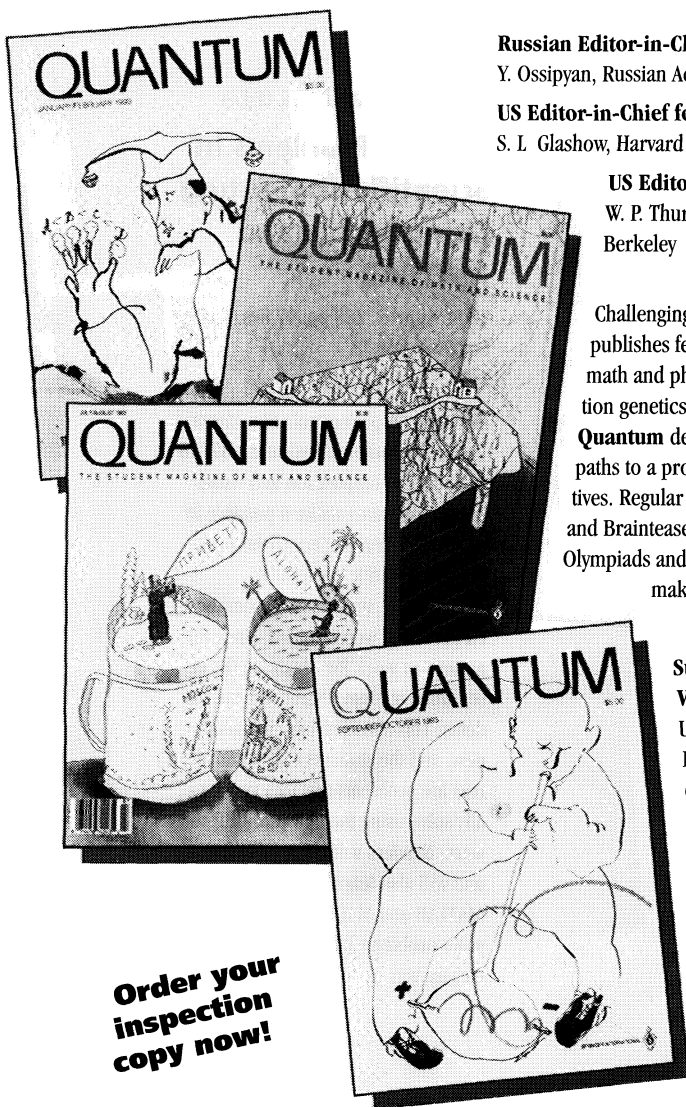
Please indicate clearly which macro package you need and the journal for which your paper is intended.

Use our L<sup>A</sup>T<sub>E</sub>X and plain-T<sub>E</sub>X macros  
to prepare your article  
for this and for other Springer journals.

# Test the energy of a QUANTUM!

The Student Magazine of Math and Science

ISSN 1048-8820 Title No. 583



## Russian Editor-in-Chief:

Y. Ossipyan, Russian Academy of Sciences

## US Editor-in-Chief for Physics:

S. L. Glashow, Harvard University

## US Editor-in-Chief for Mathematics:

W. P. Thurston, University of California, Berkeley

Challenging as well as entertaining, **Quantum** publishes feature articles that inspire thinking in math and physics from the "geometry of population genetics" to the "superfluidity of helium II". **Quantum** demonstrates and teaches the thinking paths to a problem, its solutions, and its alternatives. Regular sections such as At The Black Board and Brainteasers, intended for those who like Olympiads and other problem-solving competitions, make for ideal classroom material.

## Subscription information 1994, Vol. 5 (6 issues)

US\$26.10\* plus carriage charges:

FRG US\$7.90;

other countries US\$28.75

\*suggested list price

**Order your  
inspection  
copy now!**



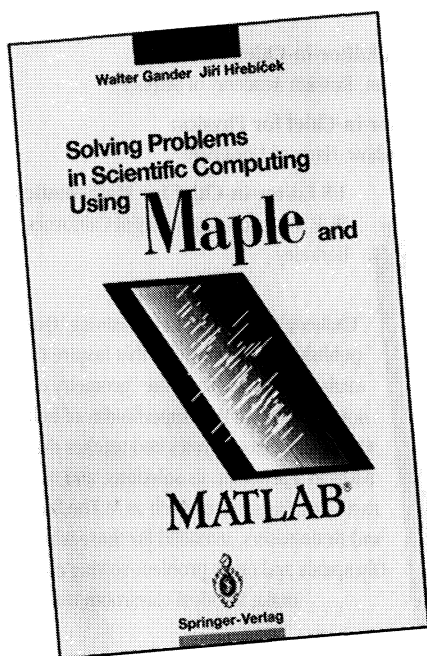
**Springer**

Tm 1473/MNTZ/E/1

Prices are subject to change without notice. In EC countries the local VAT is effective.

Springer-Verlag  Heidelberger Platz 3, D-14197 Berlin, F.R. Germany  175 Fifth Ave., New York, NY 10010, USA  8 Alexandra Rd., London SW 19 7JZ, England  26, rue des Carmes, F-75005 Paris, France  37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan  Room 701, Mirror Tower, 61 Mody Road, Tsimshatsui, Kowloon, Hong Kong  Avenida Diagonal, 468-4 °C, E-08006 Barcelona, Spain  Wesselényi u. H-1075 Budapest, Hungary

# Learning by doing!



W. Gander, J. Hřebíček (Eds.)

## Solving Problems in Scientific Computing Using Maple and MATLAB

1994. Approx. 280 pp. 97 figs. 7 tabs  
Softcover DM 78,-  
ISBN 3-540-57329-1

Modern computing tools like *Maple* (symbolic computation) and *MATLAB* (a numeric computation and visualization program) make it possible to easily solve realistic nontrivial problems in scientific computing.

In education, traditionally, complicated problems were avoided, since the amount of work for obtaining the solutions was not feasible for the students. This situation has changed now, and the students can be taught real-life problems that they can actually solve using the new powerful software. Readers will learn by examples and will also learn how both systems, *MATLAB* and *MAPLE*, may be used to solve problems interactively in an elegant way.



# Springer

d&p 1371 MNT/E/1

Prices are subject to change without notice. In EC countries the local VAT is effective.

For information on prices in Austrian schillings and Swiss francs please consult the German book directory "VLB - Verzeichnis lieferbarer Bücher" or our general catalogue.

**Springer-Verlag**  Heidelberger Platz 3, D-14197 Berlin, F.R. Germany  175 Fifth Ave., New York, NY 10010, USA  8 Alexandra Rd., London SW 19 7JZ, England  26, rue des Carmes, F-75005 Paris, France  37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan  Room 701, Mirror Tower, 61 Mody Road, Tsimshatsui, Kowloon, Hong Kong  Avinguda Diagonal, 468-4° C, E-08006 Barcelona, Spain  Wesselényi u 28, H-1075 Budapest, Hungary