Instructions to Authors



© Springer-Verlag 1983

A. General

In upper right corner of title page write by hand "For CMP".

Manuscripts should be submitted in duplicate. They should preferably be written in English; papers in French or German are also accepted.

Manuscripts must be in their **final form**, typed on one side of each sheet only, with double spacing and wide margins. Formulae should be typewritten whenever possible. Mimeographed copies are not acceptable unless clearly legible.

Please include a "Note for the Printer" explaining markings used. See suggestion overleaf.

To speed up publication, authors will receive **only one set of proofs:** provisionally numbered page proofs. Authors are requested to **correct typographical errors only;** they will be charged for corrections involving changes, additions or deletions to the original manuscript.

Equations should be typewritten whenever possible. Even if you use a sophisticated typewriter, some parts of your manuscript will have to be marked to avoid misunderstandings and mistakes. If there is no difference in size, special attention should be given to the placing of subscripts and superscripts so that they are recognizable as such. Please avoid multilevel formulas, subscripts, or superscripts, whenever possible (see overleaf).

Diagrams should be submitted on separate sheets, not included in the text. They should be drawn in Indian ink in clean uniform lines, the whole about twice the size of the finished illustration. Inscriptions should allow for the figure 1, for example, to be about 2 mm high in the final version (i.e. 4 mm for reduction $\times \frac{1}{2}$). The author should mark in the margin of the manuscript where diagrams may be inserted.

Footnotes, other than those which refer to the title heading, should be numbered consequently and placed at the foot of the page to which they refer (not at the end of the article).

Please give on the first page of the manuscript a **running head** (condensed title), which should not exceed 70 letters including spaces.

References to the literature should be listed at the end of the manuscript. The following information should be provided for **journal articles:** names and initials of all authors, name of the journal, volume, first and last page numbers and year of publication. It is suggested that authors give complete titles of articles referred to. References to **books** should include name(s) of author(s), full title, edition, place of publication, publisher and year of publication.

Examples

Haag, R., Swieca, J.A.: When does a quantum field theory describe particles? Commun. Math. Phys. 1, 308–320 (1965)

Glimm, J., Jaffe, A.: Quantum physics. A functional integral point of view. Berlin, Heidelberg, New York: Springer 1981

B. Marking

1. Text

The words "Theorem", "Lemma", "Corollary", "Proposition" etc. are normally printed in boldface, followed by the formulation in italics (to be underlined by the author in the manuscript).

The words "Proof", "Remark", "Definition", "Note" etc. are printed in italics with the formulation in ordinary typeface.

Words or sentences to be set in italics should be marked by single underlining.

2. Formulas

Letters in formulas are normally printed in italics, figures in ordinary typeface.

It will help the printer if in doubtful cases the position of indices and exponents is marked thus: $b \, {}_{\uparrow}^{\circ}$, $a \, {}^{\downarrow}$. Spacing of indices and exponents must be specially indicated $(A_{m \, n}^{\ n})^m$ otherwise they will be set $(A_{mn}^{\ nm})$. Underlining for special alphabets and typefaces should be done according to the following code:

single underlining: small letter double underlining: capital letter

brown: boldface headings, boldface letters in formulas

yellow: upright

(abbreviations e.g. Rc, Im, log, sin, ord, id, lim, sup, etc.)

red: Greek blue: Gothic green: Script

violet: the numeral 1, and zero (to distinguish them from the small letter l and the

capital letter O)

orange: Special Roman The following are frequently confused:

 a', a^1 ; the symbol a and the indefinite article a;

also the handwritten Roman letters:

c,C; e,l; I,J; k,K; o,O; p,P; s,S; u,U; v,V; w,W; x,X; z,Z;

Please take care to distinguish them in some way.

C. Examples

1. Special alphabets or typefaces

Script $\mathscr{A}, \mathscr{B}, \mathscr{C}, \mathscr{D}, \mathscr{E}, \mathscr{F}, \mathscr{G}, \mathscr{H}, \mathscr{I}, \mathscr{J}, \mathscr{H}, \mathscr{M}, \mathscr{N}, \mathscr{O}, \mathscr{P}, \mathscr{Q}, \mathscr{R}, \mathscr{S}, \mathscr{T}, \mathscr{U}, \mathscr{V}, \mathscr{W}, \mathscr{X}, \mathscr{Y}, \mathscr{Z}$

a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, x

Sanserif A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z

a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z

Gothic $\mathfrak{A}, \mathfrak{B}, \mathfrak{C}, \mathfrak{D}, \mathfrak{E}, \mathfrak{F}, \mathfrak{G}, \mathfrak{H}, \mathfrak{H}, \mathfrak{H}, \mathfrak{R}, \mathfrak{L}, \mathfrak{M}, \mathfrak{N}, \mathfrak{D}, \mathfrak{R}, \mathfrak{D}, \mathfrak{R}, \mathfrak{E}, \mathfrak{I}, \mathfrak{U}, \mathfrak{B}, \mathfrak{K}, \mathfrak{D}, \mathfrak{J}$

a, b, c, b, e, f, g, h, i, j, t, l, m, n, o, p, q, r, s, f, t, u, v, w, x, n, z

Boldface A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z

a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z

Special Roman A, B, C, ID, E, IF, G, IH, II, J, IK, IL, M, N, O, IP, Q, IR, S, TI, U, V, W, X, Y, Z, 1

Greek $\Gamma, \Delta, \Theta, \Lambda, \Xi, \Pi, \Sigma, \Phi, \Psi, \Omega$

 $\alpha, \beta, \gamma, \delta, \varepsilon, \zeta, \eta, \theta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, o, \pi, \rho, \sigma, \tau, \nu, \varphi, \phi, \chi, \psi, \omega$

2. Notations

preferred form	instead of	preferred form	instead of
$A^*, \tilde{b}, \gamma', \mathbf{v}$	$ar{A},\hat{b},\check{\gamma},ec{v}$	$f: A \rightarrow B$	$A \xrightarrow{f} B$
lim sup, lim inf	lim, <u>lim</u>		•
inj lim, proj lim	$\underset{x^2+y^2}{\varinjlim}$, $\underset{x^2}{\varprojlim}$	$\cos(1/x)$	$\cos\frac{1}{x}$
$\exp\left(-(x^2+v^2)/a^2\right)$	$e^{-\frac{x^2+v^2}{a^2}}$	$(a+b/x)^{1/2}$	$\sqrt{a+\frac{b}{a+b}}$
f^{-1}	f^{-1}		$V = \frac{a + \frac{a}{x}}{x}$

Authors of this journal can benefit from library and photocopy fees collected by VG WORT if certain conditions are met. If an author lives in the Federal Republic of Germany or in West Berlin, it is recommended that he contact Verwertungsgesellschaft WORT, Abteilung Wissenschaft, Goethestrasse 49, D-8000 München 2, for detailed information.

Commun. Math. Phys. 89, 4 (1983)

W. Thirring

A Course in Mathematical Physics

Translated from the German by E.M. Harrell

Volume 1

Classical Dynamical Systems

2nd printing 1983. 58 figures. Approx. 270 pages. Cloth DM 54,-, öS 378,-ISBN 3-211-81496-5

Contents: Introduction. – Analysis on Manifolds. – Hamiltonian Systems. – Nonrelativistic Motion. – Relativistic Motion. – The Structure of Space and Time. – References. – Index.

This is a unique combination of mathematical rigor and a realistic physical approach. The perfect textbook for physics, mathematics, and applied mathematics students.

From the reviews:

- "... Thirring has selected a variety of applications in wide areas of physics to exhibit the power of a modern mathematical treatment. This volume should stimulate the professional, the graduate student and in some cases, the advanced undergraduate who is well versed in mathematics. Recommended."

 Choice
- "... This is the first volume of a four volume set which is sort of mathematical physicist's Landau-Lifschitz. Like the first volume, they are all well-written, but unlike the first, the later volumes have no real competition and the last two on quantum mechanics are likely to become classics ..."

 Physics Today
- "... On the whole the book gives a lot of information to the reader and is undoubtedly a valuable contribution to the literature ..."

 Zentralblatt für Mathematik



Springer-Verlag Wien New York

Mathematical Physics

Chief Editor A. Jaffe, Cambridge, MA

Editorial Board H. Araki, Kyoto

J. Fröhlich, Zürich

R. Haag, Hamburg

S. Hawking, Cambridge

O. Lanford, Bures-sur-Yvette

J. Lascoux, Palaiseau

J. L. Lebowitz, New Brunswick, NJ

G. Mack, Hamburg

J. Mather, Princeton, NJ

L. Nirenberg, New York, NY

K. Osterwalder, Zürich

B. Simon, Pasadena, CA

Ya. G. Sinai, Moscow

T. Spencer, New York, NY

R. Stora, Geneva

S.-T. Yau, Princeton, NJ

Advisory Board M. F. Atiyah, Oxford

A. Connes, Bures-sur-Yvette

G. 't Hooft, Utrecht

I. Singer, Berkeley, CA

C. N. Yang, Stony Brook, NY