INSTRUCTIONS TO AUTHORS

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.

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 consecutively 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. References to **books** should include name(s) of author(s), full title, edition, place of publication, publisher and year of publication.

Examples

Bombieri, E., Giusti, E.: Inventiones math. **15**, 24–46 (1971)
Tate, J. T.: *p*-Divisible groups. In: Proceedings of a conference on local
    fields, pp. 158–183. Berlin, Heidelberg, New York: Springer 1967

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 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. Formulae

Letters in formulae 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: $b_\wedge$, $a^\vee$. 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 formulae
yellow:	upright
	(abbreviations e.g. Re, 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)

The following are frequently confused:

$\cup,\ \mathbf{u},\ \bigcup, U;\quad \circ, o, O, 0;\quad \times, x, X, \kappa;\quad \vee, v, \nu;\quad 0, \Theta, \phi, \varphi, \Phi, \emptyset;\quad \psi, \Psi;\quad \varepsilon, \in;$

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

also the handwritten Roman letters:

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

Please take care to distinguish them in some way.

C. Examples

1. Special alphabets or typefaces

Script	$\mathcal{A}, \mathcal{B}, \mathcal{C}, \mathcal{D}, \mathcal{E}, \mathcal{F}, \mathcal{G}, \mathcal{H}, \mathcal{I}, \mathcal{J}, \mathcal{K}, \mathcal{L}, \mathcal{M}, \mathcal{N}, \mathcal{O}, \mathcal{P}, \mathcal{Q}, \mathcal{R}, \mathcal{S}, \mathcal{T}, \mathcal{U}, \mathcal{V}, \mathcal{W}, \mathcal{X}, \mathcal{Y}, \mathcal{Z}$
	$a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z$
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	$\mathfrak{A}, \mathfrak{B}, \mathfrak{C}, \mathfrak{D}, \mathfrak{E}, \mathfrak{F}, \mathfrak{G}, \mathfrak{H}, \mathfrak{I}, \mathfrak{J}, \mathfrak{K}, \mathfrak{L}, \mathfrak{M}, \mathfrak{N}, \mathfrak{O}, \mathfrak{P}, \mathfrak{Q}, \mathfrak{R}, \mathfrak{S}, \mathfrak{T}, \mathfrak{U}, \mathfrak{V}, \mathfrak{W}, \mathfrak{X}, \mathfrak{Y}, 3$
	$a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, 3$
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	$\mathbb{A}, \mathbb{B}, \mathbb{C}, \mathbb{D}, \mathbb{E}, \mathbb{F}, \mathbb{G}, \mathbb{H}, \mathbb{I}, \mathbb{J}, \mathbb{K}, \mathbb{L}, \mathbb{M}, \mathbb{N}, \mathbb{O}, \mathbb{P}, \mathbb{Q}, \mathbb{R}, \mathbb{S}, \mathbb{T}, \mathbb{U}, \mathbb{V}, \mathbb{W}, \mathbb{X}, \mathbb{Y}, \mathbb{Z}, \mathbb{1}$
Greek	$\Gamma, \Delta, \Theta, \Lambda, \Xi, \Pi, \Sigma, \Phi, \Psi, \Omega$
	$\alpha, \beta, \gamma, \delta, \varepsilon, \zeta, \eta, \theta, \vartheta, \iota, \kappa, \lambda, \mu, \nu, \xi, o, \pi, \rho, \sigma, \tau, \upsilon, \varphi, \phi, \chi, \psi, \omega$

2. Notations

preferred form	instead of	preferred form	instead of
$A^*, \tilde{b}, \gamma', \mathbf{v}$	$\bar{A}, \hat{b}, \check{\gamma}, \vec{v}$	$f: A \to B$	$A \xrightarrow{f} B$
lim sup, lim inf	$\overline{\lim}, \underline{\lim}$		
inj lim, proj lim	$\varinjlim, \varprojlim$	$\dfrac{\cos(1/x)}{(a+b/x)^{1/2}}$	$\dfrac{\cos\dfrac{1}{x}}{\sqrt{a+\dfrac{b}{x}}}$
$\exp(-(x^2+y^2)/a^2)$	$e^{-\frac{x^2+y^2}{a^2}}$		
f^{-1}	$\overset{-1}{f}$		

Springer journals are known and respected internationally for keeping professionals in science and in medicine, in research and in industry well-informed about the rapid progress in their fields. Decide for yourself by sending in one of the order coupons.

To: **The Head Librarian/The Library Committee**

From: _____

Department: _____

☐ I/we have studied the Springer Journal(s)

_____

☐ and recommend that the journal(s) be purchased for the Main/Department Library

☐ I/we would like to see the Springer Journals Catalog with information on subscriptions/back volumes/microform

☐ Please obtain sample copies on other related Springer Journal and/or latest index/sample copy including volume-index

_____

SUBSCRIPTION ORDER FORM

SPRINGER-VERLAG BERLIN HEIDELBERG NEW YORK

Please order through your bookseller:
or Springer-Verlag, P.O. Box 105280, D-6900 Heidelberg,
All countries (except North America)
or (North America) Springer-Verlag New York Inc.,
175 Fifth Avenue, New York, NY 10010, USA
North America subscriptions are entered with prepayment only.

☐ Please enter my/our subscription to (please give title or ISSN)

_____

Full subscription information is given on inside
front or back cover page

Name: _____

Address: _____

_____

Date/Signature: _____

☐ This is a new order   ☐ This is a renewal order

Please send a sample copy and/or latest index/sample copy
including volume-index (supply is limited):

_____

_____

_____

Please send information concerning
☐ back volumes   ☐ microform editions   ☐ journals catalog

To: **The Head Librarian/The Library Committee**

Postcard - Airmail

To the bookseller

Lecture Notes in Physics

Editors: J. Ehlers, K. Hepp, R. Kippenhahn, H. A. Weidenmüller, J. Zittartz

Managing Editor: W. Beiglböck

New Volumes:

Volume 116
Mathematical Problems in Theoretical Physics

Proceedings of the International Conference on Mathematical Physics Held in Lausanne, Switzerland, August 20–25, 1979
Editor: K. Osterwalder
1980. VIII, 412 pages
DM 47,–; approx. US $ 27.80   ISBN 3-540-09964-6

These proceedings of the International Conference on Mathematical Physics contain seven survey lectures on Schrödinger operators (Combes, Hunziker), on statistical mechanics (Lieb, Lanford III), on quantum field theory Bros, Jaffe) and on gauge theory (Olive). Numerous contributions of the highest scientific quality are presented in addition to the main lectures. These short contributions also cover problems from the theory of dynamical systems, supersymmetry and group theory and C*algebra technqiues. Quite a few of the shorter papers have the character of a review, making this volume of interest to students as well as to researchers.

Volume 117
Deep Inelastic Fusion Reactions with Heavy Ions

Proceedings of the Symposium Held at the Hahn-Meitner-Institut für Kernforschung, Berlin, October 23–25, 1979
Editor: W. v. Oertzen
1980. 1 figure in color. XIII, 394 pages
DM 49,–; approx. US $ 29.00   ISBN 3-540-09965-4

Contents:
Introductory. – Different Views on Deep Inelastic Collisions. – New Aspects of Deep Inelastic Collisions. – Light-Particle Emission in Deep Inelastic Collisions. – High Energies and Incomplete Fusion. – Fusion Reactions with Heavy Ions.
In this volume experimental and theoretical physicists discuss various aspects of heavy ion reactions. Two survey lectures by J. R. Huizenga and M. Lefort serve as an excellent introduction to the problems to which this conference was devoted. Different views on fusion are then collected in five sections: various theoretical approaches, new experimental aspects, light particle emission, high energies and incomplete fusion, and fusion reactions of heavy ions.

Volume 118
Quantum Chromodynamics

Proceedings of the X G.I.F.T. International Seminar on Theoretical Physics Held at Jaca, Huesca (Spain) June 1979
Editors: J. L. Alonso, R. Tarrach
1980. IX, 424 pages
DM 47,–; approx. US $ 27.80   ISBN 3-540-09969-7

Contents:
E. de Rafael: Quantum Chromodynamics as a Theoretical Framework of the Hadronic Interactions. – *C. T. Sachrajda:* Applications of Perturbative QCD to Hard Scattering Processes. – *H. L. Lynch:* Experimental Aspects of Quantum Chromodynamics. – *H. Fritzsch:* Masses and Mass Generations in Chromo and Flavour Dynamics. – *H. Leutwyler:* Hadrons. – *J. Bartels:* High Energy Behavior of Nonabelian Gauge Theories.

Volume 119
Nuclear Spectroscopy

Lecture Notes of the Workshop Held at Gull Lake, Michigan, August 27 – September 7, 1979
Editors: G. F. Bertsch, D. Kurath
1980. VII, 250 pages
DM 33,–; approx. US $ 19.50   ISBN 3-540-09970-0

The papers contained in this volume review the present status of nuclear structure physics. Nuclear theory's most important tool, the shell model representation, is described in contributions by Kurath, Bertsch and Faessler. Iachello's paper describes the use of group theory to simplify the discription of complex spectra, an application that has developed into a high art. For spectral regions beyond the grasp of either the shell model or group theory, statistical considerations have an applicability that is only recently fully understood, as French explains. Brown's lectures cover the foundations of nuclear theory in the nonrelativistic reduction of nucleon-nucleon dynamics to derive on effective Hamilitonian. An appendix by Bertsch, Zamick and Mekjian brings to light numerous open problems.

Volume 120
Nonlinear Evolution Equations and Dynamical Systems

Proceedings of the Meeting Held at the University of Lecce June 20–23, 1979
Editors: M. Botti, F. Pempinelli, G. Soliani
1980. VI, 368 pages
DM 43,–; approx. US $ 25.40   ISBN 3-540-09971-9

The contributions to this volume discuss recent advances and future trends in the theory of nonlinear evolution equations, covering both their mathematical and physical aspects. The papers are expanded versions of talks presented at the conference which include more recent developments. Among the topics to be found in this volume are: the geometrical aspects of nonlinear solvable equations and the Bäcklund transformation– analytical techniques for finding solutions; the relation of the geometry of the dual spaces of Lie algebras to the complete integrability of certain nonlinear evolutions; the properties of special functions related to certain solutions; reduction techniques for matrix equations; applications to plasma turbulence; the relation of the inverse scattering problem to arithmetics and transcendental numbers, and applications to fundamental equations of classical and quantum physics.

Communications in
Mathematical
Physics