

PROCEEDINGS

OF THE

ROYAL SOCIETY OF EDINBURGH

Section A (Mathematical and Physical Sciences)

Vol. LXIII]

1949-50 *

[PART I

CONTENTS

NO.		PAGE
I.	The Adventures of an Hypothesis. By JAMES KENDALL, M.A., D.Sc., F.R.S., P.R.S.E. (With Two Text-figures) . <i>(Issued separately May 17, 1950)</i>	I
II.	The Stability of Solutions of Non-linear Difference-differential Equations. By Professor E. M. WRIGHT, University of Aberdeen <i>(Issued separately May 17, 1950)</i>	18
III.	The Simplest Form of Second-Order Linear Differential Equation, with Periodic Coefficient, having Finite Singularities. By ENZO CAMBI. <i>Communicated by Professor A. C. AITKEN, F.R.S.</i> (With Two Text-figures) <i>(Issued separately June 16, 1950)</i>	27
IV.	Studies in Practical Mathematics. V. On the Iterative Solution of a System of Linear Equations. By A. C. AITKEN, D.Sc., F.R.S., Mathematical Institute, 16 Chambers Street, Edinburgh, 1 <i>(Issued separately June 16, 1950)</i>	52
V.	Les transformations asymptotiquement presque périodiques discontinues et le lemme ergodique. (Première Note.) Par MAURICE FRÉCHET, Hon.F.R.S.E., Université de Paris, à la Sorbonne. <i>Communicated by Sir EDMUND WHITTAKER, F.R.S.</i> <i>(Issued separately June 16, 1950)</i>	61

[Continued on page iv of cover

PUBLISHED BY

OLIVER & BOYD

EDINBURGH: TWEEDDALE COURT

LONDON: 98 GREAT RUSSELL STREET, W.C.1

ROYAL SOCIETY OF EDINBURGH

22, 24 GEORGE STREET, EDINBURGH, 2

THE PREPARATION FOR PUBLICATION OF PAPERS IN THE TRANSACTIONS AND IN THE PROCEEDINGS (SECTIONS "A" AND "B") OF THE SOCIETY

In view of the high cost of publication, authors of papers are requested to write their communications in as concise a form as possible and to avoid excess of tables and illustrations.

An author is advised to retain a copy of his paper, as the Society cannot undertake any responsibility in relation to the custody of papers entrusted to it. The MS. must be easily legible, preferably typewritten on one side of quarto or foolscap paper and with pages numbered. *It must be absolutely in its final form for printing.* Each paper must be accompanied by a synopsis, the object being to provide readers or abstracters with a brief epitome of the paper. The synopsis will be printed in small type at the beginning of the paper, immediately after the "Contents", if any, and should not exceed 150–200 words.

This synopsis will not necessarily replace a "Summary of Conclusions", which will be printed, if required, as heretofore, in ordinary type at the end of the paper. A table of contents (for a long paper), references to plates, etc. must be in their proper places, and positions indicated for the insertion of illustrations that are to appear in the text. Names of genera and species should be in italics. Footnotes should be avoided where possible.

Additions to a paper after it has been finally handed in for publication will, if accepted by the Council, be treated and dated as separate communications, and may, or may not, be printed immediately after the original paper.

References to literature should be placed at the end of the paper, alphabetically arranged, under authors' names, with abridged titles of journals, thus:—

SANDEMAN, I., 1929. "The Fulcher Bands of Hydrogen", *Proc. Roy. Soc. Edin.*, XLIX, 48–64.

WHITTAKER, E. T., and ROBINSON, G., 1923. *A Short Course in Interpolation*, London.

Titles of papers should be quoted exactly, and all references to literature carefully checked by the authors before submitting the paper. References in the text should be made by quoting the author's name and the year of publication thus (Sandeman, 1929) or (Whittaker and Robinson, 1923), and adding the page when necessary.

All illustrations must be in a form immediately suitable for reproduction, preferably of a size to permit reduction to about two-thirds the linear dimensions of the original, and should be capable of reproduction by photographic processes. Drawings and diagrams to be reproduced as line blocks should be made with fixed Indian ink, preferably on fine white bristol board, free from folds or creases; smooth clean lines or sharp dots, but no washes or colours, should be used. Graphs should be on a squared paper ruled in *faint blue* lines, unless the lines are to be brought out. If the illustrations are on a large scale to be afterwards reduced, by photography, any lettering must be on a corresponding scale.

INDEX SLIP
PROC. R.S.E., VOL. LXIII, PART I
Section A (Mathematical and Physical Sciences)
1949-1950

- KENDALL, JAMES.—The Adventures of an Hypothesis. (Presidential Address.)
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 1-17.
- Hypothesis, Adventures of an.
JAMES KENDALL.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 1-17.
- WRIGHT, E. M.—The Stability of Solutions of Non-linear Difference-differential Equations.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 18-26.
- Difference-differential Equations—the Linear, with Constant Coefficients.
E. M. WRIGHT.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 18-26.
- CAMBI, ENZO.—The Simplest Form of Second-Order Linear Differential Equation, with Periodic Coefficient, having Finite Singularities.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 27-51.
- Differential Equation, Second-Order Linear, with Periodic Coefficient, having Finite Singularities.
ENZO CAMBI.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 27-51.
- AITKEN, A. C.—Studies in Practical Mathematics: V. On the Iterative Solution of a System of Linear Equations.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 52-60.
- Iteration, Solution of Linear Equations by.
A. C. AITKEN.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 52-60.
- Linear Equations, Iterative Solution of.
A. C. AITKEN.
Proc. Roy. Soc. Edin., lxiii, A, 1949-50, 52-60.

- FRÉCHET, MAURICE.—Les Transformations asymptotiquement presque périodiques discontinues et le lemme ergodique. (Première Note.)
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 61–68.
- Transformations (Les) asymptotiquement presque périodiques discontinues et le lemme ergodique. (Première Note.)
MAURICE FRÉCHET.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 61–68.
- BHATTACHARYYA, A.—Unbiased Statistics with Minimum Variance.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 69–77.
- Statistics, Unbiased, with Minimum Variance.
A. BHATTACHARYYA.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 69–77.
- Unbiased Statistics with Minimum Variance.
A. BHATTACHARYYA.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 69–77.
- RUSE, H. S.—Parallel Planes in a Riemannian V_n .
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 78–92.
- Parallel Planes in a Riemannian V_n .
H. S. RUSE.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 78–92.
- Riemannian V_n , Parallel Planes in a.
H. S. RUSE.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 78–92.
- LAWLEY, D. N.—A Further Note on a Problem in Factor Analysis.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 93–94.
- Factor Analysis, A Further Note on a Problem in.
D. N. LAWLEY.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 93–94.
- HOUSTOUN, R. A.—A Measurement of the Velocity of Light.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 95–104.
- Light, A Measurement of the Velocity of.
R. A. HOUSTOUN.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 95–104.
- Velocity of Light, A Measurement of the.
R. A. HOUSTOUN.
Proc. Roy. Soc. Edin., lxiii, A, 1949–50, 95–104.