ABSTRACTS

Edited by DAVID E. ZITARELLI

The purpose of this department is to give sufficient information about the subject matter of each publication to enable users to decide whether to read it. It is our intention to cover all books, articles, and other materials in the field.

Books for abstracting and eventual review should be sent to this department. Materials should be sent to Prof. David E. Zitarelli, Department of Mathematics, Temple University, Philadelphia, PA 19122, U.S.A.

Readers are invited to send reprints, autoabstracts, corrections, additions, and notices of publications that have been overlooked. Be sure to include complete bibliographic information, as well as transliteration and translation for non-European languages. We need volunteers willing to cover one or more journals for this department.

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In order to facilitate reference and indexing, entries are given abstract numbers which appear at the end following the symbol #. A triple numbering system is used: the first number indicates the volume, the second the issue number, and the third the sequential number within that issue. For example, the abstracts for Volume 12, Number 1, are numbered: 12.1.1, 12.1.2, 12.1.3, etc.

For reviews and abstracts published in Volumes 1 through 13 there is an author index in Volume 13, Number 4, and a subject index in Volume 14, Number 1.

The initials in parentheses at the end of an entry indicate the abstractor. In this issue there are abstracts by Victor Albis (Bogotá), Ivor Grattan-Guinness (Middlesex), Albert C. Lewis (Hamilton), Ivica Martinović (Dubrovnik), and David E. Zitarelli.


ALEXANDERSON, GERALD L. 1989. A conversation with SAUNDERS MACLANE. The College Mathematics Journal 20(1), 3–25. An interview that will appear in the forthcoming book, Mathematical People II, edited by D. Albers, G. Alexanderson, and C. Reid. MacLane recalls his high school teachers, his education at Yale, Chicago, and Göttingen, his teaching appointments, and his collaborations in Algebra with Garrett Birkhoff and in Homology with Samuel Eilenberg. He also reflects on administrative and leadership positions he held in various universities and societies. Photos. (DEZ) #16.3.2

ARBOLEDA, LUIS C. See #16.3.1.


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All rights of reproduction in any form reserved.
ASCHER, MARCIA. 1988. Graphs in Cultures (II): A Study in ETHNOMATHEMATICS. *Archive for History of Exact Sciences* 39(1), 75-95. Figure tracing in OCEANIA and AFRICA among people who neither read nor write. Mathematical ideas are presented with details of the contexts of the ideas and cultures in which they arose. **EULERIAN GRAPHS. See also #16.2.12. (DEZ)** #16.3.5


BALL, ROBERT L. See #16.3.4.

BERS, LIPMAN. 1988. *European mathematicians' migration to America*. Providence: American Mathematical Society. One-hour videotape. VHS format. $59. Experiences, some the speaker's own, of immigrants to the UNITED STATES before and during World War II. (ACL) #16.3.8


BOGOSHI, JONAS, NAIDOO, KEVIN, AND WEBB, JOHN. 1987. The oldest mathematical artefact. *The Mathematical Gazette* 71(458), 294. Fragment with 29 notches on a fibula from a baboon, dating from ca. 35,000 B.C. It was found between Swaziland and South Africa. (DEZ) #16.3.10


BUXTON, H. W. 1988. *Memoir of the life and labours of the late Charles Babbage*. Cambridge: MIT Press. Hardbound $50. xxi + 401 pp. The author was a barrister, self-taught in mathematics, whom BABBAGE entrusted to write his memoirs. The manuscript was not published in his lifetime and remained in storage until recently. This edition, edited by Anthony Hyman, provides a view of Babbage's broad range of interests and his own thoughts, as conveyed to Buxton, on analytical engines. **COMPUTERS. (DEZ)** #16.3.13

CALINGER, RONALD. 1988. Mathematical innovator and reformer. *The world and I, August*, 194-199. A biographical sketch of the "diffident genius" GEORGE BOOLE, including the development of his research, his publications, and his appointment at University College in Cork, Ireland. In 1984 the University named its new library after him in recognition of his vigorous leadership of the faculty's library committee. (DEZ) #16.3.14

CARTAN, HENRI, AND FERRAND, JACQUELIN. 1988. The case of ANDRÉ BLOCH. *The Mathematical Intelligencer* 10(1), 23-26. The article seeks to lay to rest some of the "outrageously eccentric" conjectures about Bloch's life. Bloch killed a brother, aunt, and uncle and spent the rest of his life in a psychiatric hospital, where he carried on his mathematical investigations. Cartan was one of Bloch's correspondents. **COMPLEX VARIABLES. (DEZ)** #16.3.15

Chellman, Warren C. See #16.3.4.

Ciesielski, Krzysztof. 1988. Lost legends of Lvov: Banach’s grave. The Mathematical Intelligencer 10(1), 50–51. The author locates the grave of Stefan Banach in Lvov. He describes attempts by the Polish Mathematical Academy to have it transferred to Poland. (DEZ) #16.3.17


Dadic, Zarco. 1988. Boscovich’s contribution to the solution of the Problem of Tides. In #16.3.11, pp. 47–56. The efficiency of the Geometrical Method in Boscovich when determining the maximal elevation of the sea under the joint action of the sun and the moon, and a comparison of Daniel Bernoulli’s analytical solution of the same problem. (IM) #16.3.20

Dale, A. I. 1988. On Bayes’ Theorem and the inverse Bernoulli Theorem. Historia Mathematica 15(4), 348–360. In response to an earlier article by S. M. Stigler (see #11.3.69) the author concludes “there is not sufficient evidence to remove Bayes from his place as the originator of the method adopted.” Thomas Bayes. Inverse Bernoulli Theorem. Statistics. (DEZ) #16.3.21


Frei, William F., Jr. See #16.3.4.


EISELE, CAROLYN. 1988. The role of scientific methodology in the thought of C. S. Peirce. In Gedankenzeichnen. Festschrift für Klaus Oehler zum 60. Geburtstag. R. Clausen and R. Daube-Schackat, Eds., pp. 251–256. Tübingen: Stauffenburg. The author summarizes her finding that Peirce "is the mathematician who weaves his logical approach in every area into a pragmatic formalism by adopting always mathematical semiotic procedures." (ACL) #16.3.29


FAUVEL, JOHN. 1988. Cartesian and Euclidean rhetoric. For the Learning of Mathematics 8(1), 25–29. A literary critique of Descartes' style of writing in his Geometry. DESCARTES is taken to task for his self-serving obscurity. The writing styles of CARDANO and RECORDE are also discussed. (DEZ) #16.3.33

FERRAND, JACQUELINE. See #16.3.15.

Galuzzi, M. See #16.3.25.


HAHN, ROGER. 1988. Laplace and Boscovich. In #16.3.11, pp. 71–82. Scientific and personal disagreements between BOSCOVICH and LAPLACE about the controversy on the orbits of comets. (IM) #16.3.36


ISRAEL, G. See #16.3.23.


MUMFORD, DAVID. 1988. Oscar Zariski and his work. Providence: American Mathematical Society. One-hour videotape. VHS format. $59. The speaker gives a biographical account of his thesis advisor, Oscar Zariski, from his birth in Russia and his training in Italy to his immigration to the United States in 1927, and identifies various influences on his work. (ACL) #16.3.49

NAIDOO, KEVIN. See #16.3.10.

NÚÑEZ ESPALLARGAS, José María, and SERVAT SUSAGNE, Jordi. 1988. La matemática en la Institución Libre de Enseñanza: Concepciones teóricas y pedagógicas (Mathematics and the Institu-
ción Libre de Enseñanza: Theoretical and pedagogic conceptions). LLULL 11(20), 75–96. MATH TEACHING in SPAIN (1878–1936) outside the formal state system, influenced by K. KRAUSE and the German school. TEXTBOOK analyses. (VA) #16.3.50

PAPPAS, JOHN. 1988. Les relations entre Boscovich et D’Alembert. In #16.3.11, pp. 121–148. The relations between BOSCOVICH and D’ALEMBERT. A complete version with notes and amplified references of the paper abstracted in #15.4.41. (IM) #16.3.51

PARSHALL, KAREN HUNGER. 1988. America’s first school of mathematical research: JAMES JOSEPH SYLVESTER at the JOHNS HOPKINS UNIVERSITY. Archive for History of Exact Sciences 38(2), 153–196. A sketch of 19th-century American mathematics through 1876, with an analysis of Johns Hopkins as the first example of a vigorous center for mathematical research in the U.S. Also included is a detailed description of the history of combinatorics that concludes that Sylvester’s school “systematized and legitimized the theory of partitions.” (DEZ) #16.3.52

PENSIVY, MICHEL. 1988. Jalons historiques pour une épistémologie de la série infinie du binôme. Sciences et Techniques en Perspective 14, 1–231. Historical landmarks for an epistemology of the infinite BINOMIAL SERIES. (ACL) #16.3.53

PÉREZ DE MOYA, JUAN. 1987. Diálogos de aritmética práctica y especulativa (Dialogues on practical and speculative arithmetic). Reproduction of the Diálogos from the ninth book of PÉREZ DE MOYA’S 1562 Aritmética Práctica y Especulativa (Salamanca), Zaragoza: Frenas Universitarias de Zaragoza, 106 pp. Foreword and notes by Rafael Rodríguez Vidal. (VA) #16.3.54

POINCARE, HENRI. 1989. La correspondance avec des mathématiciens de J à Z. Cahiers du Séminaire d’Histoire des Mathématiques 10, 83–229. A transcription with notes, or, in some cases, notes only, of correspondence between POINCARE and 39 other mathematicians; in this selection, from C. Jordan to Zermelo. This project was started in Volume 7. (ACL) #16.3.55

QUEIRÓ, JOÃO FÍLIPPE. 1988. JOSÉ ANASTÁCIO DA CUNHA: A forgotten forerunner. The Mathematical Intelligencer 10(1), 38–43. Well-known in Portugal as a poet and man of culture, CUNHA’S mathematics seems to have been overlooked. The author argues that Cunha gave a general definition of convergence for an arbitrary series and used it correctly before CAUCHY. (DEZ) #16.3.56


RICHARDS, JOAN L. 1987. Augustus De Morgan, the history of mathematics, and the foundations of algebra. Isis 78(291), 7–30. De MORGAN urged mathematicians to learn the history of the subject in order to conduct their research properly. This paper discusses how this position affected De Morgan’s viewpoint on the nature of mathematics. It examines his role vis-à-vis the ANALYTICAL SOCIETY and examines his views on the Foundations of ALGEBRA and the Foundations of CALCULUS. (DEZ) #16.3.58


ROBERT, ALAIN. 1988. The Euler busts. The Mathematical Intelligencer 10(2), 36. Lists the sculptor and the location of the busts in Leningrad, Moscow, and Basel. (DEZ) #16.3.61


SERVAT SUSAGNE, JORDI. See #16.3.50.

SHIELDS, ALLEN. 1988. Carathéodory and conformal mapping. The Mathematical Intelligencer 10(1), 18–22. Discusses three fundamental papers of Constantin Carathéodory and gives a biographical sketch based on an unfinished autobiographical article by Carathéodory. (DEZ) #16.3.65


STERN, NANCY. 1988. Age and achievement in mathematics: A case study in the sociology of science. Association for Women in Mathematics Newsletter 18(2), 12–20. Reprint of a paper first published in Social Studies of Science in 1978. Discusses whether citations can provide an acceptable measure of the quality of mathematics. A related statistical analysis concludes that there is no clear relationship between age and achievement in mathematics; indeed, the 45–49 age group is least productive. (DEZ) #16.3.69


Abstracts


TUCCI, Pasquale. See #16.3.11 and #16.3.74.


VOZZO, Martin L. See #16.3.4.


WILSON, Robin. 1988. Stamp corner. The Mathematical Intelligencer 10(1), 72. HIPPARCHUS, ZHANG HENG (78–139), and Zu Chong-Zhi. (DEZ)

WINOCUR, MARCOS. 1988. ¿Dios es una paradoja? (Is God a paradox?). Matheis (México) 4, 105–111. Russell's idea of the class of all classes and theological concepts of God. (VA) #16.3.85