AFRICAN MATHEMATICAL UNION

COMMISSION ON THE HISTORY OF MATHEMATICS IN AFRICA

(AMUCHMA)

AMUCHMA-NEWSLETTER-25

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Chairman: Paulus Gerdes (Mozambique)
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Associate Members: José Barrios (Canary Islands, Spain), Scott Williams (USA)

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Centro de Investigação Etnomatemática, Maputo (Mozambique), 21.12.2001

1. OBJECTIVES

The African Mathematical Union Commission on the History of Mathematics in Africa (AMUCHMA), formed in 1986, has the following objectives:

a. to improve communication among those interested in the history of mathematics in Africa;
b. to promote active cooperation between historians, mathematicians, archaeologists, ethnographers, sociologists, etc., doing research in, or related to, the history of mathematics in Africa;
c. to promote research in the history of mathematics in Africa, and the publication of its results, in order to contribute to the demystification of the still-dominant Eurocentric bias in the historiography of mathematics;
d. to cooperate with any and all organizations pursuing similar objectives.

The main activities of AMUCHMA are as follows:

a. publication of a newsletter;
b. setting up of a documentation centre;
c. organisation of lectures on the history of mathematics at national, regional, continental and international congresses and conferences.

2. MEETINGS, EXHIBITIONS, EVENTS

2.1 6th International Colloquium on the History of Arabic Mathematics (Algiers, Algeria, 22-24 November 2000)

This colloquium with its periodicity of 2 years had to take place in 1996. The difficult situation in Algeria for some years, however, did not permit to convince a sufficient number of foreign researchers to participate in it. The colloquium could nevertheless take place in 2000 and was organized by the 'École Normale Supérieure' of Algiers in association with the Algerian Association of the History of Mathematics. It was held at the National Library of Algiers. Seventeen researchers from various countries of Africa, Europe and the Middle East took part. During the colloquium, the decision was taken to organise the 7th Colloquium in Marrakech (Morocco) in May 2002 (see below). The following papers were presented:
• Ali Ishaq Abdullatif (Jordan): The epistle of al-Sijzi on the properties of the square of the diameter of a circle;
• Sidi Amar Assali (Algeria): The mathematical tools in the work of al-Hasan al-Murrakushi (13th century);
• Elena Ausejo (Spain): José Sanchez Perez, historian of Arabic mathematics;
• Mona Chaarani (Lebanon): Applied mechanics of Taqi al-Din Ibn Ma rouf al-Dimasqi;

- Abdelmalek Bouzari (Algeria): The theory of the conical sections in the Arabic mathematical tradition through a manuscript of 10th century attributed to Abu Ja far al-Khazin;
- Ahmed Djebbar (Algeria): The processes of measurement in Andalusia and in the Maghreb through an epistle of Ibn Abdun (10th c.);
- Abdallah El-Idrissi (Morocco): Trigonometry in the work of Abu l-Hasan al-Murrakushi (13th c.);
- Lutfallah Gari (Saudi Arabia): Arabic astronomy after the 12th century;
- Youcef Guergour (Algeria): The measure of the circle according to al-Mutaman Ibn Hud;
- Michel Guillemot (France): About the methods of simple false position;
- Ezzaim Laabid (Morocco): Al-Hufi and his Summary on inheritances: a durable influence on the whole tradition of education;
- Anissa Harbili (Algeria): The processes of demonstration in the comment of al-Uqbani (d. 1408) on the Talkhis of Ibn al-Banna (d. 1321);
- Mariano Hormigon (Spain): Sa'id al-Andalusi, scientific columnist of his time and historian of sciences. The contributions to the history of mathematics;
- Kheira Megri (Algeria): The first steps of an undulatory conception of light in the Optics of Kamal al-Din al-Farisi;
- Jacques Sesiano (Switzerland): Magic squares of an epistle of al-Zarqali;
- Maryvonne Spiesser (France): Research on the Arabic and Italian sources of an arithmetic in French at the end of 15th century;
- Moktadir Zerrouki (Algeria): The arithmetical and algebraic contribution of al-Uqbani (d. 1408) to the techniques of calculation of donations.

2.2   The 2000 International Year of Mathematics in Côte d'Ivoire

Coordinated by AMUCHMA member Salimata Doumbia, the Mathematical Society of Côte d'Ivoire (Ivory Coast) organised several activities in the period March 29, 2000 to February 17, 2001. The programme started March 29, 2000 with a historical lecture by the president of the Mathematical Society of Côte d'Ivoire, Saliou Touré, entitled *"Mathematical Life in Côte d'Ivoire from Independence until our days"*. Professor Touré, also former Minister of Higher Education and former Secretary-General of the African Mathematical Union, presented on February 13, 2001 the theme *"The evolution of mathematics since its origins until our days."*
Other public lectures in various cities of the country were presented on the themes *"How to encourage young people to do mathematics?"*, *"Mathematics and human sciences"*, and *"Mental learning methods to have success in mathematics."* On February 15, a round table took place with as theme *"Evaluation and redynamisation of mathematics education and research in Côte d'Ivoire at the start of the third millennium."* A competition *"Miss Math 2000"* and exhibition on pedagogical activities and mathematics books completed the celebrations.

2.3   Papers presented at recent meetings

*   The inaugural lecture at the 2nd International Meeting on Mathematical Analysis and its Applications (M'sila, Algeria, 19-21 November 2000) was given by Ahmed Djebbar in the presence of the Minister of Scientific Research. The lecture was entitled "*The Arab phase of Algebra.*"

*   At the Alexander Von Humboldt Symposium on Science and Cultural Diversity realized during the seventh Mexican Congress on the History of Science and Technology (State University of Hidalgo, Pachuca, Mexico, 26-29 November 2000), Paulus Gerdes (Mozambique) presented a plenary lecture entitled "*Science and Cultural Diversity: The Case of Mathematics in Africa South of the Sahara.*"

*   At the invitation of the Department of Mathematics of the Faculty of Science of Nouakchott (Mauritania), Ahmed Djebbar (Algeria) presented three lectures on the history of mathematics. On this occasion, meetings took place with teachers of the Department of mathematics of the 'École Normale Supérieure', the Faculty of Science and the inspectors of mathematics to discuss the possibility of creating activities in the history of mathematics in Nouakchott.   At the conclusion of these meetings, the Mauritanian colleagues created the Group of History of the Mathematics of Nouakchott (G.H.M.N) of which the first President is Ould Jidoumou.

*   At the 12th Symposium of the Southern African Mathematical Science Association (SAMSA) (University of Swaziland, Ezulwini, Swaziland, 11-15 December 2000), Paulus Gerdes (Mozambique) presented a keynote address entitled "*On Polyhedra in African Cultures.*"

*   At the 9th Conference of the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE) (Eduardo Mondlane University, Maputo, Mozambique, 17-20 January 2001), Paulus Gerdes (Mozambique) presented a keynote address entitled "*On the 'African Renaissance' and Ethnomathematical Research.*"

*   At the Conference 'Mathematics and Culture 2001' (University of Venice, Italy, 30-31 March 2001), Paulus Gerdes (Mozambique) presented a lecture entitled "*Variations on Lunda-designs.*" In the days before he gave lectures at the Mathematics Departments of the Universities of Pisa (March 28) and Milan (March 29) entitled "*Geometrical Ideas from Africa South of the Sahara*" and "*On Art and Geometry in African Cultures*", respectively.

* On April 23 and 24, 2001, Paulus Gerdes (Mozambique) gave talks on geometrical traditions in Southern Africa at the Nampula Branch of the Pedagogical University and the Marrere Teacher Training Centre, both in the Nampula province in northeast Mozambique.

* The inaugural plenary lecture of the XXI International Congress of History of Science (Mexico City, 8-14 July, 2001) was presented by Roshdi Rashed (Egypt / France) on the theme "*History of science and diversity at the beginning of the 21ˢᵗ century*". The following papers related to the history of mathematics in Africa were presented at the congress:

> Marouane Ben Miled (Tunisia): "*Algebraic readings of Book X of Euclid's Elements between the 9th and the 12th century. Research of unpublished texts kept in codex 6167 of the National Library of Tunis*" (July 10);
>
> Roshdi Rashed (Egypt/France): "*The 'ars inveniendi' from al-Síjzî to Ibn al-Haytham*" (July 10);
>
> Abdulcarimo Ismael (Mozambique): "*An ethnomathematical-historical study of the 'tchadji' game in Northern Mozambique*" (July 12);
>
> Paulus Gerdes (Mozambique): "*About mathematical activity and cultural diversity in the history of Central and Southern Africa*" (July 12 and 14).

* At the Roundtable Conference 'Science and Cultural Diversity' (Science Week, Madrid, Spain, 5-9 November, 2001, Paulus Gerdes (Mozambique) presented the theme "*Mathematics and Cultural Diversity in Africa*" (November 5).

* At the International Conference 'Gender and Mathematics' (Essen University, Essen, Germany, November 30 – December 1, 2001, Paulus Gerdes (Mozambique) presented the theme "*Mathematical ideas embedded in female and male cultural practices in Central and Southern Africa*" (December 1).

3.   CURRENT RESEARCH INTERESTS

*   Muhammad Bello (Kano, Nigeria) concluded a paper on the "indigenous (i.e. pre-Islamic and pre-colonial) Hausa number system."

*   Obusitswe Pitso (Gaberone, Botswana), who coordinated the new Botswana Secondary School Mathematics Curriculum, is doing research for his Ph. D. on mathematical ideas and practices of the Basarwa ('Bushmen') in the Kgalagadi desert. "My aim is to identify mathematics concepts, skills and methods of problem solving in the [Basarwa] day to day activities and find ways of how I can use that mathematics to empower them by integrating it into the national mathematics curriculum."

4.   NOTES AND QUERIES

This section is reserved for questions that readers would like to have answered; these are the 'queries'. The answers will be the 'notes'. If you have questions or answers about sources, dates, names, titles, facts, or other such matters related to the history of mathematics in Africa, frame them in clear and concise language and send them to the editors. If you are answering a question, make clear reference to that question. All readers may send both questions and answers. Each will be published with the name of the sender.

*   Query from Muhammad Bello (Kano, Nigeria)

We received the following congratulations and query from Muhammad Y. Bello, deputy vice-chancellor (Academic) of Bayero University (Kano, Nigeria):

 "I am a regular receiver and reader of the AMUCHMA Newsletter. Please accept my congratulations for the excellent job you are doing.

I would be very grateful if you carry the following query in the next issue of the newsletter:

Inconsistency in Arabic Writing**?**
It is very common knowledge that Arabic writing is from right to left, as against Western writing that is left to right. When it comes to writing numbers, however, Arabic writing seems to be inconsistent – writing from left to write. Thus, two thousand, eight hundred and seventy-five would be written left to right just as in the Western way:
Is Arabic inconsistent when it comes to writing numbers, or is there an explanation for this?"

*   Query from Mohamed El Tom (Sudan)

"A colleague asked me about the origin of Arabic numerals.
India appears to be the origin of Arabic numerals: 1, 2, etc., and interestingly enough these are used only in the Arab Maghreb and I have no idea about the origin of the numerals used in the Arab Mashriq. Any idea?
A second less difficult question is why this difference between the numerals used between the two sets of Arab countries? Is it the Andalus connection on the one hand, and the Indian proximity, on the other?"

5. THESES

Hisham Barakat Bisher (al Arish, Egypt) concluded in June 2001 his masters thesis in ethnomathematics, written in Arabic, under the supervision of Professor Massouma Kazim, former member of AMUCHMA, at the Ain Shams University (Cairo, Egypt). His thesis analyses mathematical ideas in nomad Bedouin culture and possibilities to embed them into mathematics teaching.

6. HAVE YOU READ?

6.1 On the History of Mathematics in Africa

#323   Cuomo, Serafina: ***Pappos of Alexandria and the Mathematics of Late Antiquity***, Cambridge University Press, Cambridge (UK), 2000, 234 pp.

#324   Djebbar, Ahmed & Aballagh, Mohamed: *Hayât wa mu'allafât Ibn al-Bannâ al-Murrâkûshî* (1256-1321) [The life and work of Ibn al-Bannâ], Faculté des Lettres et Sciences Humaines - Université Mohamed V, Rabat (Morocco), 2001, 238 p.
>   The book constitutes a bio-bibliographical essay on the most important mathematician from the Maghreb of the 14th century. It is based essentially on the handwritten sources from the Maghreb, which the two authors have studied during this last decade. The book contains a detailed biography of the mathematician, reconstituted from testimonies both from historians and from mathematicians who commented on some of his works. It also contains the complete list of Ibn al-Bannâ's writings, reconstituted from information supplied by his commentators, as well as with references from the libraries containing these manuscripts.

#325   Djebbar, Ahmed: *Une histoire de la science arabe* (A History of Arab Science, Ahmed Djebbar interviewed by Jean Rosmorduc), Paris, Editions du Seuil, 2001, 384 p.

The contents of this book of popularization are presented in 8 chapters in the form of interviews. The first three treat the emergence and development of the Moslem Empire, the place of the science in the Arab–Moslem societies of the 9th – 15th centuries and the role of the ancient heritage in the development of these sciences. The five remaining chapters are dedicated to the presentation of the most important scientific disciplines that were practiced in this civilization: astronomy, mathematics, physics, earth and life sciences, chemistry.

#326   Gerdes, Paulus: **Africa: South of the Sahara**, in: Arne Hessenbruch (Ed.), *Reader's Guide to the History of Science*, Fitzroy Dearborn Publications, London, 2000, 13-14

Brief presentation of books on the history of science in Sub-Saharan Africa (Paper written in 1996).

#327   Gerdes, Paulus: **On mathematical ideas in cultural traditions of Central and Southern Africa**, in: Helaine Selin (Ed.), *Mathematics across Cultures: A History of Non-Western Mathematics*, Kluwer, Dordrecht, 2000.

#328   Gerdes, Paulus: **Ethnomathematics as a new research field, illustrated by studies of mathematical ideas in African history**, in: Juan José Saldaña (Ed.)*, Science and Cultural Diversity: Filling a Gap in the History of Science*, Cuadernos de Quipu 5, Mexico City, 2001, 11-36.

#329   Sabra, A.I.: **One Ibn al-Haytham or two? An Exercise in Reading the Bio-Bibliographical Sources**, *Zeitschrift für Geschichte der Arabisch-Islamitischen Wissenschaften*, 1997, 11, 1-50.

Presents a criticism of R. Rashed's hypothesis that works attributed to Ibn al-Haytham are actually the result of the confusion of two different historical characters, one a mathematician and the other a physician.

#330   Vitrac, Bernard: *Euclide, Les Eléments*, Volume 4, Livres XI-XIII, Presses Universitaires de France, Paris, 2001, 482 p.

It is the last volume of the project of new French translation of Euclid's elements, based on the Heiberg edition. The first volume was published in 1990 (cf. AMUCHMA # 94, 107, 141).

6.2 Publications on the History of Mathematics in Africa, Ethnomathematics and / or Mathematics Education

#331   Gerdes, Paulus: **Ethnomathematics**, in: Arne Hessenbruch (Ed.), *Reader's Guide to the History of Science*, Fitzroy Dearborn Publications, London, 2000, 227-229

   Brief presentation of books on ethnomathematics, in particular related to Sub-Saharan Africa (Paper written in 1996).

#332   Gerdes, Paulus: **On the 'African Renaissance' and Ethnomathematical Research**, in: Inocente Mutimucuio (Ed.), *Proceedings of the 9th Conference of the Southern African Association for Research in Mathematics, Science and Technology Education*, SAARMSTE, Maputo, 2001, Vol. 1, 1-14

#333   Gerdes, Paulus: **Intrecci culturali** (Cultural interweavings), in: P. Bellingeri, M. Dedò, S. di Sieno, C. Turrini (Eds.), *Il ritmo delle forme, Itenerario matematico (e non) nel mondo della simmetria*, Mimesis, Milano, 2001, 121-124

   Describes some geometrical aspects of basket weaving in Mozambique.

#334   Gerdes, Paulus: **Fantasie geometrico-simmetriche nell'artigianato africano**, in: Michele Emmer (Ed.), *Matemática e Cultura 2001*, Springer, Milano, 2001, 3-10

   Illustrates some geometrical-symmetrical aspects of African craft.

#335   Gerdes, Paulus: **Exploring the Game of Julirde**, *Teaching Children Mathematics*, NCTM, Reston VA, 2001, Vol. 7, No. 6 (Focus issue: Mathematics and Culture), 321-327

   Illustrates how a game from Cameroon may be explored in the teaching of geometry.

#336   Jama, Jama Musse: **Shax: The preferred game of our camel herders and other traditional African entertainments**, Sunmoonlake, Roma (Italy), 2000, 40 pp.

   Presents an introduction to the 'shax' three-in-a-row game from Somalia and two other Somali borad games 'Layli Goobaley' and 'Korkabood'. It introduces also a computer program for 'shax' (cf. www.redsea-online.com/games/shax.html).

#337   Powell, Arthur B. & Oshon L. Temple: **Seeding Ethnomathematics with *Oware*: *Sankofa***, *Teaching Children Mathematics*, NCTM, Reston VA, 2001, Vol. 7, No. 6 (Focus issue: Mathematics and Culture), 369-375

Illustrates how a 'mancala' game (cf. #217, 218, 239, 243, 244) from the Akan in Ghana may be explored in the mathematics classroom.

#338 White, Dorothy Y: **Kenta, Kilts, and Kimonos: Exploring Cultures and mathematics through Fabrics**, *Teaching Children Mathematics*, NCTM, Reston VA, 2001, Vol. 7, No. 6 (Focus issue: Mathematics and Culture), 354-361
Shows, among other examples, how 'kenta' cloth from West Africa may be explored in a geometry lesson.

6.3 Other publications on the History of Mathematics by African mathematicians

#339 Rashed, Rosdi and Vahabzadeh, B.: *Al-Khayyam Mathématicien*. Blanchard, Paris, 1999, 429 pp.
Critical editions in French of al-Khayyam's works *The Algebra*, an untitled treatise written before the *Algebra*, and a commentary on the difficulties in the postulates of Euclid's *Elements*.

6.4 Publications on the History of Mathematics and the African Diaspora

#340 Donaldson, James & Fleming, Richard: **Elbert F. Cox: An Early Pioneer**, American Mathematical Monthly, Washington, 2000, Vol. 107, 105-128
A biography of Elbert F. Cox, the first African-American to earn a Ph.D. in mathematics.

6.5 Reviews

#341 Barrow, John D. (Cambridge, UK): Paulus Gerdes' 'Geometry from Africa', *PLUS Magazine*, June 2001
[http://plus.maths.org/issue15/reviews/book2/] (cf. #279)
#342 Crowe, Donald (Madison, USA): Paulus Gerdes' 'Geometry from Africa' and 'Le cercle et le carré', *The Mathematical Intelligencer*, 23(2) 2001, 65-68 (cf. #279, #308)
#343 Hogendijk, Jan (Utrecht, Netherlands): Rosdi Rashed and B. Vahabzadeh's 'Al-Khayyam Mathématicien**'**, *Mathematical Reviews*, 2000I:01013 (cf. #337)
#344 Johnson, Julia (Sudbury, Canada): Paulus Gerdes' 'Geometry from Africa', *Crux Mathematicorum*, September 2000, 278-279 (cf. #279)

6.6 Mathematical books published in Africa

#345   Njock, G. Edward: **Théorie de Galois et Applications** (Galois Theory and Applications), Presses Universitaires de Yaoundé, Yaoundé (Cameroon), 1999, 142 pp.

> Lecture notes of a course given to students of the 'Maitrise' programme at the Mathematics Department of the University of Yaoundé.

#346   Njock, G. Edward: **Introduction à la Géométrie Projective** (Introduction to Projective Geometry), Presses Universitaires de Yaoundé, Yaoundé (Cameroon), 1999, 157 pp.

> Lecture notes of a course given at the University of Yaoundé, principally to students of the 'Licence' programme for future mathematics teachers.

#347   Yacoubi, Nouzha El (Ed.): **Proceedings of the first AMUPAMO Symposium held in Kairouan, Tunisia, from the 31st of October to the 6th of November 2000 with as Theme: Pan African Mathematics Olympiads, Training and Research**, Presses Universitaires de Yaoundé, Yaoundé (Cameroon), 2001, 214 pp.

> AMUPAMO stands for African Mathematical Union Commission on Pan African Mathematics Olympiads. The proceedings include a report of the symposium and the papers presented in English or French at the plenary sessions:
> Aderemi Kuku: Mathematical sciences and other sciences (107-124);
> Jan Persens: Mathematics development – Striving for a balance between pure and applied mathematics, even at school level (125-136);
> Saliou Touré: Un exemple de coopération dans les pays francophones d'Afrique et de l'Océan Indien (137-142);
> Claude Deschamps: Les Olympiades Internationales de Mathématiques (143-152);
> Nouzha El Yacoubi: Olympiades Pan Africaines de Mathématiques de l'Union Mathématique Africaine (155-168);
> Francisco Bellot Rosado: La compétition mathématique méditerranéenne (169-171);
> Walter Mientka: The road to the International Mathematical Olympiad (173-177).

6.7 Mathematical books published by Africans outside Africa

#348   Alves, Manuel (Mozambique): *Equações Diferenciais Funcionais Singulares de Segunda Ordem* (Second order singular functional differential equations), Perm State University Press, Perm (Russia), 2000, 179 pp.

Doctoral thesis.

7. ANNOUNCEMENTS

7.1 CONFERENCES AND WORKSHOPS

* 7th International Colloquium on the History of Arabic Mathematics

The 7th International Colloquium on the History of Arabic Mathematics will take place in Marrakech, Morocco (30 May – 2 June, 2002). A special session will be dedicated to the use of the research results presented at the earlier colloquia in mathematics education. The 7th Colloquium is organised by the Research Group in Didactics of Computer Science and Mathematics (GREDIM) of the 'École Normale Supérieure' of Marrakech.

For more information, see the website
                    www.ensma.ac.ma/comhisma7
or contact:
    Ezzaim Laabid or Abdellah El Idrissi, ENS, B.P 2400, CP 40 000 Marrakech, Morocco (Tel: +212 44 34 01 25, Fax: +212 (0) 44 34 22 87, E-mail: comhisma7@ensma.ac.ma)

* Second International Congress of Ethnomathematics

The Second International Congress of Ethnomathematics (II-ICEM) will take place in Ouro Preto, Minas Gerais, Brazil (4-7 August 2002). For more information, contact:
            Etnomat@ufop.br
For the programme, see the website
                    www.II-CIEM.ufop.br

7.2   WEBSITES

Africa-Mathematics-Forum

Abebe Kebede (USA) created a website on mathematics programmes in Africa and opportunities for research and collaboration. The site is located at:
> trigonal.ncat.edu/Africa-Mathematics-Forum

To join the Africa-Mathematics-Forum discussion group, send a message to:
> Africa-Mathematics-Forum@yahoogroups.com

Africa Journal of Mathematics

Information about the new African Journal of Mathematics (AJM) can be found at the following website:
> www.african-j-math.org

It is expected that the first issue will appear in 2002. The editor Toka Diagana may be contacted at the following address:

> Department of Mathematics, Howard University, Washington DC 20059, USA (E-mail: TokaDiag@aol.com, Africa-j-math@usa.net)

Ethiopic Numeral Names

Aberra Molla (Ethiopian Computers & Software, 9781 W. Fremont Pl., Littleton, Colorado 80128, USA; aberra@ethiopic.com) organised a web page on Ethiopic numerals:
> www.ethiopic.com/ethiopic/numerals.htm

Ethnomathematics and ethnomusicology

Marc Chemillier (GREYC, University of Caen, 14032 Caen, France; E-mail: marc@info.unicaen.fr) is interested in ethnomathematics and ethnomusicology. The following web page is dedicated to polyrythms in Central Africa:
> www.info.unicaen.fr/~marc/publi/diderot/pygmees.html

Symbol, Form and Number in Ancient Egypt

Franz Gnaedinger (Switzerland) concluded the second volume of his "In the House of Seshat" (cf. #269), entitled "Symbol, Form and Number in Ancient Egypt". Anyone interested in the text may order a free copy by writing to the author (fg@seshat.ch).   The text will also be published on the website:
> www.seshat.ch

7.3   PAMO 2002

The 12th Pan African Mathematics Olympiad (PAMO 2002) will take place in Pretoria (South Africa) from April 6 to 14, 2002.   For more information, contact the chairperson of the African Mathematical Union Commission on the Pan African Mathematics Olympiad (AMUPAMO), Nouzha El Yacoubi (Morocco) or the local convener:

> Sudan Hansraj, Convener, Local Organising Committee PAMO 2002, Department of Mathematics, University of Natal, Durban, South Africa (Fax: +27 31 305 7885, E-mail: hansrajs@nu.ac.za)

7.4 International Association for Science and Cultural Diversity

The constitutive meeting of the **International Association for Science and Cultural Diversity (IASCUD)** took place in Pachuca (Mexico) on November 29-30, 2000. During the XXI International Congress on the History of Science (Mexico City, 8-14 July, 2001), the General Assembly of the International Association for International Union of the History of and Philosophy of Science / Division of History of Science decided to formalise IASCUD as one of its specialized sections and Paulus Gerdes (Mozambique) was elected President of IASCUD. This election reflects, in part, the international prestige of AMUCHMA.

The aims of IASCUD are:
• to promote the History of Science by establishing and extending the scholarly bases for the study of Science and Cultural Diversity;
• to foster historical study of the relationship between the sciences, technology, medicine, and the cultures in which they arose throughout the world from ancient times to the present;
• to encourage international cooperation and maintain close working relationships among specialists of different disciplines;
• to facilitate research documentation in the History of Science and Cultural Diversity for scholars in all countries through exchange of information and by enlarging the material means necessary for this objective.

The board of IASCUD has the following composition:
> President: Paulus Gerdes (Mozambique)
> Secretary General: Luís Carlos Arboleda (Colombia)
> Treasurer: Wesley Stevens (Canada)
> First Vice-President: Karine Chemla (France)
> Second Vice-President: Irfan Habib (India)
> Assistant Secretary General: Martine Duquesne (France)
> Assessor: Kam-Wing Fung (China)
> Assessor: Sang-Yong Song (South Korea)

Readers interested in becoming members of IASCUD, may contact the treasurer to obtain a membership form:

Wesley Stevens, Professor of History, The University of Winnipeg, Winnipeg, Canada (E-mail: stevens-w@C-H.UWINNIPEG.CA)

It may be noted that Luís Carlos Arboleda (Mathematics in the History of Latin America [lca@norma.net]), Karine Chemla (Mathematics in the History of China [chemla@paris7.jussieu.fr]) and Wesley Stevens (Mathematics in medieval Europe) are historians of mathematics, and Irfan Habib [irfan@nistads.res.in] dedicated various papers to the cultural-historical context of the work of Indian mathematicians.

7.5 Female Education in Mathematics and Science in Africa

The Female Education in Mathematics and Science in Africa (FEMSA) project is an initiative of the Association for the Development of Education in Africa (ADEA) and is hosted by the Forum for African Women Educationalists (FAWE). The main goal of FEMSA is to improve the participation and performance of girls in science, mathematics and technology subjects in primary and secondary schools in Africa. FEMSA completed a two-year pilot phase in 1997. Country profiles of Cameroon, Ghana, Tanzania and Uganda were compiled. In the second phase Burkina Faso, Kenya, Mali, Malawi, Mozambique, Senegal, Swaziland, and Zambia were admitted to FEMSA. So far FEMSA has published 16 dissemination booklets. Among these are for instance:

• Parents' and Community Attitudes towards Girls' Participation in and Access to Education and Science, Mathematics and Technology Subjects (#6)
• Teachers' Attitudes to the Study of Science, Mathematics and Technical Subjects by Girls in Secondary Schools (#7)
• Status of Girls' Participation and Performance in Science, Mathematics and Technology Subjects in Secondary Schools.

To obtain copies of these publications or for more information, contact the FEMSA coordinator:

FAWE Secretariat, PO Box 53168, Nairobi (E-mail: femsa@fawe.org)

8. ADDRESSES OF SCHOLARS, INSTITUTIONS AND PUBLISHERS MENTIONED IN THIS NEWSLETTER

- Aballagh, Mohamed: Département de Philosophie, Faculté des Lettres et Sciences Humaines, B.P. 50, Université de Fès, Dhar El-Mehrez, Fès, Morocco
- Alves, Manuel: Department of Mathematics and Informatics, Eduardo Mondlane University, C.P. 257, Maputo, Mozambique (E-mail: mjalves@tvcabo.co.mz)
- Assali, Sidi Amar: Département de Mathématiques, Département de Mathémaitiques, Université de Laghouat, Algeria
- Barrow, John D.: Director Millennium Mathematics Project, Centre for Mathematical Sciences, Cambridge University, Wilberforce Road, Cambridge CB3 0WA (E-mail: j.d.barrow@dampt.cam.ac.uk)
- Bello, Muhammad Yahuza: Deputy Vice-Chancellor (Academic) and Department of Mathematical Sciences, Bayero University, PMB 3011, Kano, Nigeria (E-mail: mybello2001@yahoo.com)
- Bisher, Hisham Barakat: hie el salaymh-near of el salam Mosque, al Arish 45111, Egypt (Tel. 002068-350579, E-mail: hbisher@hotmail.com)
- Bouzari, Abdelmalek: Département de Mathématiques, ENS de Kouba, 16050 Vieux Kouba, Alger, Algeria (E-mail: bouzari@hotmail.com)
- Chemillier, Marc: GREYC, University of Caen, 14032 Caen, France (E-mail: marc@info.unicaen.fr)
- Crowe, Donald: Mathematics Department, University of Wisconsin, 480 Lincoln Drive, Madison, Wisconsin 53706, USA (E-mail: crowe@math.wisc.edu)
- Donaldson, James: Mathematics Department, Howard University, Washington DC 20059, USA
- Doumbia, Salimata: Institut de Recherche Mathématiques, 08 B.P. 2030, Abidjan 08, Côte d'Ivoire (Tel./Fax: 22 48 64 00)
- El-Idrissi, Abdallah: Département de Mathématiques, E.N.S. de Marrakech, B.P. S 41, Marrakech, Morocco
- El Tom, Mohamed: Program in Mathematics, Box 210, Teachers College, Columbia University, 525 W. 120th Street, New York, NY 10027, USA (E-mail: meltom41@hotmail.com)
- Gari, Lutfallah: P.O.Box 30344, Yanbu al-Sinaiyah, Saoudi Arabia
- Gnaedinger, Franz: Hafnerstrasse 60, CH-8005 Zürich, Switzerland (E-mail: fg@seshat.ch)
- Guergour, Youcef: Département de Mathématiques, ENS de Kouba, 16050 Vieux Kouba, Alger, Algeria (E-mail: guergour@hotmail.com)
- Guillemot, Michel: 10 impasse de la Pelude, 31400 Toulouse, France (E-mail: guillemo@cict.fr)
- Hogendijk, Jan: Mathematisch Instituut, Rijksuniversiteit Utrecht, Postbus 80.100, 3508 TA Utrecht, Netherlands (E-mail: hogend@math.ruu.nl)
- Hormigon, Mariano: SEHCYT, Facultad de Ciencias (Matemáticas), Ciudad Universitária, 50009 Zaragoza, Spain (E-mail: hormigon@posta.unizar.es)

- Ismael, Abdulcarimo: Centro de Investigação Etnomatemática, C.P. 915, Maputo, Moçambique
- Jama, Jama Musse: Via di Pratale 103 F, 56100 Pisa, Italy (E-mail: jama@dm.unipi.it; shax@redsea-online.com; Website: www.dm.unipi.it/~jama/ethno/shax.html)
- Johnson, Julia: Department of Mathematics & Computer Science, Laurentian University, Sudbury, Ontario P3E 2C5, Canada (E-mail: julia@cs.laurentian.ca)
- Ould Jidoumou, Ahmedou (Mauritania): (E-mail: jidoumou@opt.mr)
- Kebede, Abebe: Department of Physics, NC A&T State University, 1601 East Market Street, Greensboro, NC 27411, USA (E-mail: gutaye@ncat.edu)
- Laabid, Ezzaim (Morocco): (E-mail: ezzaimlaabid@hotmail.com)
- Kuku, Aderemi: ICTP, P.O.Box 586, Miramare, 34100 Trieste, Italy (E-mail: kuku@ictp.trieste.it)
- Molla, Aberra: Ethiopian Computers & Software, 9781 W. Fremont Pl., Littleton, Colorado 80128, USA (E-mail: aberra@ethiopic.com)
- Njock, G. Edward: P.O.Box 623, Yaoundé, Cameroon (Tel/Fax: +237 31 24 25, E-mail: enjock@uycdc.uninet.cm)
- Persens, Jan: President African Mathematical Union, c/o Director of International Relations, University of the Western Cape, Private Bag X17, Bellville, 7535 South Africa (Tel: +27-21-959-2884/3340; Fax: +27-21-9592655; E-mail: jpersens@uwc.ac.za)
- Pitso, Obusitswe: Department of Maths and Science Education, Faculty of Education, University of Botswana, Private Bag 22, Gaborone, Botswana (E-mail: pitsoo@mopipi.ub.bw)
- Powell, Arthur: Education and Academic Foundations Department, Rutgers University, 175 University Avenue, Newark, New Jersey 07102, USA (E-mail: abpowell@andromeda.rutgers.edu)
- Rosdi Rashed: Centre d'Histoire de Sciences, 27 rue Damesme, 75013 Paris, France
- Selin, Helaine: Science Librarian, Hampshire College, Amherst, Massachusetts 01002 (Fax: 413-559-5419; E-mail: hselin@hampshire.edu)
- Sesiano, Jacques: 4 Avenue du Mail, 1205 Genève, Switzerland
- Spiesser, Maryvonne (France): (E-mail: spiesser@cict.fr)
- Temple, Oshon L. (USA): Oshon Lake Temple, 21-51 35th Avenue, Long Island City, NY 11106 (E-mail: OshonTemple@dlsa.zzn.com)
- Touré, Saliou: Institut de Recherche Mathématiques, 08 B.P. 2030, Abidjan 08, Côte d'Ivoire (Tel./Fax: 22 48 64 00)
- Vitrac, Bernard: 82 rue du Poirier Baron, 95110, Sannois, France
- White, Dorothy Y: Department of Mathematics Education, University of Georgia, 105 Aderhold Hall, Athens GA 30602, USA (E-mail: dwhite@coe.uga.edu)
- Yacoubi, Nouzha El: Department of Mathematics and Informatics, PO Box 1014, Rabat, Morocco (Fax: +212 37 77 30 44, E-mail: elyac-sb@fsr.ac.ma, nelyacoubi@yahoo.fr)

- Zerrouki, Moktadir: Cité Hassein Mahiouz, Bt. B 11, no. 98, Ben Aknoun, Alger, Algeria

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