



# NASGEM NEWS

All the latest from the  
North American Study Group on Ethnomathematics

Volume 2, Issue 1  
November 2007

## Welcome A Word from the Editors

Welcome to the inaugural issue of *NASGEM News* – featuring all the latest from the North American Study Group on Ethnomathematics (and a few others).

*NASGEM News* is focused on providing up-to-date information about what is going on in ethnomathematics: ethnomathematics in the news; online and print resources for teaching; calls for chapters / papers; as well as new and upcoming publications and conferences. Each issue will also feature updates from NASGEM Executive Board members and short articles focusing on key issues in ethnomathematics. We are very honoured to have submissions from Ubiratan D’Ambrosio and Paulus Gerdes for our first volume. More traditionally academic work continues to flow to Tod Shockey and Rick Silverman, co-editors of the *Journal of Mathematics and Culture*.

Our goal is to publish *NASGEM News* online every 6 months. If submissions allow, we will move up to a quarterly schedule. We thank the contributors whose submissions made this first issue possible, and encourage everyone to continue their submissions via Dawn Wiseman ([dawn@nativeaccess.com](mailto:dawn@nativeaccess.com)). We look forward to receiving and sharing all your news.

Dawn Wiseman  
Claudette Engblom-Bradley



Dawn Wiseman



Claudette Engblom-Bradley

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# Ethnomathematics: Perspectives

## Ubiratan D'Ambrosio

A warm welcome for the *NASGEm News*. Members of the international groups that sprang out of the ISGEm will greatly benefit from this new vehicle of communication, information and exchange of ideas.

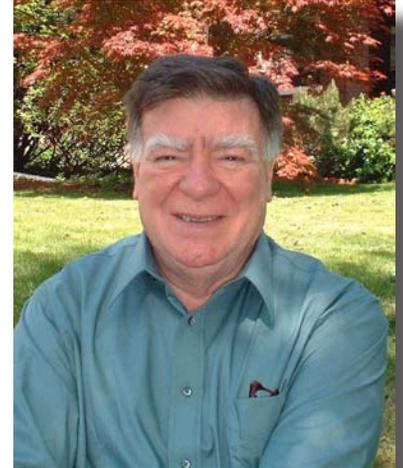
I first started to look at mathematics of different cultural environments, back in the mid-seventies, when preparing the essay for ICME 3, on “Why teach Mathematics?” My main focus was the relations between Mathematics and Society. My view of Mathematics was as the science that emerged from the Mediterranean basin and organized in antiquity, mainly by the Greeks, and of Society as communities, cultures and civilizations organized according to the model of urban, economic and social relations that emerged in post-feudal Europe, since the Late Middle Ages and Renaissance. Both, Mathematics and Society shared this historical background and became prevalent all over the World. In the Age of Enlightenment the philosophical foundations of both Mathematics and Society were well established. This foundation was supposed to guide my paper for ICME 3.

But, after much travel in Brazil, in the Americas and Africa, I was, for some time, curious about traditional ways of dealing with numbers and forms, as well as with the presence of traditions in societal arrangements and in religious practices. These recognitions were responsible for the impressive development of anthropology in the 19<sup>th</sup> and 20<sup>th</sup> centuries, particularly of ethnography. Recognition of the possibility of different mathematics in different cultures and the relations of these different approaches to space and time within models of society and education were timidly suggested in the classics of anthropology.

Then I came across the precious and pioneering book of Claudia Zaslavsky, *Africa Counts*. I became very interested in finding something similar in other regions of the World. Many years of working as a consultant with UNESCO and the Organization of American States favored my ideas. Thus I was courageous enough to deal with the theme of “Why Teach Mathematics?” taking into account these very broad factors. The paper was received with mixed feelings. How could someone question the Mathematics that was in curricula all over the World? The answer to “Why Teach Mathematics?” should stress how important was to teach *that* mathematics. It was correct to discuss new approaches of teaching and learning *that* mathematics. Cultural roots and social tensions had not much to do with *that* mathematics. Against the expected, I decided to open up reflections on mathematics education as related to cultural and social issues. It was a very controversial session during ICME 3.

An important issue, in defense of *that* Mathematics, was, and continues to be, its cognitive value. They claim it is essential in developing cognitive abilities. This privileged position may be a myth, as suggested by current research in Artificial Intelligence, as well as recent advances in studies of the mind and the brain. Of course, traditional mathematics may be a very important intellectual exercise, the same as poetry, music and Ethnomathematics.

After ICME 3, I was strongly motivated to find theoretical support for the views I had exposed in my paper. This led me to look for new approaches to the History and Philosophy of Mathematics. To emphasize Mathematics as related to culture and society, during the 1977 annual meeting of the AAAS





in a session on Native American Science, I dared to use the word Ethnomathematics. In the meeting, many speakers were talking about Ethnobiology, Ethnopharmacology, Ethnopsychiatry and many others “ethno-disciplines.” Why not Ethnomathematics? I pronounced the word, to the surprise of many, just as a word to design a very broad idea. Obviously, the academic environment attending the meeting, identified Ethnomathematics as ethnic-mathematics.

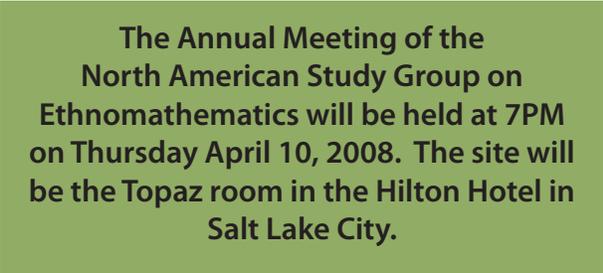
Regrettably, many people still react this way. Clearly, this is not what I had in mind when I used the word. What I had in mind, which emerged in preparing the essay for ICME 3, was a broader view of the History and Philosophy of Mathematics, emphasizing its relation to culture and society. Then, during the ICM 78, in Helsinki, came the idea of the etymological exercise that led to ethno-mathema-tics, where the words were used with special meaning. Thus, *ethno* means cultural environment, *mathema* means teaching, understanding, explaining, and *tics* is used as a reminder of techné, the root for arts and techniques. Thus came the word Ethnomathematics, which I claim to be a conceptual word. In the formation of the word resides the concept of Ethnomathematics. Of course, the abusive and imprecise appropriation of etymology was criticized by some. But how can we propose the new, if we are afraid of criticism, even if sometimes acid?

At ICME 5, in Adelaide, Australia, in 1984, these ideas were spelled out. Thus Ethnomathematics was recognized as a valid research program, with obvious pedagogical implications. All I reported above happened within the last 30 years. Now, Ethnomathematics is recognized and practiced all over the world. Much research, practical and theoretical, of a methodological or an ethnographic character, is reported. The number of journals, books, associations, congresses is growing. The International Study Group on Ethnomathematics/ISGEm was created in 1985, and later national study groups, such as the pioneering North American Study Group on Ethnomathematics, were created. Many classroom proposals are available, and a number of teacher training programs are offered all over the world.

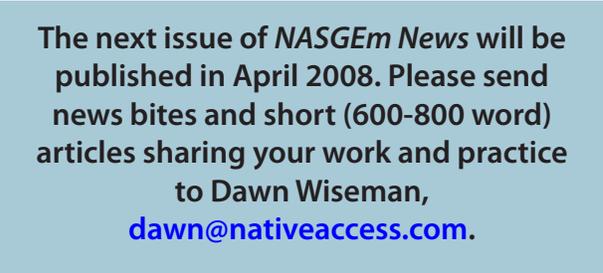
Criticism is still present, which is an indication of the growing presence of Ethnomathematics. Criticism helps ethnomathematicians to reflect upon their work.

A question is always present. What about the future of Ethnomathematics? Is it a fading proposal? Is Ethnomathematics to be replaced by the variants Critical Mathematics Education, or Mathematics and Society, History and Pedagogy of Mathematics, or some branches of Psychology of Mathematics Education? Groups are organized with these labels. Ethnomathematics, the way I conceive it, is intrinsic to all of these, as well as to Pure and Applied Mathematics.

I insist in claiming that the essence of the Program of Ethnomathematics is to understand how knowledge is generated, how it is organized and how it is diffused in *different cultural environments*. Once we recognize influence of culture in knowing and doing, we are within the scope of the Program of Ethnomathematics. This is clear when we understanding the etymological construction of the word. It is ethno+mathema+tics. It is much more than ethno+mathematics. This very subtle difference is deep in its meaning.



**The Annual Meeting of the North American Study Group on Ethnomathematics will be held at 7PM on Thursday April 10, 2008. The site will be the Topaz room in the Hilton Hotel in Salt Lake City.**



**The next issue of *NASGEm News* will be published in April 2008. Please send news bites and short (600-800 word) articles sharing your work and practice to Dawn Wiseman, [dawn@nativeaccess.com](mailto:dawn@nativeaccess.com).**



## Upcoming events

### **Mathematical Association of America**

San Diego, CA

Joint Math Meetings

January 6-9, 2008

[http://www.ams.org/amsmtgs/2109\\_intro.html](http://www.ams.org/amsmtgs/2109_intro.html)

### **Creating Balance in an Unjust World**

Second annual national conference on mathematics, social justice, and ethnomathematics

Spring 2008

Sign up at <http://www.radicalmath.org/conference/2008.htm> to receive timely information about this event.

### **Maya Exploration Centre**

Copan, Honduras and Quirigua, Guatemala

Study abroad course

March 9-15, 2008

[www.mayaexploration.org](http://www.mayaexploration.org)

A week-long Study Abroad course is being offered by Isabelle Champlin and Cathy Barkley.

The course is offered March 9 – 15, 2008 in. The course is designed for college level students or K-12 teachers and focuses on ancient Maya history, science, mathematics, and culture.

### **3rd Brazilian Congress of Ethnomathematics**

Faculty of Education, Universidade Federal Fluminense

Niterói, Brazil

March 26-29, 2008

<http://www.uff.br:80/cbem3/>

### **NCTM Annual Meeting**

Becoming Certain About Uncertainty

Salt Lake City, UT

April 9-12, 2008

<http://www.nctm.org/conferences/content.aspx?id=438>

### **11th International Congress On Mathematical Education**

The Role of Ethnomathematics in Mathematics Education

Monterrey, Mexico

July 6-13, 2008

<http://icme11.org/>

Information about contributions for Topic Study Groups, Discussion Groups, Workshops,

Sharing Experience Groups, Poster Exhibitions and roundtables can be found at

<http://icme11.org/node/16>. Further information about submitting papers can be found in

Callings.

### **2008 Northwest Mathematics Conference**

Portland, Oregon

October 9-11, 2008

<http://www.northwestmathconf.org>

TODOS has been invited to organize a strand, please see Callings for more details.

# Publications

## In print

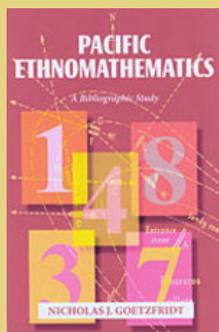
Atweh, B.; Calabrese Barton, A.; Borba, M.; Gough, N.; Keitel, C.; Vistro-Yu, C.; Vithal, R. (Eds.) (2007). *Internationalisation and Globalisation in Mathematics and Science Education*. Springer. 544 pp. ISBN: 978-1-4020-5907-0.

NASGEM members Ubiratan D'Ambrosio, Milton Rosa and Daniel Clark Orey contributed two chapters to this book. Distribution: <http://www.springer.com/east/home/education/mathematics+education?SGWID=5-40414-22-173714305-0>

Gerdes, Paulus. (2007.) *Etnomatematica: Reflexoes sobre Matematica e Diversidade Cultural*.

[Ethnomathematics: Reflections about Mathematics and Cultural Diversity]. Edicoes Humus. 284 pp. ISBN: 978-972-99937-8-7

This new book by Paulus Gerdes focuses on ethnomathematics and the production of mathematical ideas in diverse cultural contexts, ethnomathematics and mathematics education, ethnomathematics and mathematical research, and other ethnomathematical publications. It is currently available in Portuguese, but English translation is in progress. Distribution: <http://www.bertrand.pt>



Nicholas J. Goetzfridt. (2007). *Pacific Ethnomathematics A Bibliographic Study*. University of Hawaii Press. 424pp. ISBN 978-0-8248-3170-7

This ground-breaking bibliography of mathematical concepts and practices in Polynesia, Melanesia, and Micronesia, compiles nearly five hundred citations, from the 1700s to the present. It covers number systems, counting, measuring, classifying, spatial relationships, symmetry, geometry, and other aspects of ethnomathematics in relation to a wide range of activities such as trade, education, navigation, construction, rituals and festivals, divination, weaving, tattooing, and music.

Distribution: [http://www.uhpress.hawaii.edu/cart/shopcore/?db\\_name=uhpress&page=shop/flypage&product\\_sku=978-0-8248-3170-7](http://www.uhpress.hawaii.edu/cart/shopcore/?db_name=uhpress&page=shop/flypage&product_sku=978-0-8248-3170-7)

## Online

For those of you who read Portuguese or who would like to see pictures and drawings, the book *Cestaria e Geometria dos Bora na Amazonia Peruana* [Basketry and Geometry of the Bora in the Peruvian Amazon] is now available, both in print and as a download, from Lulu.com in Morrisville NC, go to <http://stores.lulu.com/pgerdes> or search **paulus gerdes** on [www.lulu.com](http://www.lulu.com).

The book results from fieldwork and a workshop given in Iquitos and Zungarococha in 2000, and presents an analysis of circular basket trays and cylinder baskets collected from the Bora. Topics include decoration, colorings, symmetries, designs and plane patterns. The last part of the book presents proposals for the incorporation of geometrical aspects of Bora baskets in mathematics education.

## Papers

Eglash, Ron. (2005). "An Ethnomathematics Comparison of African and Native American Divination Systems." National Museum of Ethnology, Leiden.

[http://www.ccd.rpi.edu/Eglash/papers/eglash\\_div\\_paper.doc](http://www.ccd.rpi.edu/Eglash/papers/eglash_div_paper.doc)

Eglash, Ron. (2006). "Culturally Situated Design Tools: Ethnocomputing from Field Site to Classroom." American Anthropologist.

<http://www.ccd.rpi.edu/Eglash/csdt/teaching/papers/aa.2006.108.2.pdf>

# Ethnomathematics: a blossoming research program

Paulus Gerdes

NASGEM President Frederick Silverman invited me to contribute with some information for *NASGEM News*. First of all I would like to congratulate NASGEM publicly, in my capacity as President of ISGEM, for all its activities, including the publication of the *Journal of Mathematics and Culture*.

Recently the important collection of papers on ethnomathematics and mathematics education presented at the 10<sup>th</sup> International Congress of Mathematics Education was published (Favilli, 2007). The growth of the ethnomathematical literature is also reflected in the publication of regional bibliographies on the Pacific (Goetzfridt, 2007) and Africa (Gerdes & Djebbar, 2007).

In several parts of the African continent doctoral theses in ethnomathematics are being produced. Among the more recent doctoral dissertations are the theses by Jan Draisma (2006) on gesture and oral computation in Mozambique, by Kalifa Traoré (2006) on the mathematical practices developed-in-context by the Siamous population in Burkina Faso, and by Mamadou Kanouté (2007) on the influence of the learning of Bamana on the teaching and learning of mathematics in Mali. In the final stages are the theses by Obusitswe Pitso on the mathematical practices of Basarwa community in central Kgalagadi (Botswana), by Daniel Soares on the educational exploration of geometrical knowledge embedded in house building in the Sofala and Zambeze provinces in central Mozambique and by Generosa Cossa on cultural aspects of mathematical competitions in Mozambique.

Manuel Cadete is concluding a study on numeration systems in Angola, conducted in a similar way as the earlier collective study on numeration systems in Mozambique (Gerdes, 1993). Dissemination, translation, and publication, using also the new technological possibilities, of research have been lately priority activities for me. A series of earlier papers was republished in the reader *Ethnomathematics: Reflections on Mathematics and Cultural Diversity* (Gerdes, 2007a). The English language version of the new edition of book on the geometry of the *sona* illustrations from Angola appeared (Gerdes, 2006) and the children's book on educational exploration of these *sona* drawings in the sand is being published in several languages, including English (Gerdes, 2007b). The mathematical analysis of the *sona* drawings and the further exploration of their mathematical potential led to the publication of a introductory book on a beautiful

class of matrices with attractive visual properties (Gerdes, 2007g) and of an expanded edition of the book on Lunda-Geometry (Gerdes, 2007e) dealing with mirror curves and new forms of symmetry discovered in the 1990s.

Two monographs were published, one (Gerdes, 2007c) on geometry and basket weaving among the Makhuwa in northeast Mozambique, based on thirty years of engagement with the Makhuwa culture and didactic experimentation, and a second (Gerdes, 2007d) on some mathematical ideas embedded in basket weaving among the Bora in the Peruvian Amazon, based on the ethnomathematics seminar I had the honor to conduct in 2000 in Iquitos and Zungarococha and on an analysis of material collected at that time. I hope that these books published in Portuguese may become available in other languages too.

The growing interest of the broader academic community in the results of ethnomathematical research is also reflected in the invitations for contributions to encyclopedia. For instance, the recent *New Encyclopedia of Africa* includes several contributions on mathematical ideas in African cultures (Gerdes, 2007f). Internationally, ethnomathematics is really becoming the blossoming research program Ubiratan D'Ambrosio envisaged.

## References

- Draisma, Jan (2006), *Teaching Gesture and Oral Computation in Mozambique: four case studies*, Monash University, Clayton, Victoria, Australia, 360 pp.
- Favilli, Franco (Ed.) (2007), *Ethnomathematics and Mathematics Education, Proceedings of the 10<sup>th</sup> International Congress of Mathematics Education, Discussion Group 15: Ethnomathematics*, Tipografia Editrice Pisana, Pisa, 156 pp. [Preface by Ubiratan D'Ambrosio; Foreword by Bill Barton]
- Gerdes, Paulus & Djebbar, Ahmed (2007), *Mathematics in African History and Cultures: An annotated Bibliography*, Lulu.com, Morrisville NC, 430 pp. [Preface by Jan Persens] (also published in French: *Les Mathématiques dans l'Histoire et les Cultures Africaines*, Union Mathématique Africaine & Université des Sciences et des Technologies, Lille, 2007, 332 pp.)
- Gerdes, Paulus (Ed.) (1993), *A numeração em Moçambique: Contribuição para uma reflexão sobre cultura, língua e educação matemática*, Universidade Pedagógica, Maputo, 159 pp.
- Gerdes, Paulus (2006), *Sona Geometry from Angola: Mathematics of an African Tradition*, Polimetrica International Science Publishers, Monza, 232 pp. [Translation and preface by Arthur B. Powell]
- (2007a), *Enomatemática – Reflexões sobre Matemática e Diversidade Cultural*, Edições Húmus, Ribeirão, 285 pp. [Preface by Jaime Carvalho e Silva] (available from: www.bertrand.pt)
- (2007b), *Drawings from Angola: Living Mathematics*, Lulu.com, Morrisville NC, 72 pp. [Translation by Arthur B. Powell]
- (2007c), *Othava: Fazer Cestos e Geometria na Cultura Makhuwa do Nordeste de Moçambique*, Lulu.com, Morrisville NC, 292 pp. [Preface by Abdulkarimo Ismael; epilogue by Mateus Katupha]
- (2007d), *Geometria e Cestaria dos Bora na Amazônia Peruana*, Lulu.com, Morrisville NC, 170 pp. [Preface by Dubner Medina Tuesta]
- (2007e), *Lunda Geometry: Mirror Curves, Designs, Knots, Polyominoes, Patterns, Symmetries*, Lulu.com, Morrisville NC, 198 pp.
- (2007f), Arts: Basketry and Mat Making (Vol. 1, 195-198); Geometries (Vol. 2, 464-467); Mathematics (Vol. 3, 496-498); Number Systems (Vol. 4, 79-81), in: John Middleton (Ed.), *New Encyclopedia of Africa*, Charles Scribner's Sons, New York
- (2007g), *Adventures in the World of Matrices*, Nova Science Publishers, New York, 196 pp. [Preface by Gaston N'guérékata]
- Goetzfridt, Nicholas (2007), *Pacific Ethnomathematics: A Bibliographic Study*, University of Hawai'i Press, Honolulu [Preface by Ubiratan D'Ambrosio]
- Kanouté, Mamadou (2007), *L'influence de l'apprentissage en Bamana sur l'enseignement et l'apprentissage des mathématiques au premier cycle de l'enseignement fondamental*, Université de Bamako
- Traoré, Kalifa (2006), *Étude des pratiques mathématiques développées en contexte par les Siamous au Burkina Faso*, Université de Québec, Montréal





# NASGEM President's Report

## Fredrick L. "Rick" Silverman

### Collaboration with Other Organizations and Advancing an Equity Agenda

Since the April, 2007, Annual Meeting, I have spent considerable time working to respond to the charge I received from the NASGEM membership and Board concerning collaboration among the Mathematics Equity organizations: NASGEM, TODOS, WME, and BBA. Miriam Leiva, President of TODOS, has been a strong advocate for implementing this vision. After considerable ups and downs, the effort seems to have borne fruit. NCTM's Board recently took action to make Equity a high priority. As a result, NCTM has agreed to host a meeting of representatives from the various organizations: NASGEM, TODOS, WME, BBA, AMTE, and NCSM. Steve Rasmussen will attend. Steve is both personally and professionally committed to the effort to advance Equity in Mathematics Education. Many of you will recall that in his capacity of President of Key Curriculum Press Steve underwrote the presentation by Ubi D'Ambrosio at the Anaheim Annual Meeting of NCSM in 2005. I invited Kay Gilliland to be NASGEM's leader for Equity in Mathematics Education. With her lengthy history of advocacy for Equity in Mathematics, we are really honored that Kay has accepted this appointment. We expect to attend the NCTM Meeting on Equity next year.

### Outreach

Bill Collins developed an excellent NASGEM flyer. It is colorful and informative about our organization. He also developed a draft document for joint membership in the Mathematics Equity organizations. That flyer accompanies our membership invitations. It was distributed to attendees at DreamCatching 2007 in Regina, SK, and, thanks to our partnership with TODOS, at the 2007 Conference on Mathematics and Social Justice in Brooklyn, NY.

I have had varying levels of correspondence with representatives of TODOS, WME, and BBA. Miriam Leiva and I have worked together on goals of mutual interest to our respective organizations and the greater mathematics education community. Most of this work focuses on advancement of High Quality Mathematics for All and collaboration among the Mathematics Equity Organizations.

### Other Activities

Tod Shockey, Co-Editor the *Journal of Mathematics and Culture* and I, have been promoting the JMC to solidify

its presence internationally. Manuscripts continue to arrive from scholars around the world. Tod is working to keep the JMC on track for two issues annually. Tod and I are indebted to members of NASGEM and to other mathematics education leaders for their conscientious work in reviewing manuscripts. Tod also chairs the NCSM initiative on Equity in Mathematics Education. Jim Barta is the NCSM Board Member who is liaison for that initiative.

Blidi Stem has taken on the leadership for membership development and recruitment. She has asked Bill Collins and Luise Gould to assist in that process. Blidi is also investigating the levels of affiliation with NCTM to determine if NASGEM might benefit from a more than the basic affiliation than we currently have.

Thanks to Claudette Engblom-Bradley for developing and submitting proposals for NASGEM presentations at the 2008 Annual NCSM Meeting. Thanks to Larry Shirley for developing and submitting a NASGEM proposal for presentation at the 2008 Annual NCTM Conference. Larry is also the lead organizer for the Fourth International Conference on Ethnomathematics; readers will find news and information elsewhere in this issue of *NASGEM News*.

Ron Eglash continues, I am happy to say, as master of our website and leader for Internet presence. He was instrumental in crosslinking our website with that of TODOS, WME, and BBA. TODOS and WME have reciprocated by crosslinking their websites with ours.

Finally, and very importantly, I want thank Dawn Wiseman on behalf of all us NASGEM members for her initiative, considerable effort, and personal expertise to present us with this inaugural issue of *NASGEM News*.

### A Final Comment

NASGEM, I'm pleased to report, as an organization and through its members, has been active in participating in various venues for Mathematics Education. I am sure I have only cited a small portion of the work our members do in contributing to the advancement of High Quality Mathematics Education, particularly in regard to advancing equity, social justice, and respect for diverse cultural appearances of mathematics in the lives of people of greatly varying backgrounds and locales around the world.

## ICEM-4 in Baltimore

Lawrence Shirley

Plans are to be made to hold the fourth International Conference on Ethnomathematics (ICEM-4) in Towson, Maryland (near Baltimore) in the last week of July of 2010.

The ICEMs are conferences of the International Study Group on Ethnomathematics (ISGEM), the parent body of NASGEM. They allow ISGEM--and NASGEM--members to gather to exchange ideas formally in papers, less formally in demonstrations and field trips, and socially in conference events. The first ICEM was held in 1998 in Granada, Spain, followed in 2002 by ICEM-2 in Ouro Preto, Brazil. Auckland, New Zealand hosted ICEM-3 in February 2006. At that time, the ISGEM Board announced that ICEM-4 would come to the United States--thus holding our fourth conference in our fourth continent! Also, 2010 will be the twenty-fifth anniversary of the founding of ISGEM.

The ICEM-4 will be held on the campus of Towson University. We have already begun to make arrangements for meeting rooms, a hall for plenary events, and a limited number of dorm rooms on campus. There are also hotels nearby and more in downtown Baltimore.

We are beginning to plan conference events and possible field trips to nearby sites of ethnomathematical interest, maybe including sites in Washington DC. Details will be announced as the arrangements are made at <http://pages.towson.edu/shirley/ICEM-4.htm>.

## On the web

### **New design tool for fractal simulations**

Culturally Situated Design Tools at <http://www.rpi.edu/~eglash/csdt.html>

now offers fractal simulations (see "African overview" at <http://www.ccd.rpi.edu/eglash/csdt/african/>). Natural objects include: Koch curve, lungs, algae, fern, and clouds. Cultural objects include African architecture and metalwork. Using the applet in any windows browser, users can edit these fractals, or create their own from scratch. Macintosh users will have wait for the java 6 plugin to be released.

**New design tool for breakdancing simulations** <http://www.ccd.rpi.edu/Eglash/csdt/subcult/brdance/index.html>

Macintosh users will have wait for the java 6 plugin to be released.

### ***Code of the Quipu Databook and Code of the Quipu Databook II***

About four years ago the *Code of the Quipu Databook* and *Code of the Quipu Databook II* were made available on the Internet at <http://instruct1.cit.cornell.edu/research/quipu-ascher/>.

Originally published in 1978 and 1988, the *Databooks* contain detailed descriptions of 206 quipus that Marcia Ascher and Robert Ascher studied first-hand in museums and private collections spread over three continents. Now a Photo Archive with 88 photographs has been added to these data. The Archive contains photos of 20 of the quipus described in the *Databooks* as well as photos of some of their construction details and associated artifacts. We hope that the addition of these photos will make the website even more useful to students and scholars interested in these remarkable artifacts.

## News from members

### Larry Lesser (University of Texas – El Paso)

While we don't have research results yet, it is exciting to be helping Matthew Winsor create a capstone course for inservice secondary teachers here at The University of Texas at El Paso that is infused with culturally-relevant mathematics since the vast majority of students (in all grade levels) in El Paso County have a Latino/a, Mexican-American background.

For a more whimsical connection to ethnomathematics, I have a couple of "culturally-relevant math songs" that should appear in the very next issue of TODOS Noticias.

### Thomas Gilsdorf (University of North Dakota)

I spent last year in Mexico City on a Fulbright Scholarship, studying topics like the mathematics of the Otomíes of central Mexico. I have submitted an article on this topic to the *Estudios Otopame*, a journal published by the Institute of Anthropological Studies at the National University (UNAM) in Mexico. I am working on a version of this article to submit to the *Journal of Mathematics and Culture*. Also, my article "Ethnomathematics of the Inkas" is scheduled to appear soon in the *Encyclopedia of Non-Western Sciences* (Springer Verlag). Finally, I am scheduled to give a presentation on "Ethnomathematics and weaving" at the Joint Meetings of the American Mathematical Society and Mathematical Society of America, in early January, 2008 (in San Diego).

### Paulus Gerdes (Ethnomathematics Research Centre, Maputo, Mozambique)

As all of you know ethnomathematical research may lead to new educational ideas and may stimulate the invention of new mathematical concepts. It may inspire new artwork too. Lunda art decorates our research centre and home in Maputo. It always draws the attention of visitors. The mathematician-artist John Sims exhibited some of my Lunda art in Florida, and some of you may have seen it on a travelling exhibition he had organized throughout the US.

'Lunda art' is original artwork inspired by a geometrical study of traditional 'sona' drawings-illustrations by Cokwe storytellers-educators in the Lunda region of eastern Angola. Some of my geometrical artwork is now visible and available at <http://stores.lulu.com/pgerdes>.

In this way more people can see the images and at the same time it is an attempt to raise funds for our research centre. Have a look!

### Become a NASGEM member!

Dues for membership in NASGEM are \$20.00 per year and may be paid up to three years. A year's membership is from April through the following April. Dues are used to cover costs related to maintaining the NASGEM organization, paying affiliate dues to related math organizations, and producing the NASGEM Journal, *The Journal of Mathematics and Culture*. To join or renew a membership please send your name and contact information with a check to: Jim Barta, UMC 2805, Old Main Hill, Utah State University, Logan, UT 84322. Make checks payable to NASGEM.

Please briefly describe any projects in which you are involved that may be related to ethnomathematics.



# Callings

## Chapters

### **Handbook of Research on Computational Arts and Creative Informatics**

Edited by:

James Braman, Towson University, Towson, MD, USA

Giovanni Vincenti, Gruppo Vincenti, S.r.l., Rome, Italy

Goran Trajkovski, South University, Savannah, GA

*The Handbook of Research on Computational Arts and Creative Informatics* will provide a comprehensive range of topics regarding the interaction of the sciences and the arts. Key concepts, theories and innovations involving the computational side of the arts and other creative technologies will be discussed. This particular volume will feature chapters (8,000-10,000 words) written by experts and leading innovators of their respective fields.

Proposals Submissions Due: 11/15/2007

Full Chapters Due: 2/28/2008

Proposals (in Word format) can be submitted electronically to [ComputationalArts@gmail.com](mailto:ComputationalArts@gmail.com).

For more information: <http://www.igi-pub.com/requests/details.asp?ID=238>

## Papers

### **The Role of Ethnomathematics in Mathematics Education**

11th International Congress On Mathematical Education

Monterrey, Mexico

July 6-13, 2008

Information about contributions for Topic Study Groups, Discussion Groups, Workshops, Sharing Experience Groups, Poster Exhibitions and roundtables can be found at <http://icme11.org/node/16>.

Rick Silverman will co-Chair, with Marcos Cherinda of Mozambique, Discussion Group DG – 18: The role of ethnomathematics in mathematics education.

The organizing team invites submissions of papers for Discussion Group 18: The Role of Ethnomathematics in Mathematics Education. Information about the proposal submission and review process for this Discussion Group is available at <http://dg.icme11.org/tsg/show/19>. The deadline for short outlines/proposals (2 pages) is December 28, 2007.

### **2008 Northwest Mathematics Conference**

Portland, Oregon

October 9-11, 2008

TODOS has been invited to organize a strand. Proposals from TODOS members for this strand should address at least one of the TODOS goals and be consistent with the mission of TODOS

(<http://www.todos-math.org>) and the conference theme. Deadline is November 26, 2007. Please contact Carol Edwards, [csae@cox.net](mailto:csae@cox.net), for more information.



# Minutes

## North American Study Group on Ethnomathematics (NASGEM) Annual Meeting March 22, 2007, 7 – 9 PM. Atlanta, Georgia

Rick Silverman called the meeting to order at 7 PM. Present were Bill Collins, Tim Crane, Claudette Engblom-Bradley, Ubi D'ambrosio, Sara Jenkins, Larry Shirley, Blidi Stemm, and others.

The agenda was accepted.

Secretary Claudette Engblom-Bradley presented the minutes of the 2006 Annual Meeting held in St. Louis, MO, and they were approved as presented.

Claudette led a tribute to the late Lyn Taylor, advocate for Equity in Mathematics Education, leader of WME for many years.

Rick Silverman presented the Treasurer's report on behalf of Jim Barta. NASGEM is solvent. The report was accepted as presented.

### Reports and Announcements

Delegate Assembly – Bill Collins attended the Delegate Assembly as NASGEM Representative and reported on several items, nothing earth shattering this year.

Newsletter – Claudette Engblom-Bradley presented a mock-up of the forth-coming *NASGEM News*. Dawn Wiseman is Editor, Claudette is Co-Editor, and Ron Eglash is webmaster for online publication.

ICME – Towson, MD – Larry Shirley. Actual dates will be forth-coming. The meeting will take place at Towson, MD, in Summer 2010. More information will follow and will be available on a website.

Membership: renewal or joining \$20/yr – A number of members present and not present renewed their memberships. Several new members joined.

2008 NCTM Program Proposal – Larry volunteered to write and submit a proposal from NASGEM for the 2008 NCTM Annual Meeting to convene in Salt Lake City, UT, in Spring 2008.

2008 NCSM Proposal – Claudette volunteered to develop one or two proposals from NASGEM for the 2008 NCSM Annual Meeting in Salt Lake City, UT, in spring 2008.

Special Interest Group Proposal – Rick volunteered to develop a SIG proposal from NASGEM for the 2008 NCSM Annual Meeting.

Dream Catching Conference Visibility, May 2-5, Regina, Saskatchewan: Rick spoke on behalf of this conference which Dawn Wiseman leads and which Jim Barta and Tod Shockey attend regularly. Jim, Tod, and Dawn will have NASGEM organization and membership flyers, which Bill will develop, on hand for this conference. *(Continued next page)*



(Continued from page 11) Radical Math Conference Visibility, May 27-29, Brooklyn, NY: Rick and Bill – Thanks to our partnership with TODOS and the personal commitment to NASGEM by TODOS President Miriam Leiva, NASGEM organization and membership flyers will be available at this conference.

*Journal of Mathematics & Culture* – Rick indicated that a new issue of JMC would be forth-coming during the Summer 2007. JMC needs more reviewers. Co-Editors Rick and Tod have received inquiries from around the world. Submissions are arriving. Rick encouraged all present to consider JMC for article submissions.

MAA Meeting & Ethnomathematics Strand – Ubi indicated that MAA will have an Ethnomathematics strand at the Jan. 2008, meeting and that he will be featured presenter. Everyone agreed that this action on behalf of MAA is a breakthrough in recognition of the influence and attention that Ethnomathematics is receiving.

Equity & Access in Mathematics Education – Rick reported that Tod Shockey, member of NASGEM, TODOS, and Co-Editor of JMC, accepted appointment to lead an NCSM Mathematics Education Equity and Access Task Force. It has begun to meet. Tod invited Rick to participate as a guest and as NASGEM President at a meeting of the Task Force earlier in the week. Jim Barta is the NCSM Board Member liaison to the Task Force.

### **Old Business**

There was no old business. Some items above could have been properly classified as Old Business

### **New Business**

In addition to several items above, those present charged Rick, as NASGEM President, to pursue vigorously a membership collaboration and mutual support arrangement with TODOS, WME, & Baneker to form a united and univocal effort on behalf of the 4 Mathematics Education Equity Organizations to advocate collectively for Mathematics Education Equity and High Quality Mathematics Education for All. Moreover, those present charged Rick to vigorously pursue a membership arrangement that would be mutually beneficial to all four organizations by offering a system of incentives to motivate new and renewing members to join more than one of these organizations. Bill Collins volunteered to create a draft form for membership in up to all four of these organizations.

### **Closing**

Rick thanked all for attending and participating and for volunteering for the various tasks named above.

Meeting adjourned at 7 PM.

### **NASGEM News**

Is published twice a year by the North American Study Group on Ethnomathematics.

Editor: Dawn Wiseman  
Co-editor: Claudette Engblom-Bradley  
Webmaster: Ron Eglash