## Journal of Mathematics Education at Teachers College

Spring – Summer 2011

A CENTURY OF LEADERSHIP IN MATHEMATICS AND ITS TEACHING

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#### The Journal of Mathematics Education at Teachers College is a publication of the Program in Mathematics and Education at Teachers College Columbia University in the City of New York.

**Guest Editor** Dr. Nicholas Wasserman

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This issue honors Clifford B Upton who was a senior member of the Teachers College faculty from 1907 until his retirement in 1942. Professor Upton was among the Nation's most prolific mathematics authors. He served on the Board of Directors of the American Book Company enabling him to endow the Clifford Brewster Chair of Mathematics Education. The first professor to hold the Upton Chair was Dr. Myron Rosskopf.

Bruce R. Vogeli has completed 47 years as a member of the faculty of the Program in Mathematics, forty-five as a Full Professor. He assumed the Clifford Brewster Chair in 1975 upon the death of Myron Rosskopf. Like Professor Upton, Dr. Vogeli is a prolific author who has written, co-authored or edited more than two hundred texts and reference books, many of which have been translated into other languages.

This issue's cover and those of future issues will honor past and current contributors to the Teachers College Program in Mathematics. Photographs are drawn from the Teachers College archives and personal collections.

#### Aims and Scope

The *JMETC* is a re-creation of an earlier publication by the Teachers College Columbia University Program in Mathematics. As a peer-reviewed, semiannual journal, it is intended to provide dissemination opportunities for writers of practice-based or research contributions to the general field of mathematics education. Each issue of the *JMETC* will focus upon an educational theme. The theme planned for the 2011 Fall-Winter issue is: *Technology*.

*JMETC* readers are educators from pre K-12 through college and university levels, and from many different disciplines and job positions—teachers, principals, superintendents, professors of education, and other leaders in education. Articles to appear in the *JMETC* include research reports, commentaries on practice, historical analyses and responses to issues and recommendations of professional interest.

#### **Manuscript Submission**

*JMETC* seeks conversational manuscripts (2,500-3,000 words in length) that are insightful and helpful to mathematics educators. Articles should contain fresh information, possibly research-based, that gives practical guidance readers can use to improve practice. Examples from classroom experience are encouraged. Articles must not have been accepted for publication elsewhere. To keep the submission and review process as efficient as possible, all manuscripts may be submitted electronically at www.tc.edu/jmetc.

**Abstract and keywords.** All manuscripts must include an abstract with keywords. Abstracts describing the essence of the manuscript should not exceed 150 words. Authors should select keywords from the menu on the manuscript submission system so that readers can search for the article after it is published. All inquiries and materials should be submitted to Ms. Krystle Hecker at P.O. Box 210, Teachers College Columbia University, 525 W. 120<sup>th</sup> St., New York, NY 10027 or at JMETC@tc.columbia.edu

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#### **Call for Papers**

The "theme" of the fall issue of the *Journal of Mathematics Education at Teachers College* will be *Technology*. This "call for papers" is an invitation to mathematics education professionals, especially Teachers College students, alumni and friends, to submit articles of approximately 2500-3000 words describing research, experiments, projects, innovations, or practices related to technology in mathematics education. Articles should be submitted to Ms. Krystle Hecker at JMETC@tc.columbia.edu by September 1, 2011. The fall issue's guest editor, Ms. Diane Murray, will send contributed articles to editorial panels for "blind review." Reviews will be completed by October 1, 2011, and final drafts of selected papers are to be submitted by November 1, 2011. Publication is expected in late November, 2011.

#### **Call for Volunteers**

This *Call for Volunteers* is an invitation to mathematics educators with experience in reading/writing professional papers to join the editorial/review panels for the fall 2011 and subsequent issues of *JMETC*. Reviewers are expected to complete assigned reviews no later than 3 weeks from receipt of the manuscripts in order to expedite the publication process. Reviewers are responsible for editorial suggestions, fact and citations review, and identification of similar works that may be helpful to contributors whose submissions seem appropriate for publication. Neither authors' nor reviewers' names and affiliations will be shared; however, editors'/reviewers' comments may be sent to contributors of manuscripts to guide further submissions without identifying the editor/reviewer.

If you wish to be considered for review assignments, please request a *Reviewer Information Form.* Return the completed form to Ms. Krystle Hecker at hecker@tc.edu or Teachers College Columbia University, 525 W 120th St., Box 210, New York, NY 10027.

#### Looking Ahead

Anticipated themes for future issues are:

| Fall 2011   | Technology    |
|-------------|---------------|
| Spring 2012 | Evaluation    |
| Fall 2012   | Equity        |
| Spring 2013 | Leadership    |
| Fall 2013   | Modeling      |
| Spring 2014 | Teaching Aids |

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#### PREFACE

### Mathematics Curricula: Standards and Implementation

With the creation of the Common Core State Standards (CCSS) for K-12 English and Mathematics, and subsequent adoption by most states—currently 41 of the 50 states, the District of Columbia, and the U.S. Virgin Islands have adopted the CCSS Initiative—the United States is entering into a conversation about national level standards. Internationally, centralized systems of education are more common in developed countries than the decentralized, state system seen in the United States. This state-led effort and national development, in particular, has begun (and will continue) to have an immediate impact on K-12 mathematics curriculum in the United States.

This issue of the *Journal of Mathematics Education at Teachers College*, with a theme of *Mathematics Curriculum*, gathers a series of studies and reports about mathematics curriculum developments in the United States and abroad. Some articles, including the feature article written by Jeremy Kilpatrick, explore the impact of adopting the CCSS in Mathematics in the United States; others discuss curricular reform movements in India and an implementation in the United States of Realistic Mathematics Education (RME) that was developed in the Netherlands.

While standards are an example of curriculum, in particular the intended curriculum, some of the remaining articles begin to address how curriculum is enacted in the classroom, which can be very different from that which is intended. One article addresses the role teachers play in this process. Others concentrate on specific curricula, including a post-secondary unit on logarithms and the incorporation of Sudoku puzzles into elementary mathematics classrooms.

Notably, one of the features of the CCSS is the renewed emphasis on modeling in mathematics education. The final section entitled, *Notes from the Curriculum Laboratory*, consists solely of excerpts that address this one facet, modeling, in further detail.

The Journal of Mathematics Education at Teachers College aims to address topics that are timely for professionals in mathematics education. Discussion of the CCSS is one such example in the area of mathematics curricula. By addressing topics that revolve around both national and international standards, educators continue to learn about mathematics curricula as it is intended and implemented in many different educational settings.

> Nicholas H. Wasserman Guest Editor

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# Teachers College Columbia University Department of Mathematics, Science, and Technology

#### MATHEMATICS EDUCATION FACULTY VACANCY

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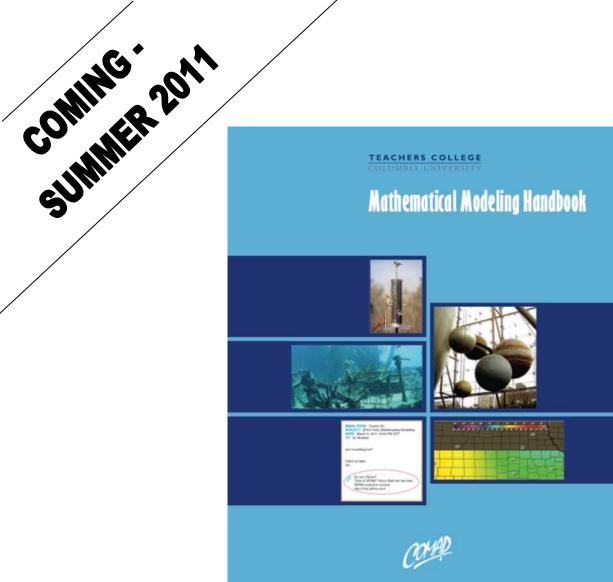
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Review of applications will begin by November 15, 2011 and continue until the search is completed. Appointment begins September 2012.

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