

COMMENTARY

SUSAN FRIEDLANDER

In July 2005 I succeeded Donald Saari as chief editor of the *Bulletin*. During his two terms Don was an excellent chief editor, and he admirably fulfilled the main goal of the *Bulletin* to inform the general mathematical community about current advances, directions, and ideas in mathematics. He raised the visibility and influence of the *Bulletin* to new heights. It is an honor and a challenge for me to step into Don's "*Bulletin* shoes", and I will do my best to continue the tradition of excellent expository articles.

The January issues of the *Bulletin* will continue to publish articles based on the lectures given in the Current Events session at the previous AMS winter meeting. This concept was initiated and organized by David Eisenbud and modeled after the Bourbaki seminars. These sessions in the past three years have proved to be very successful, and their connection with the *Bulletin* will be acknowledged in future years by the modified title "The Current Events Bulletin". This present *BAMS* issue contains articles based on the lectures of four of the five talks given in January 2005: namely, articles by Bryna Kra, Dusa McDuff, Jerrold Marsden and Shane Ross, and László Lovász.

Readers may notice some innovations that we are introducing, with the intention of adding contextual information for the very broad *Bulletin* audience (*BAMS* has the largest worldwide circulation of any mathematical research journal). For example, each article will now be followed by a very brief comment "About the author". The most noticeable change is the new cover. The venerable green *Bulletin* of the past century is making way for a new cover for the new millennium. I fear some traditionalists will lament the passing of the green, but I hope in time the new cover will become recognized and appreciated. The new pale cream background allows for a "wash" of a historical mathematical document. It is our intention to produce a different "wash" on the cover of each issue and, when possible, to select a document that has a connection with the mathematics of one of the expository articles. For the debut of this experiment we have chosen a page from a letter handwritten by Gauss to his former student Encke in 1849. The letter discusses a topic that fascinated Gauss, namely the distribution of primes. The first article in this issue of the *Bulletin* describes exciting recent developments on this topic, namely the Green-Tao Theorem on arithmetic progressions in the primes.

We are also introducing in this issue a new section of the *Bulletin* entitled "Mathematical Perspectives". This will contain several short pieces giving perspectives on different strands of mathematics. To inaugurate this section we invited Sir Michael Atiyah to express his thoughts on the undefinable concept of "good mathematics". We trust you will enjoy his piece entitled "Mathematics: Art and Science". We are inviting select pieces for future issues from other mathematicians whose work has had great influence on our discipline.

The “Mathematical Perspectives” section also contains a brief discussion about the cover as well as a clear reproduction of the document. We are grateful to Yuri Tschinkel, who currently holds the chair once held by Gauss in Göttingen, for arranging for the reproduction and for describing the cover document.

The third portion of the new section contains reviews of three important papers whose reviews were originally published in *Math Reviews* in 1969, 1982, and 2002. They have been selected to highlight some of the key results on the topic that we chose to feature in this issue, namely arithmetic progressions in the primes. Our choice of reviews covers, of course, only a small sample of works in the field. It is intended to convey the esprit and development of the topic and give guidance to those who wish to delve further. We thank Andrew Granville for his brief introduction to the reviews.

The new “Mathematical Perspectives” section is a work in progress, and we hope it will evolve in future issues in ways that you will enjoy.

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF ILLINOIS AT CHICAGO, 851 S. MORGAN
(M/C 249), CHICAGO, ILLINOIS 60607-7045

E-mail address: `susan@math.uic.edu`